

Hatrockhound Gazette 2023

PO Box 1122, Hermiston, Oregon 97838



Meetings at 6:30 on the 2nd
Tuesday of each month
First Christian Church of
Hermiston:
775 West Highland
(Go to back of church)

Officers:
President – Doug Gill
V. Pres. – Mike Filarski
Secretary – Trista Meek
Treasurer – Mel Lambert
Members at Large – Laura
Tiffany, Louise Lambert

Club Contact: Mike Filarski stonemorlin1@netscape.net 541-571-2593
Newsletter/Website – Judi Allison, 1701 NW 11th St, Hermiston, OR 97838 541-720-4950
Jall23.wixsite.com/hatrockhounds



Hatrockhounds Gem and Mineral Society is Affiliated with:

The Northwest Federation of Mineralogical Societies
And The American Federation of Mineralogical Societies



AFMS Rockhounds “Code of Ethics”

- I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.
- I will keep informed on all laws, regulations or rules governing collecting on public lands and will observe them.
- I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind such as fences, signs, buildings, etc.
- I will leave all gates as found.
- I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material - matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.
- I will not contaminate wells, creeks, or other water supplies.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
- I will cooperate with field-trip leaders and those in designated authority in all collecting areas.
- I will report to my club or federation officers, Bureau of Land Management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
- I will appreciate and protect our heritage of natural resources.
- I will observe the "Golden Rule", will use Good Outdoor Manners and will at all times conduct myself in a manner which will add to the stature and Public Image of Rockhounds everywhere.

Hatrockhound Gazette - January 2023 Issue

Meeting – January 10, 6:30 PM - Fossil Jeopardy

Help your team members form the questions and vie for the privilege of being the first to choose from the rock selection.

Treats by Randy Free and Karli Cook

December News

Our Christmas party brought out close to thirty people, even with the less than pleasant weather. Everyone enjoyed good food good company, a new gift exchange game and a number of fun rounds of rock BINGO. We were able to present the American Federation Rockhound of the Year and Junior Rockhound of the Year awards to Gordon Weber and Teddy Bunch. Congratulations and thanks, guys!



Let's mix up the gifts



President, Doug presenting Gordon and Teddy with their awards.

Hatrockhounds 2023 Calendar

January 10 – Fossil Jeopardy – Pit your team’s knowledge against two others to find out who gets to pick the rock prizes first.

February 14 - Heart Shaped Rocks – Do you have a special rock that is shaped like a heart? Bring it along and perhaps win a prize for the most “heartfelt” rock.

March 14 – Minerals. Lakeside member, Bill Hamel, will share some of his knowledge about minerals as well as some of his collection.

April 11 – Crystal Systems –Learn more about the 7 systems and how they relate to mineral identification. Match some crystals to their systems.

April 22-23 – Trip to the Owyhees – Led by Randy and Gordon.

April 29-30- Lakeside Show - Kennewick

May 9 – Maps and GPS – How can we make the most of maps in locating collecting areas?

May 12 Annual Show Setup. EOTEC Potluck for members & Dealers

May 13-14 Annual Gem and Mineral Show.

June 13 – Wire Wrapping – It is always fun to learn new techniques. Let’s see what we can create.

July 11 – Matching Game-Test your knowledge about rock and minerals. Can you match the descriptions to the actual items?

August 3-6 – NFMS/AFMS Show – Billings, Montana

August 19 (Saturday) - Picnic and Silent Auction – Come relax in the Park. Enjoy a potluck lunch with the main dish supplied by the club. After lunch, try your hand at winning a bid for your favorite rock (There is no regular Tuesday meeting in August.)

September 12 – Gold Panning – Can you get rich panning gold? Tips, tricks and techniques for some fun trying.

October 10 - Annual Rock Costume Contest - Your creative juices may come up with a winner such as "pop rocks", "two faced guy" or "punk rock". There are three prizes: 1st place, 2nd place and most creative story, so come join the fun.

November 14 - "I Did It" Contest - You may enter this contest three times, as there are three categories: "I Made It", "I Found It" and "I Bought It". Items must be within the last year. Winners of each category receive a plaque

December 12 - Annual Christmas Party - Come enjoy good company, good food and fun times. We generally play "rock BINGO" and have a rock related gift exchange. The Club furnishes a main dish, drinks and all the utensils.

There were no formal meetings in December. For information about our club and a copy of the calendar go to the website jall23.wix.com/hatrockhounds

Calcite Mineral's Magical Properties

October 7, 2022

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Iceland Spar

Calcite mineral properties make this a useful and magical stone. It is one of the most common minerals on earth. Usually white, calcite is a member of the carbonate mineral group and is found in a wide variety of localities and in fine colors which add to its popularity as a collector mineral. Limestone and marble are mainly calcite so it is one of the most common minerals for sheer volume and quantity. Double-refracting calcite was used in the Norden bomb site in World War II.

It is found in over 300 different, sometimes complex, crystal forms including double-refracting calcite. It offers collectors a shelf full of beautiful crystal forms from simple hexagons to butterfly twins, scalenohedrons, rhombs and a massive banded monochromatic alabaster that has been used for millennia.

A Calcite Properties Mystery

How did the ancient Vikings cross the north Atlantic Ocean out of sight of land on cloudy days and determine directions accurately for weeks without a compass? Can a magical property of calcite solve this question?

As early as the 800s A.D., the Vikings were sailing west for many days out of sight of land as they crossed the Atlantic and found Iceland. Granted the Chinese had developed the magnetic compass as early as 800 B.C. and maybe earlier. But, their magnetic compass did not reach Europe and the West until just before 1200 A.D.

The Vikings were already experienced sailors using the sun to stay on course. But what about those days, sometimes weeks, in the North Atlantic when the sky was densely overcast and the sun only a memory? In extreme northern Europe or Asia, summer nights experience prolonged periods of twilight after the sun has set. Viking sailors had to deal with this phenomenon yet could sail west accurately. How? The answer seems to be the Vikings solved the mystery of navigating without a compass by using double-refracting Iceland spar to find the sun and determine direction.

Double Refracting Iceland Spar

To understand double refracting Iceland spar we get into such science terms as refractive index, polarization and birefringence.

We already know when you look at a single letter or line through a clear rhomb of Iceland spar you see a double image. This is because light is not organized as it travels randomly in waves of different lengths and directions. What Iceland spar does is organize or polarize the light waves so they are in two linear groups that move in slightly diverging directions so the image is doubled. One of the images may be a bit stronger than the other. In crystallography, we organize or polarize light passing into an unknown mineral and call it birefringence. Each mineral differs in polarizing light or birefringence so we use it to identify minerals.

But how can the polarizing birefringence property of Iceland spar be used to locate the sun when the sun is not visible? Despite being overcast, the sun's unseen light rays do come through. Only an eclipse of the sun by the moon can make the earth's atmosphere dark.

What the Vikings learned is that if you scan a piece of Iceland spar across the sky the source of light rays, the sun, will pass into and through the Iceland spar as two organized light rays. These show up giving you the sun's position. Tests have shown the Iceland spar method will identify the sun's position within four degrees of its actual position. That's close enough to serve as a navigation guide. The Vikings referred to a "sunstone" in their lore and stories. Could it be Iceland spar?

Iceland Spar Today

Do we have any uses for Iceland spar today? Of course. During World War II, the most accurate bombsight we had used the polarizing properties of Iceland spar for more accurate bomb aiming.

Though Iceland spar may seem mysterious, there is nothing mysterious about the beauty and great variety of well-crystallized calcite. Iceland spar is most often seen as a rhombic cleavage, not a crystal. When a calcite crystal is shattered every little piece takes on the same rhombic shape. It was this property of calcite that helped French scientist Rene Just Hauy in his establishment of the Science of Crystallography.

Calcite Forms

Calcite, like all other minerals, falls in one of the six crystal systems: cubic, monoclinic, triclinic, orthorhombic, tetragonal and hexagonal. Of these, calcite was assigned to the hexagonal system. As scientists delved deeper into these systems they realized there were problems with the hexagonal system, especially with calcite.

Many calcite crystals exhibit the classic six-sided crystal, clearly hexagonal. Yet calcite commonly exhibits a different crystal form, a rhombohedron. Calcite crystals from Tsumeb and Iceland show this form. Scientists realized internally some calcite crystals had six internal axes that formed the hexagon.

Some calcites only had three axes and their crystals reflected this. A subdivision was added to the crystal system, trigonal. Some list this as a seventh system while others pair it up with hexagon within the hexagonal system. Calcite may be hexagon or trigonal.

Does this mean calcite is being mysterious again or is there a simple explanation? Scientists figured it out. It is the stability of the calcite during crystal growth that influences what grows. Differences in temperature and pressure affect calcite's crystal form. The different forms of calcite are determined by the environment and stability and can be charted. The known crystal forms of calcite are placed on a sliding scale of increasing or decreasing temperature and pressure. This is charted on page 534 in Ivan Kostov's superb book "Mineralogy" published by Oliver and Lord, London, 1968. The chart shows the effect of temperature on calcite crystal forms.

Calcite Mineral Today

Calcite is still one of the more popular collector minerals. New sources, like mines in China, have yielded amazing specimens including intensely pink crystals. Some collectors specialize in this calcium carbonate.

The role minerals have played in the movement of people around the world is well known. Gold rushes, the search for diamonds, the prospecting for uranium and other minerals are still with us. Yet, of all these important movements and migrations, it is significant that a simple calcite rhomb could be responsible for the Vikings navigating the open oceans and discovering the New World. Calcite should take its place among the more important minerals in the history of mankind.

This story about calcite mineral properties appeared in Rock & Gem magazine. [Click here to subscribe.](#) Story by Bob Jones.

Is Ice a Mineral or Not?

December 26, 2022

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Is ice a mineral? It's transparent to translucent, usually colorless or white, but sometimes slightly bluish. It has a vitreous luster, a widely variable hardness, and low specific gravity of less than 1.0. It occurs in both massive and crystalline forms and is unstable even at moderately elevated temperatures.

Yes. Ice is a mineral — not the first thing that comes to mind when discussing minerals. Pin this post to save this information for later.

Ice is something we either love or hate. It's great for figure skating, iced tea and bourbon, but not for water pipes, windshields and highways. Ice is often thought of as "frozen water" rather than a mineral, and certainly not as a collectible mineral. But those who do collect ice travel thousands of miles, endure difficult conditions and spend millions of dollars to do it.

Why Is Ice a Mineral?

Minerals are defined as natural, inorganic, solid materials with definite chemical compositions and orderly atomic structures. Ice is a natural, solid dihydrogen oxide (H₂O) that crystallizes in the hexagonal system. To further its mineral credentials, it is assigned the Dana mineral classification number 04.01.02.01 and rates four pages of mineralogical description in the 7th edition of Dana's System of Mineralogy.

Water, however, is not a mineral, being liquid at ambient temperatures and lacking both solidity and a crystalline structure. (Mercury is a grandfathered exception to this rule.) Like opal and obsidian, water is a mineraloid—a mineral-like material that fails to meet all mineral qualifications. The transformation of liquid water to solid ice and vice versa is explained by molecular structure and hydrogen bonding. (Find the balance of this article by Steve Voynick in a copy of the Rock and Gem Magazine.)