**Place:**
**Arden Community Hall**
**636 Hall Rd**
**Arden, WA**

**Club Meetings:**

**Third Tuesday of the Month at 6:00PM**

# The Panorama Prospector

November 2024

## PANORAMA GEM AND MINERAL CLUB

**Minutes for the November 15, 2024 General Meeting**

Called to order at 6:10 pm

Jim is working on an inventory of where club items are and who has them.

Who has seen the Northern Lights and the comet?

Treasurer's report: $80 more than last month with no expenses

Marcus Ciderfest netted about $430

November is the auction, will be auctioning off the leftover sapphire dirt, contact Brian Martel to be auctioneer

The display case at the Colville library is glass so we can't display any heavy stuff, will display in February

We need a new cabinet for the TV and speakers, or mount it on the wall (others could use also)

Election of officers is next month, need whole new slate: President, VP, Secretary, Treasurer and two Trustees.

We will decide next month whether to keep granting scholarships and in what form or do some sort of charitable giving

Get items to editor for newsletter before Wednesday before meeting

Continued on page 4

## Oregon Agate Bed

## By Lynne Calvert

Roger and I were returning from California on November 6, 2024. We had stayed at a hotel in the lovely town of Madras. We decided to stop at Richardson's Rock Shop and Agate Bed Ranch. We had been there once before. The owner and his son like to joke around after they get to know you but they were working away from the office. Digging in the agate beds is no longer allowed for the public. The wife, Bonnie, showed us around the yard and shop. In her work station she has her rocks that she likes. They provide her some joy and beauty. She told us she was looking for adventures outside the ranch. She misses her hometown of Akron, Ohio. Roger mentioned that city smells like tires and she gave a great big grin. It is a fond memory for her. Recently, she had run her DNA and discovered she was part Scottish. I asked her if she had any rocks from Scotland. She said, "No." I could tell from her reaction she thought it was a good idea. Hopefully, she can get away from the ranch and visit Scotland and bring home some agates and rocks. It is difficult to get anyone to ship rocks to the U.S. I know this because we have been trying to get some for Kevin Youngblood and a few for us. That's a story for another time when we are able to make it happen. Meanwhile back at the ranch, I found a unique piece of raw Brazilian agate in one of their piles and decided it was going home with me. We also purchased a pink agate that is from their ranch and a few other rocks. Below are pictures.


## Identify the "Rock or Mineral"

## This month's rock or mineral:

**Painite** – Once considered the rarest mineral is a borate mineral found in Mogok, Myanmar (Burma). The first crystal was discovered by British mineralogist Arthur Pain and identified as new gem species in 1957. By 2001 only two more crystals had been found. Since then, several hundred crystals have been identified and new extensive exploration in the area surrounding Mogok has identified several new painite occurrences resulting in just over a thousand new painite crystals and fragments. Most of this material is highly included and fractured making it unusable for a faceted gemstone.

Due to its rarity and value, as well as low quality material, it is not commonly used in jewelry. Most specimens are found in private collections or museums. The largest known Painite specimen is in the Natural History Museum in London, it has a weight of over 50 carats. Due to Painite having colors and a specific gravity that overlap those of almandine, Spessartites and rubies it was originally misidentified as rubies or garnet. This was the case of this brown specimen in the London Museum where it had been identified as a tourmaline with rubies from Mogok. Upon re-examination it was discovered to be the largest specimen of Painite (Left Side Photo Above).

Painite is known for its reddish-brow or orange-brown color and high brilliance. It has a hardness of 8 and an average density of 4.01 g/cm$^3$. The chemical makeup of painite contains calcium, zirconium, boron, aluminum, and oxygen ($CaZrAl_9O_{15}(BO_3)$). The mineral also contains trace amounts of chromium and vanadium, which are responsible for Painite's typically orange-red to brownish-red color. The mineral's rarity is due to zirconium and boron rarely interacting with each other in nature. The crystals are naturally hexagonal, but may also be euhedral or orthorhombic.

Painite is incredibly valuable due to its rarity. Prices can range s from lower quality Painite starting around $100 to $1,000 per carat and the finest quality reaching $50,000 to $60,000 per carat. Its value is influenced by factors such as color, cut, clarity, and carat weight. Due to its rarity and value Painite is not commonly used in jewelry.

As a side note to the location of Painite's discovery site: Mogok, Myanmar (Burma) and other villages nearby, especially Kyatpyin, have been famous since ancient times for their abundance of gemstones

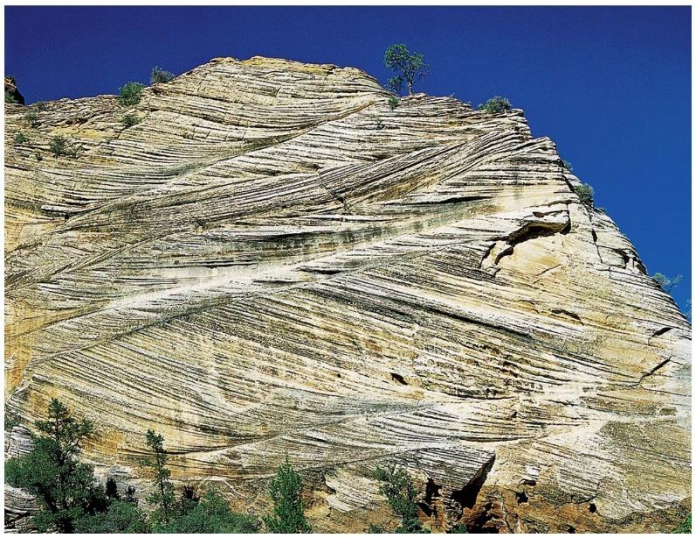
including ruby and sapphire. The gems are found in alluvial marble gravels by means of panning, tunneling and digging pits by hand. Gems are sold in markets in Mogok; however, foreigners require special permits to visit the town, and it is illegal to purchase/export gems from Myanmar other than from government licensed dealers

## This month's rock or mineral:

## Sedimentary Rocks (A series)

## (https://geologyscience.com/rocks/sedimentary-rocks/)

## Sedimentary Structures



Sedimentary structures are distinctive features found within sedimentary rocks that provide valuable information about the conditions under which the sediments were deposited, the processes that shaped them, and sometimes even the direction of the ancient currents. These structures offer insights into the past environments, such as river systems, coastal areas, deserts, and deep-sea settings. Here are some common sedimentary structures:

1. **Bedding (Stratification):** Bedding is the most fundamental sedimentary structure. It refers to the layering of sedimentary rocks into distinct horizontal layers or beds. Each bed represents a single episode of deposition. Beds can vary in thickness and composition and often provide a chronological record of changing environmental conditions.
2. **Cross-bedding:** Cross-bedding occurs when inclined layers of sediment are deposited at an angle to the main bedding plane. This structure is common in sand dunes, river channels, and underwater sediment ripples. Cross-bedding can reveal the direction of ancient currents or wind patterns.
3. **Ripple Marks:** Ripple marks are small ridges or depressions on the surface of sedimentary beds caused by the action of water or wind. They can be preserved in rocks and indicate the movement of currents at the time of deposition. Ripple marks come in two main types: asymmetrical (formed by unidirectional currents) and symmetrical (formed by bidirectional currents).
4. **Mudcracks:** Mudcracks are polygonal patterns that form as fine-grained sediments like mud dry out and contract due to the evaporation of water. These structures are indicative of alternating wet and dry conditions, suggesting a fluctuating environment.
5. **Graded Bedding:** Graded bedding occurs when sediments within a bed change in size from bottom to top. This structure is often found in turbidity currents (underwater avalanches of sediment) and debris flows. The larger particles settle out first, forming the bottom of the bed, while finer particles settle on top.

6. **Fossils:** While not strictly structures, fossils preserved within sedimentary rocks provide crucial insights into past life forms and ecosystems. Fossils can be found in various positions, such as in life position (preserved as they lived), transported, or disarticulated.
7. **Biogenic Structures:** These structures are formed by the activities of organisms. Examples include burrows, tracks, trails, and borings. They can provide information about the types of organisms present and their behaviors.
8. **Concretions and Nodules:** Concretions and nodules are rounded, compact masses of mineral matter that form within sedimentary rocks. They often have a different composition from the surrounding rock and can result from the concentration of minerals around a nucleus, such as a shell fragment.
9. **Raindrop Impressions:** Raindrop impressions are small depressions on sediment surfaces caused by the impact of raindrops. They can indicate periods of intermittent wetness and can provide clues about the local climate and environment.
10. **Load Structures:** Load structures, such as load casts and flame structures, are formed when denser sediments sink into softer underlying sediments, displacing them in distinctive patterns. They are often seen in sandy or muddy environments.

These sedimentary structures offer a window into the Earth's past, allowing geologists to decipher ancient landscapes, water flow patterns, and environmental conditions that prevailed millions of years ago. By analyzing these structures, scientists can reconstruct the stories of how sedimentary rocks were formed and the processes that shaped them.

*Why was the sedimentary rock always invited to parties?*

*Because it was so down to earth!*

Minutes cont.

The Northwest Federation newsletter is now electronic and Frank will send it out to the members (make sure he has your correct email address)

The American Federation has a youth program, Sharon gets that newsletter and can send it out electronically to anyone who wants it

Share a rock: Roger showed lapis, Sheila had either jade or jasper, Johnie, Gene and Bob also shared

Break

Wirewrapping video

## Upcoming Events

November 19 -- our club auction! Bring lots of money!!

December 17 – Our annual Christmas dinner! More details to follow.

March – 2025 Club show. Start planning for your case and clearing your calendar. All hands on deck!

## Fossils in Sedimentary Rocks

Fossils are the remains, traces, or impressions of ancient plants, animals, and other organisms that are preserved in sedimentary rocks. They provide invaluable insights into the Earth's history, evolution of life forms, past environments, and the changes that have occurred over millions of years. Fossils can be found in various forms and can tell us a great deal about the organisms that lived long ago. Here are some key aspects of fossils in sedimentary rocks:

**Types of Fossils:**

1. **Body Fossils:** These are the actual remains of an organism, which can include bones, teeth, shells, leaves, and other hard or durable parts. Body fossils provide direct evidence of the organisms themselves and their physical characteristics.
2. **Trace Fossils:** Trace fossils are indirect evidence of organisms' activities, such as footprints, burrows, tunnels, and tracks. They offer insights into the behavior, movement, and interactions of ancient organisms.
3. **Petrified Fossils:** Petrified or mineralized fossils occur when the organic material of an organism is replaced by minerals over time. This process preserves the original structure of the organism but converts it into stone.
4. **Molds and Casts:** Molds are impressions left behind by an organism in sediment that later hardens. Casts are formed when the mold is filled with sediment or minerals, creating a replica of the original organism.

**Importance of Fossils:**

1. **Evolutionary Insight:** Fossils provide a record of the evolution of life on Earth. By studying the fossilized remains of different organisms, scientists can trace the development and changes in various species over time.
2. **Paleoenvironmental Reconstruction:** Fossils can reveal information about past environments, climates, and ecosystems. By analyzing the types of organisms present and their adaptations, scientists can reconstruct ancient landscapes and habitats.
3. **Stratigraphic Correlation:** Fossils play a critical role in dating and correlating rock layers. Certain fossils are associated with specific time periods, allowing geologists to determine the relative ages of rocks and establish a chronological sequence.
4. **Index Fossils:** Some fossils are particularly useful for dating and correlating rocks because they were widespread and existed for a relatively short period of time. These "index fossils" are used as markers in the geological record.
5. **Paleontological Research:** The study of fossils is a cornerstone of paleontology, helping scientists understand the diversity of life, extinctions, adaptations, and the history of different species.
6. **Educational Value:** Fossils capture the imagination and curiosity of people of all ages. They provide tangible evidence of life in the distant past and contribute to our understanding of the natural world.

Fossils are often found in sedimentary rocks because these rocks are typically formed in environments conducive to preservation, such as marine sediments, lake beds, and river floodplains. The process of fossilization involves the burial of organic material by sediment, which can prevent decomposition and allow for the preservation of intricate details.

The study of fossils is a multidisciplinary field that combines geology, biology, paleontology, and more. By examining the remains of ancient life, scientists can piece together the story of the Earth's history and the complex interactions between living organisms and their changing environments.

*Why was the geologist always so calm?*

*Because he had great sedimental value.*

## 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/

**Facebook Group:** Panorama Gem & Mineral Club

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).

### A Quick Note from The Editor (Glynis)

*Thank you to those who contributed to this issue. If you have a special story to share,* ***please*** *contribute to OUR newsletter! Send ideas for articles, internet finds, jokes, pictures, adventure stories, science articles or your own articles to me.* gghull@comcast.net

Guinevere says "Hi"!

### Refreshment Schedule for 2024

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

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

## Panorama Gem and Mineral Club: Organizational Chart

### Officers

| | | | |
|---|---|---|---|
| President: | Lynne Calvert | | 559-906-5923 |
| Vice-President: | Bob Bristow | | 509-935-4375 |
| Secretary: | Glynis Hull | gghull@comcast.net | 509-981-9714 |
| Treasurer: | Frank Stratton | | 509-207-8503 |
| Trustee 1: | Kevin Youngblood | | 509-680-0207 |
| Trustee 2: | Jim Peters | | 509-992-6921 |
| Trustee 3: | Cyndi Doppler | | 509-216-5473 |

### Committee Chairs

| | | | |
|---|---|---|---|
| Program Coordinator: | Sheila Stratton | | 509-207-8506 |
| Hospitality: | Betty Peters | | 509-992-6921 |
| Historian: | Sheila Stratton | | 509-207-8506 |
| Newsletter: | Glynis Hull | gghull@comcast.net | 509-981-9714 |
| Show Chair | Johnie Pitman | | 509-684-8887 |