Skagit Gems

August 2016
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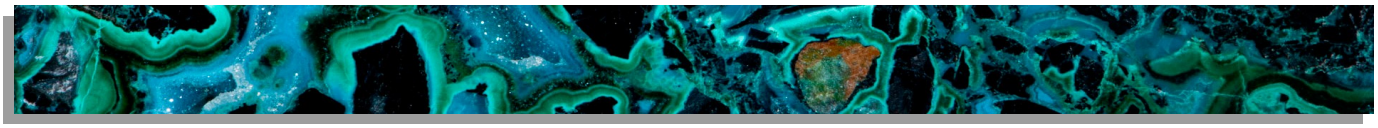

Skagit Rock & Gem Club

Upcoming Events

Aug 6th: Meeting 10am
Aug 13th: Potluck at Joanie's
Aug 27 or 28: Field Trip to Greg's in Marblemount

A crystal or crystalline solid is a solid material whose constituents, such as atoms, molecules or ions, are arranged in a highly ordered microscopic structure, forming a crystal lattice that extends in all directions. In addition, macroscopic single crystals are usually identifiable by their geometrical shape, consisting of flat faces with specific, characteristic orientations. The scientific study of crystals and crystal formation is known as crystallography.

Most minerals occur naturally as crystals. Every crystal has an orderly, internal pattern of atoms, with a distinctive way of locking new atoms into that pattern to repeat it again and again. The shape of the resulting crystal-such as a cube (like salt) or a six-sided form (like a snowflake)-mirrors the internal arrangement of the atoms. As crystals grow, differences in temperature and chemical composition cause fascinating variations. But people will rarely find in their backyard the perfectly shaped mineral crystals that they see in a museum. This is because in order to readily show their geometric form and flat surfaces, crystals need ideal growing conditions and room to grow. When many different crystals grow near each other, they mesh together to form a conglomerated mass. This is the case with most rocks, such as granite, which is made up of many tiny mineral crystals.

Spherocobaltite Crystal

The internal arrangement of atoms determines all the minerals' chemical and physical properties, including color. Light interacts with different atoms to create different colors. Many minerals are colorless in their pure state; however, impurities of the atomic structure cause color. Quartz, for example, is normally colorless, but occurs in a range of colors from pink to brown to the deep purple of amethyst, depending on the number and type of impurities in its structure. In its colorless state, quartz resembles ice. In fact, the root for crystal comes from the Greek word 'krystallos' ice because the ancient Greeks believed clear

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President's Message

Hi Everyone, I hope to see you on the 6th and on the 13th for the BBQ. We will soon be planning for our club's rock show in November.

---Eric Self

Next Meeting

August 6th 10am

Gem of the Month:

Crystals and Quartz

Potluck at Joanie's Aug 13th @ Noon

We will be having a secret rock swap so bring a WRAPPED rock if you want to participate. We will draw numbers and everyone will go home with a new treasure.

Joanie is providing the main dishes so just bring a side dish or dessert.

24251 Alexander St. Sedro Woolley, WA

Field Trip to Marblemount

Aug 27 or 28: Greg is graciously letting us come to his house again for a field trip on the nearby Skagit River. It is a easy walk down a level path to the river bank. We enjoyed it so much last year we're going again. We can go to Jordan Creek as well, but it takes climbing down the bank a little. Bring tools, bucket, water shoes. More info at the meeting...

Club Dues are Due in Sept.

Our club's year runs Sept. thru August

Dues are $15.00/yr per adult and $7.50/yr per child under age 16.

Please pay by the Sept. 3rd meeting. You can also send a check to the treasurer

David Britten 612 Greenleaf Ave
Burlington, WA 98233

A great time at the

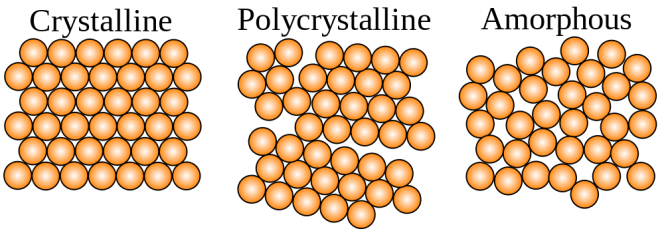
Vandenburgs on July 9th.

Thank you Danny and LaVonda!!!!

Ziva riding the horse

Continued from pg 1

quartz was ice frozen so hard it could not melt.
Scientists typically describe crystals as "growing," even though they are not alive. In subterranean gardens, they branch and bristle as trillions of atoms connect in regular three-dimensional patterns. Each crystal starts small and grows as more atoms are added. Many grow from water rich in dissolved minerals, but they also grow from melted rock and even vapor. Under the influence of different temperatures and pressures, atoms combine in an amazing array of crystal shapes. In crystals, these repeated patterns occur within the basic atomic structure and reflect the pattern of faces of the crystal. You often can see the characteristic symmetry of a mineral crystal with the naked eye, but if the crystal is tiny, then you may need to look at it with a magnifying glass or microscope. Recognizing symmetrical patterns in crystals may be difficult at first, but experience helps: the more specimens you look at, the more symmetry-and crystals-you will recognize. However, some specimens do not have well-formed crystals and are difficult even for experts to classify.



The scientific definition of a "crystal" is based on the microscopic arrangement of atoms inside it, called the crystal structure. A crystal is a solid where the atoms form a periodic arrangement.

Not all solids are crystals. For example, when liquid water starts freezing, the phase change begins with small ice crystals that grow until they fuse, forming a polycrystalline structure. In the final block of ice, each of the small crystals (called "crystallites" or "grains") is a true crystal with a periodic arrangement of atoms, but the whole polycrystal does not have a periodic arrangement of atoms, because the periodic pattern is broken at the grain boundaries. Most macroscopic inorganic solids are polycrystalline, including almost all metals, ceramics, ice, rocks, etc. Solids that are neither crystalline nor polycrystalline, such as glass, are called amorphous solids, also called glassy, vitreous, or non-crystalline. These have no periodic order, even microscopically. There are distinct differences between crystalline solids and amorphous solids: most notably, the process of forming a glass does not release the latent heat of fusion, but forming a crystal does.

By volume and weight, the largest concentrations of crystals in the Earth are part of its solid bedrock. Crystals found in rocks typically range in size from a fraction of a millimeter to several centimeters across, although exceptionally large crystals are occasionally found. For example, selenite crystals in excess of 10 meters are found in the Cave of the Crystals in Naica, Mexico. (see picture on next page)

Some crystals have formed by magmatic and metamorphic processes, giving origin to large masses of crystalline rock. The vast majority of igneous rocks are formed from molten magma and the degree of crystallization depends primarily on the conditions under which they solidified. Such rocks as granite, which have cooled very slowly and under great pressures, have completely crystallized; but many kinds of lava were poured out at the surface and cooled very rapidly, and in this latter group a small amount of amorphous or glassy matter is common. Other crystalline rocks, the metamorphic rocks such as marbles, mica-schists and quartzites, are recrystallized. This means that they were at first fragmental rocks like limestone, shale and sandstone and have never been in a molten condition nor entirely in solution, but the high temperature and pressure conditions of metamorphism have acted on them by erasing their original structures and inducing recrystallization in the solid state. Other rock crystals have formed out of precipitation from fluids, commonly water, to form druses or quartz veins. The evaporites such as halite, gypsum and some limestones have been deposited from aqueous solution, mostly owing to evaporation in arid climates. Excerpts from geologypage.com

Board Meeting Minutes June 4th, 2016

- President Eric is taking the day off so Vice President Greg called the meeting to order at 9:15
- **Members Present:** Greg Hochmuht, Debbie Frank, Dave Britten, Linda Keltz, Virgil Keltz
- **Members absent:** Susan May, Eric Self
- **Board Meeting Minutes:** Approved as printed in the newsletter
- **Treasurer's report:** Read by Dave and approved
- **Old Business:** The club's old box truck will be towed to Eric's by the 15th. The tables are still at the Bever's so they need to get moved to the shop.
- **New Business:** Brian Hawes will be representing the club at the Federation Show in Albany Oregon. Debbie will contact the food vendor from the Bellingham show about possibly working our show. Advertising for the show is very expensive in the Herald so we may adjust our budget .
- Meeting adjourned at 9:50

General Meeting Minutes June 4th, 2016

- Vice President Greg called the meeting to order at 10:05
- **Guests:** Joel, Emily and their son Orsen visited today.
- **Meeting Minutes:** Approved as printed in the newsletter
- **Treasurer's report:** Read by Dave and approved.
- **Program:** Dave presented the second half of a fun video on the search for diamonds in Canada
- **Displayer Table:** David, Wes, Janet, Joel, Peggy, Gayle, Greg, Virgil, Marie-Claire, Merrilee and Frank. Merrilee won a prize. Thank you for sharing!
- **Refreshments:** Thank you to Linda and Greg!
- Meeting adjourned at 11:30
- Submitted by Debbie Frank

Cave of the Crystals

Naica, Mexico

Mineral Council Field Trips

***Always contact the host club before attending their field trip

Date	Host	Site	Meeting Place & Time	Material	Tools
8/20-21	CAS	Greenwater	9:00 @ Enumclaw Ranger Stn	Agate & Jasper	Dig & Hard rock
9/10-11	POW	Teanaway	8:00 @ Teanaway Camp	Geodes, Agate, Jade	Dig & Hard rock
9/24	CAS	Little Naches	9:00 @ Enumclaw Ranger Stn	T. Eggs & Lilypad Jade	Dig & Hard rock

Cas = Cascade Mineralogical Society — Tony Johnson— (253) 863-9238

Pow = All Rockhounds PowWow Club — Larry Vess—vessel3755@gmail,com (253) 473-3908

Different Colors of Quartz

Local Gem Shows in August

12th 10am—8pm
13th 10am—8pm
14th 10am—6pm

Port Townsend Rock Club Annual Rock, Gem, & Mineral Show in conjunction with the Jefferson County Fair
Jefferson County Fairgrounds
4907 Landers Street Port Townsend WA 98368

13th 9am—5pm
14th 10am—5pm

Maplewood Rock and Gem Club
Annual Rock and Mineral Sale
Maplewood Rock and Gem Clubhouse
8802 196th ST SW Edmonds WA

@@For a full list of Gem Shows and Field Trips go to the club's website: skagitrockandgem.com

Officers and Committees

President	Eric Self
Vice President	Greg Hochmuht
Treasurer	David Britten
Secretary	Susan May
Fed Director	Virgil Keltz
Bulletin Ed	Debbie Frank
Past President	Linda Keltz

Annual Show Chair-Eric Self
Banquet- The Women
Display Table-Open
Education Coordinator-Open
Facilities/Field Trips- Dave Britten
Greeter-Linda Keltz
Library-David Britten
Scholarship-Nona Avery, Joe Kantor
Mineral Council & PLAC-Open
NFMS Competition-Open
Nominating Committee-Executive Board
Program-Open
Publicity-Frank Isca
Stamps-Virgil Keltz
Sunshine-
Swap-Vandenburgs
Ways & Means-Executive Board

Every Committee that says 'OPEN' is an opportunity to help!

VISITORS ARE ALWAYS WELCOME

Meetings are on the FIRST Saturday of the month (except for Jan, July and Dec) at 10:00 am at the Mount Vernon Community (Senior) Center
1401 Cleveland St. Mount Vernon WA 98273

- The purpose of this non-profit earth society shall be to stimulate interest in the study of geology, lapidary, and the collection of geological specimens
- We are a member of the Northwest Federation of Mineralogical Societies and the Washington State Mineral Council. We are affiliated with the American Federation of Mineralogical Societies.
- Dues are $15.00 per year for adults and $7.50 for those under age 16
- Visit our website: skagitrockandgem.com
- Email: skagitrockandgem@gmail.com
- Mailing address: PO BOX 244 Mt. Vernon 98273

Refreshments	Schedule	
February	Debbie Frank	Eric Self
March	Francie Hansen	Jenny Miller
April	Peggy Peterson	Janet Garner
May	Nona Avery	Marie-Claire Dole
June	Greg Hochmuht	Linda Keltz
July	Potluck & Swap	
August	Susan May	Frank Isca
Sept	Violet Munion	Margo Perry
Oct	Marion Melville	Lee Tennefoss
Nov	Joanie Self	David Britten
Dec	Xmas Potluck	
Bringing snacks not manadatory, only if you're able		

Skagit Rock and Gem Club
Debbie Frank, Editor
20379 Aliston Ln.
Burlington WA 98233