

MAPLEWOOD

Rock & Gem Club

Number 59, Volume 02

SEE IT IN COLOR ONLINE!
www.maplewoodrockclub.com
February General Meeting

Monday the 20th, 7PM at the Clubhouse.
Rock of the Month is **Fluorite**.

MAPLEWOOD ROCK AND GEM CLUB FEBRUARY 2012 NEWSLETTER

BENCH TIPS from Brad Smith.

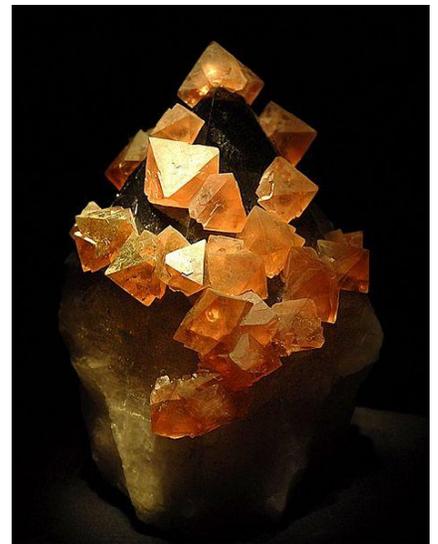
The round, stronger toothpicks have a multitude of uses on the jewelry bench. I use them for mixing epoxy resin, for applying paste solder, with Zam for polishing in tight spots, and with a bit of beeswax for holding small stones. They're particularly good for testing the fit of a small faceted stone in a prong or tube set finding. What have you tried them for? **Brad Smith** brad@greenheart.com

Fluorite CaF_2

The many colors of fluorite.



Fluorite may occur as a vein deposit, especially with metallic minerals, where it often forms a part of the **gangue** (the surrounding "host-rock" in which valuable minerals occur) and may be associated with **galena**, **sphalerite**, **barite**, **quartz**, and **calcite**. It is a common mineral in deposits of **hydrothermal** origin and has been noted as a primary mineral in **granites** and other **igneous rocks** and as a



common minor constituent of **dolostone** and **limestone**.

In the **United States**, deposits are found in **Missouri**, **Oklahoma**, **Illinois**, **Kentucky**, **Colorado**, **New Mexico**, **Arizona**, **Ohio**, **New Hampshire**, **New York**, **Alaska**, and **Texas**. Fluorite has been the **state mineral** of **Illinois** since 1965. At that time, Illinois was the largest producer of fluorite in the United States, but the last fluorite mine in Illinois was closed in 1995.

One of the largest deposits of fluorite in North America is located in the [Burin Peninsula, Newfoundland, Canada](#).

Cubic crystals up to 20 cm across have been found at [Dalnegorsk](#), Russia. The largest documented single crystal of fluorite was a cube 2.12 m in size and weighed ~16 tonnes.

One of the most famous of the older-known localities of fluorite is [Castleton in Derbyshire, England](#), where, under the name of **Derbyshire Blue John**, purple-blue fluorite was extracted from several mines or caves, including the famous [Blue John Cavern](#). During the 19th century, this attractive fluorite was mined for its ornamental value. The name derives from French "*bleu et jaune*" (blue and yellow) characterising its color. The mineral Blue John is now scarce, and only a few hundred kilograms are mined each year for ornamental and [lapidary](#) use. Mining still takes place in both the Blue John Cavern and the nearby [Treak Cliff Cavern](#).

Uses. Natural fluorite mineral has ornamental and [lapidary](#) uses. Fluorite may be drilled into beads and used in jewelry, although due to its relative softness it is not widely used as a semiprecious stone.

Industrial grades. There are three principal types of industrial use for natural fluorite, corresponding to different grades of purity. Metallurgical grade fluorite (60–85% CaF_2), the lowest of the three grades, has traditionally been used as a [flux](#) to lower the melting point of raw materials in [steel](#) production to aid the removal of impurities, and later in the production of [aluminium](#). Ceramic grade fluorite (85–95% CaF_2) is used in the manufacture of [opalescent glass](#), [enamels](#) and cooking utensils. The highest grade, "acid grade fluorite" (97% or more CaF_2), accounts for about 95% of fluorite consumption in the US where it is used to make [hydrogen fluoride](#) and [hydrofluoric acid](#) by reacting the fluorite with [sulfuric acid](#).

Internationally, acid-grade fluorite is also used in the production of AlF_3 and [cryolite](#) (Na_3AlF_6), which are the main fluorine compounds used in aluminium smelting. [Alumina](#) is dissolved in a bath that consists primarily of molten Na_3AlF_6 , AlF_3 , and fluorites to allow electrolytic recovery of aluminium. Fluorine losses are replaced entirely by the addition of AlF_3 , the majority of which will react with excess sodium from the alumina to form Na_3AlF_6 .

OPTICS Synthetically grown fluorite (calcium fluoride crystal) is used instead of glass in some high-performance [telescopes](#) and [camera lens](#) elements.

Fluorite has a very low [dispersion](#), so lenses made from it exhibit less [chromatic aberration](#) than those made of ordinary glass.

Exposure tools for the [semiconductor](#) industry make use of fluorite optical elements for [ultraviolet light](#) at [wavelengths](#) of about 157 [nanometers](#). Fluorite has a uniquely high transparency at this wavelength.



Hi, folks. Here are a few pics from Friday's Westgate Elementary school science fair.

Layton had many students and adults impressed with our junior member's outstanding rock and fossil collection. Howard's bug collection was a huge hit, with his many specimens of butterflies, moths, spiders and beetles, as well as his collection tools and mountings in process. It was a busy two hours, but it went quickly! Howard's coprolite got the expected response/squeals, and the shiny lure of pyrite was a sure hits with the kids. That's the way it goes when rockhounds get to share favorite collecting locations, and to talk about the interesting finds in our displays.

Flyers were picked up for both upcoming August sale and the November show. There were nice compliments from previous visitors on our shows, and there was a lot of interest expressed from others to visit as we talked of our club collecting trips and our active lapidary shop.

Cheers! Emily M.



Cut and polished Flourite.



Fluorescing Flourite!



Local Area Shows February and March 2012

February 25&26 10AM-5PM sponsored by the **Idaho Gem & Mineral Club** at the **Expo Idaho Fairgrounds 5610 Glenwood & Chinden Boise, Idaho**

March 3&4 9AM-6PM sponsored by the **Owyhee Gem & Mineral Society** at the **O'Conner Field House Canyon Co. Fairgrounds 2200 Blaine Caldwell, Idaho**

March 10&11 9AM-5PM sponsored by the **Magic Valley Gem Club** at the **Twin Falls Co. Fairgrounds, 215 Fair Ave. Filer, Idaho**

March 17&18 10AM-5PM sponsored by the **North Seattle Lapidary And Mineral Club** at the **Lake City Community Center 12531 28th Ave NE, Seattle, WA**

March 30-31 8:30AM-5PM sponsored by the **Panorama Gem & Mineral Club** at the **Fort Colville Grange Hall one mile east of junction US 395 & Hwy 20, Colville WA Bill Allen 509-935-8779**

March 31-April 1 10AM-5PM sponsored by the **Sweet Home Rock & Mineral Club** at the **Sweet Home High School Gym 1641 Long St. Sweet Home OR**

Happy Birthday to our amethyst members! Stan A., Jenna B., Jeremy F., Kim L., and Jim M. Congratulations on another trip around the Sun! Way to go!

Highlights from the January general meeting.

Meeting called to order by outgoing President Dennis Borden at 7:05 pm. Dennis then turned gavel over to incoming President Bev Ryder

Guests: Melanie, John, and Amy. Amy won the guest drawing. Junior drawing: Muriel and Ethan
Member drawing: 23 three members signed book. Tom W. wins

Bev Ryder Announcements: Padlock left over from Nov. sale. Snack duty list for 2012 posted on kitchen refrigerator. ROM 2012 sign-up posted on bulletin board

John Wolfe Newsletter: Has sign-up sheet for members wanting newsletters either mailed or emailed to them. Articles, photos and suggestions welcome! stableplatform@gmail.com.

Rock-of-Month: Beth H. presented **Kyanite**. It's name is derived kuanos meaning deep blue. It is an Aluminum Silicate. It is typically found as different shades of blue from light to dark blue. It can be



found in association with other mineral such as quartz and garnet. It can also be found as orange, white, grey, and green. It is found all over the world and as close a Skagit county. It has a high heat capacity of 1400 degrees and is mined and for industry uses such as porcelain spark plug insulators. Kyanite crytals have an unusual hardness property. The longitudinal direction is 4.5-5 and 6.5-7 across the short transverse direction. This makes it difficult to cut and use as a gemstone. It is used as a healing crystal and is one of the few minerals not needing 'spiritual cleansing'



Jim Miller Mineral Council: addressed State House Bill 2600 and the companion State Senate Bill 6057. These concern rock hounding on State lands and will be presented Jan. 27, 2012. Jim has petitions to sign and recommended contacting your legislators regarding support of these bills.

Derald Borth: **Induction of 2012-2013 officers and board members.** Thank you all so very much!



Derald B., Bev R., Tracy B., Jim M., Don W., Mary Ann C. Anna T. Norm I., John H., Michael C.
Renew your membership !

Chris H. Field Trips: announced Field Trip leaders Jim M, Nancy R, and Don W. Eight field trips have been planned for 2012. Trips will range from class 1 to class 5. Among the planned trips are Saddle Mountain, Denny Creek, So. Skagit Quarry, Tower Hill, and Phiney Creek Road. Chris also mentioned the possibility of different climbing, rope, and navigating classes. All field trip information will be on the MRGC website. Participants will need to sign-up ahead of time for field trips. (Please see related story about Spruce Ridge claim.)

Show and Tell Juniors: Murial showed hard rock found in back yard that broke dad's rock hammer

Show and Tell Adults:

Tom W: showed rocks from Stubbs Hill, Sultan field trip. Jasper found along road both as found and nicely tumble polished - red with streaks and red with green.

Mary Ann C: showed couple pieces of Kyanite. (photo right) One is silver wrapped for a necklace

Dennis B: had bags of tumbled agates. Also sphere and polished pieces he'd made of oldest rock in world 4.3 billion years old.

John H: showed youngnite purchased at the Nov. Sale and identified by Facets in Newport, OR. Part of the youngnite was polished to bring out highlights. Also various jade pieces including one shaped like a big foot and another like a huge clam, serpentine, and carnelian from Studebaker Creek.



He was especially happy to show a polished serpentine piece. The **serpentine group** describes a group of common [rock-forming hydrous magnesium iron phyllosilicate](#) ($(\text{Mg, Fe})_3\text{Si}_2\text{O}_5(\text{OH})_4$) [minerals](#); they may contain minor amounts of other elements including [chromium](#), [manganese](#), [cobalt](#) and [nickel](#). In [mineralogy](#) and [gemology](#), serpentine may refer to any of 20 varieties belonging to the serpentine group. Owing to admixture, these varieties are not always easy to individualize, and distinctions are not usually made. There are three important mineral [polymorphs](#) of serpentine: [antigorite](#), [chrysotile](#) and lizardite

Many types of serpentine have been used for [jewelry](#) and [hardstone carving](#), sometimes under the name *false jade* or *Teton jade*.

Credits to Wikipedia for photographic and written content on fluorite, kyanite and serpentine.

THE FIELD TRIP OF A LIFETIME: THE SPRUCE CLAIM

Face it, my garage is a disaster area. Even on a good day, it's packed with teetering boxes of rocks and crystals and books and all kinds of other knick knacks. Of course, I've grown perfectly accustomed to the decor, and even find beauty in the chaos (but I have to look really hard). Occasionally, one of my neighbors will happen by when I have the garage door opened. When they recover from the shock and can breath on their own again, they notice the rocks...everywhere. Some just say a prayer for my wife and continue on their way. Sometimes I'm delighted to find that one person sheepishly looking over my shoulder is another rock enthusiast who stumbled upon my trove purely by chance! When that happens, all kinds of fish stories come out of the wood work about *this great jade place*, or *that secret thunder egg paradise*, etc.

One Saturday afternoon, I was surprised to find my next door neighbor peering over my shoulder into the abyssal nightmare of my garage. He began confessing his lifelong (and hidden!) obsession with rocks. He had been collecting for decades. We knew the same places, though we both learned new secret spots from our collaboration that day. Before leaving, he commented that none of the sites he visited could compare to one very special location, one that produced egg-sized pyrite crystals...well, that was a *whale* story. I had to see it for myself. Welcome to the *Spruce Claim*.

Bob Jackson discovered fantastic crystals of quartz and pyrite that became the Spruce Claim by accident, when he was a geology graduate student. He ran into a group of prospecting geologists while exploring the Snoqualmie Batholith behind Snoqualmie Mountain. They had already surveyed most of the valley, but discovered little in the way of commercially important ore deposits. Across the valley, East of Garfield Peak, they stumbled on a gully rich in pyrite and quartz. After investing days climbing up and down the steep crags, they realized there wasn't anything but the quartz and pyrite, and retreated, angry at having wasted precious time in that miserable place.

Bob returned home, but was fascinated by the prospect of finding crystals. He decided to go back to the geologists camp the next day, bringing dinner for them. While munching the tasty meal, they provided more details about the crystal gulley and specific directions. The next morning, Bob set out to have a look for himself.

He climbed the steep terrain by scrambling. After just a few minutes, he discovered a small hole on the steep forest floor. Very little effort was required to pry it open for a better look. It was much bigger than he expected. Bob had discovered a large vug, filled with perfect quartz and pyrite crystals. It was easy to break off a sizable plate. It barely fit into his pack, but he managed to climb down safely. The next day, he took the specimen to his geology professor at the University of Washington, who offered \$2000 on the spot. According to Bob, "if I turned down a deal like that, there would have been two fools in the room". His tuition that year at the University was \$1400, demonstrating the value of his discovery. He immediately filed a claim.

Bob's timing was impeccable. Until then, land in this part of the North Cascades could be purchased as part of the claiming process. It was the final year this program was offered by the federal government. Bob became one of the last people in the country with the option to purchase claimed property. He now owns the Spruce claim like we own our back yards.

He began mining, at first by himself. He learned where the best specimens would likely occur, how to blast away the hard country rock in these regions without destroying the treasures inside, and how to get people to buy them, which turned out to be the easiest part.

The Spruce Claim produces some of the most stunning mineralogical specimens in the world. Many of Bob's discoveries are in national museums of several countries, including our own Smithsonian. Private collectors have paid \$10,000 and more for single piece. He also sells some of what he finds at many rock and gem shows, such as the Tuscon exposition, where he makes more affordable pieces available to everyone.



For those who have time, endurance and money (\$400 per person), he also offers trips to the claim, where lucky customers can dig all day and carry out as much as they can carry out. Only a few dozen people are chosen every year, and reservations have to be booked a year in advance...but the clock is ticking...

In preparation for his retirement, Bob is in the process of transferring Spruce to a group of private collectors. Anyone can become a part of this elite group for a one time fee of \$12,000. When the group reaches 21 members, the yearly trips will no longer be offered. Spruce will be closed to the public for good. As of today, places for only 10 private collectors remain.

This year, Bob offered the Spruce trip to 24 people; I was fortunate enough to have been a part of that. I managed to hobble down that climbers path with nearly 110 pounds of pyrite and quartz. Those treasures were amazing and I'll be cleaning them up for years to come, but the most valuable part of that experience was a chance to see where these incredible specimens originate, and then getting the chance to coax them out of the ground myself with chisels, hammers and TLC.

Chris Herter
Field Trip Director
MRGC

**WASHINGTON STATE
MINERAL COUNCIL FIELD TRIPS**

www.mineralcouncil.org

No 2012 field trips are schedules yet.

**Mineral Council calendars are available for
\$10 at our February meeting.**



**Maplewood Rock and Gem Club
P.O. Box 5657 Lynnwood, WA 98046-5657**