

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

May 2019

PANORAMA GEM & MINERAL CLUB

Minutes of the April 16, 2019 Meeting

By: Sheila Stratton

The meeting was opened at 7:00 p.m. by President Rick McDougald. New members Lori Morgan and Sharon Lindquist were welcomed to the meeting.

The treasurer's report was given by Frank Stratton.

Johnie Pitman read the suggestions from the club members for next year's show as follows:

1. New advertising signs for the sides of roads and the need for someone to volunteer to place the signs before the show
2. Names in displays and better labeling
3. Better stuff for silent auction
4. More demonstrations
5. New game
6. Metal detector hunt game
7. Need volunteer to go to the schools to inform about scholarships given out by the club

Rick explained about the display case in the Steven's County Courthouse in Colville. He went to different people and they were unaware of who oversees the case. He was informed that the Historical Society had the key to the cabinet.

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The Passing of a Beloved Member

By: Bob Bristow

Lucille May (Luci) Bristow died May 2nd from a stroke. She was born May 23, 1937 in Klamath Falls, Oregon and is survived by her husband, Robert (Bob) Bristow, son Dale, granddaughter Heather, and great grandson Israel.

Luci worked 24 years for Boeing and was Office Manager for the Director of Technology. She also was a nurse, a caterer, and fire lookout. She was a member of the US Electoral College, Washington State Committee Woman for King County, represented the Republican Party in the Eighth Congressional District, featured on King TV, was invited to the White House to meet the president and was appointed to several committees by Governor Spellman. She was a member of several Christian Churches and the Chewelah UCC Church, Chewelah Federated Women, Chewelah Valley Lion's Club, Order of the Eastern Star, and NE Nile Club. Listed in Who's Who in American Politics and several other Who's Who books.

Luci has been a member of the Panorama Gem & Mineral Club for many years and was the secretary for several years. She supported the club in many ways and was a vendor helping Bob sell mineralogy computer programs. She was also a member of the Rock Rollers and worked in various positions during their annual shows.

What Is the Difference Between Agate and Jasper? And, Are They A Mineral or A Rock?

By: Jim Retzer

As most of us know agate and jasper are probably the two most collected materials by rockhounds and lapidaries. Their color variations and the ability to be cut and polished into semi-precious gemstones lend to this popularity. But what are they? Are they a rock or a mineral? What is the difference between them or are the names sometimes interchangeable? In this article I will look at these questions.

Mineral or Rock?

We will look at the last part first. What is the difference between a mineral and a rock? The easy difference is that a rock is made up of two or more minerals whereas a mineral is a naturally occurring substance with a characteristic chemical composition and a highly ordered atomic structure. There are three major categories of rocks that are referred to by the process of the rock's formation – igneous, sedimentary and metamorphic. Minerals on the other hand are represented by a single chemical compound and occur naturally. Some minerals are an individual chemical element such as copper or gold.

Now that we have a broad, simplistic working definition of rocks and minerals we can look at agate and jasper to see where they fall. Both agate and jasper are grouped under the generic name chalcedony. Chalcedony is a form of silica (SiO₂) composed of very fine intergrowths of quartz and moganite. Chalcedony was once thought to be a fibrous variety of microcrystalline quartz which has a trigonal crystal structure, but recently it has been shown to also contain a monocline crystal structure form of quartz known as moganite. Microcrystalline, sometimes called cryptocrystalline, is a term referring to a formation of microscopic crystals that form a larger aggregate piece. This microcrystalline structure of

chalcedony's is what gives it its conchoidal fracturing characteristic, that is it fractures in a smoothly curving surface with no planar surfaces or cleavage.



Agate Showing Conchoidal Fracture

So, based on the preceding information and knowing agate and jasper are forms of chalcedony we can say that they are minerals. Or can we? Jasper is usually considered an opaque form of chalcedony. The opaqueness is caused by an abundance of impurities along with the quartz and sometimes moganite. Because of the impurities and that it is sometimes composed of more than one mineral type some regard it as a rock instead of a mineral. But even with the impurities it is generally accepted to be a mineral.

Agate or Jasper

Since we have determined that agate and jasper can be considered minerals, we now need to see what the difference between them is. The primary difference between agate and jasper is in their diaphaneity. "Diaphaneity" is used to describe "how easily light passes through a material." There are three general levels of diaphaneity. They are, from highest to lowest:

- **Transparent** (light and images pass through)
- **Translucent** (light passes through)
- **Opaque** (no light passes through)

In most cases jasper is an opaque form of chalcedony whereas agate is translucent to transparent. This seems simply enough but let's take a closer look at these two minerals.

What is Agate?

Agate is a translucent to semitransparent chalcedony. If you have a piece that is semitransparent you will be able to hold a very thin piece up and see distorted or foggy images through it. Holding a translucent piece up to a source of light you will see a small amount of light passing through the thin edges. By passing your hand between the material and the light, your hand will block the light passing through the material.



Translucent Laguna Agate

Many agates form in areas of volcanic activity where waters, rich in dissolved silica (SiO_2), flow through fractures and cavities in igneous rocks. When the solution is highly concentrated with dissolved silica, a silica gel can form on the walls of these cavities. That gel will slowly crystallize to form microcrystalline quartz.

Over time, additional layers of gel are deposited forming younger bands of microcrystalline quartz in the cavity. If the dissolved mineral composition of the silica-rich water changes over time, impurities (elements other than silicon and oxygen) can be incorporated into the gel and into the microcrystalline quartz. These impurities can alter the color of the microcrystalline quartz. This produces the color banding. Crystallization of foreign (non-silica) materials is often what forms the plumes, dendrites, or mossy structures that are often seen in translucent agate.

Although agates typically form in igneous rocks such as basalt, rhyolite, and andesite, they can also form in sedimentary rocks such as limestone. All these types of rock are more susceptible to weathering than agate. So, when the rocks are

eventually broken down by weathering, the durable agates will remain. This is why agate nodules are often found in stream valleys that cut through fine-grained igneous rocks or limestone.

Some of the banding in agate is based on periodic changes in the translucency of the agate substance. Layers appear darker when they are more translucent (this may appear reversed in transmitted light). This effect may be accompanied and amplified by changes in the color of neighboring layers, due to other co-precipitated minerals.



Banded White Agate

What is Jasper?

Jasper is an opaque variety of chalcedony. Opaque means that neither light nor images pass through.



Opaque Deschutes Jasper

Microcrystalline quartz in its pure form is semitransparent. When a small amount of impurities or foreign materials are added, the color of the microcrystalline quartz changes and its ability to transmit light decreases. Jasper contains

enough impurities and foreign material to render it opaque. So, the real difference between jasper and agate is the amount of impurities and foreign material contained with a specimen.

While agate is typically a material that forms in the cavities of an igneous rock or limestone, jasper often forms when fine particulate materials are cemented by silica. This often occurs in soft sediments when silica cements them into a solid mass. These particulates are what give jasper its color and opacity.

To sum this all up, agate and jasper are a form of chalcedony which is a microcrystalline quartz and thus they are a mineral. The primary difference between agate and jasper is that a slab of agate is translucent, and a slab of jasper is opaque. Now for a problem mainly related to lapidaries. Due to the impurities in jasper, its Mohs hardness varies between 6 to 7, not only between types of jasper but within a slab of jasper itself, whereas agate usually has a Mohs hardness of 7 just like quartz.

Meeting Minutes

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Rick asked if there were any volunteers that would be willing to set up the cabinet. Johnie said that the display should be from Steven's County. Joe Barreca stated that he has seen the cabinet and it looked like the rocks currently on display are glued down and that the same display has been there for years. Becky Dobbs said she would volunteer to redo the cabinet and Cyndi Doppler offered to help. Discussion was made regarding possible samples to put into the cabinet. Becky asked for any samples that anyone would like to donate to please contact her.

On April 27, 2019, the Easter "Thunderegg" Hunt will be held at Johnie and Ginger's house at 2:00 p.m.

Rick asked Bruce Hurley if he had a date to go to the LaFarge Limestone Quarry in Metaline Falls. Bruce said he would plan for the outing on Saturday, July 27, 2019.

Meeting Minutes

Continued

Rick asked for volunteers for a field trip committee. There is a need for volunteers to head up actual field trips, go before the trip to check out access and type of vehicles needed, and get permission to access is needed. There were no volunteers at this time.

Ginger suggested an outing on May 4, 2019, at Mario & Son Marble and Granite in Liberty Lake located at 2750 Eagle Lane, Liberty Lake WA. It is an hour presentation from 10:00 to 11:00 a.m. and will demonstrate how the granite is cut. After the presentation, they let you go through scrap pile for samples.

Also, Ginger announced the rock sale at Sherry Bamburger's house on June 21st & 22nd. If anyone is interested, contact Ginger Pitman.

Other field trips were discussed. Refreshments were served and silent auction was held.

Sharon Borgford gave a presentation on "A Brief Summary of Eastern Washington Mammoths." It was very interesting and informative of what was roaming our countryside many ages ago.

Meeting was dismissed.

Johnie's Jabber

By: Johnie Pitman

Saturday April 20th was a windy, cloudy, sleety day for the annual thunderegg hunt at the Pitman's house, but seven well coated individuals came with high expectations and large buckets. There were 220 eggs hidden and almost all were found except for 11 that Ginger and I found in the weeks since then and an unknown yet to be discovered. Lots of fun!!!

The Trustees have reviewed the scholarship applications and have selected the following students to receive the clubs \$1000 scholarships:

Kettle Falls High School; Jordyn Smith, she will be attending Washington State University and majoring in education. She plans on teaching secondary math and science.

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"Identify the Rock or Mineral"



Last month's "mineral" is **Crazy Lace Agate** a variety of banded Chalcedony. It is predominantly white, with layers of creamy browns, blacks and grays. Some may include layers of yellow ochre, gold, scarlet and red. Agate is sometimes called the earth rainbow because, in its various forms, the concentric bands in nature form nearly every color the earth can produce, including a colorless form.

This month's mineral:



Johnie's Jabber

Continued

Chewelah, Jenkins High School; Jaydin Ludeman, she will be attending Whitworth University where she will major in education. She plans on teaching music and theatre.

Colville High School; Hallie Cox, she will be attending Washington State University and majoring in pre-optometry, then will complete her education at an Optometry School.

Other jabber, thanks Bruce Hurley for donating many specimens for our silent auction.

Thank you Betty and Jim Peters for volunteering to help with the scholarship program, that involves delivering the scholarship applications to the schools, picking up the finished applications and presenting the winners with a certificate at the awards night at each school.

Johnie

Rick's Ramblings May 2019 A Few Words the Club President

We mourn the passing of Luci Bristow .

Thank you, Sharon Borgford! You gave a presentation on "A Brief Summary of Eastern Washington Mammoths." It was very interesting and informative of what was roaming our countryside many ages ago. Will you find one too?

Do you like our website, panoramagem.com? Do you have any suggestions? Contact Rick McD.

The North Idaho Mineral Club will have their 59th Annual Show at Kootenai County Fairgrounds: Sat. June 1st 9-5 and Sun June 2nd 10-4.

You can find them online at:

<https://www.facebook.com/NorthIdahoMineralClub/>

Scot Jackson has graciously offered to lead two field trips:

1. Keystone mines - both upper and lower. Meet at the Chewelah Safeway at 10A on Saturday, June 16th
2. Jim Creek - for pyrites and white marble. Time and date TBA.

Scot Jackson said that he and at least four other thunderegg seekers are heading to McDermitt, NV for a couple of weeks starting on May 19th. They expect to stay there for a week. Then they'll move on to Glass Buttes, OR for obsidian.

Stay tuned: The date may change for hunting Trilobites with the Hurleys at the Lefarge Quarry near Metaline Falls.

Did you know that you can see Rock Roller's field trip schedule on page 19 of their May Newsletter? <https://www.rockrollers.org/WP/>

This just in: North Idaho organized the field trip to Mario & Son in Liberty Lake. We were taken on a GRAND TOUR by Mikaela, Mario, and his son Joey. They were all very easy to talk to and so informative! It was quite a treat - don't miss it the next time it is offered.

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 99114.

Webpage: <http://panoramagem.com/>
Contact: Rick McDougald, President,
pres-pgmc@hotmail.com

We, **The Panorama Gem & 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).

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 **May 21, 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 & Mineral Club: Organizational Chart

Officers

President:	Rick McDougald	Pres-pgmc@hotmail.com	509-675-0237
Vice-President:	Bob Bristow	Bristow@theofficenet.com	509-935-4375
Secretary:	Sheila Stratton	skstratton11@gmail.com	509-207-8506
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