The CMS Tumbler

March 2023

The monthly newsletter of the Cascade Mineralogical Society, Inc., Kent, Washington

Next Meeting:
March 9, 2023
7:00 p.m.

American Legion Hall
25406 97th Pl S
Kent, WA

The Program is Rock & Mineral Identification

The Show & Tell Theme is Something You Want Identified

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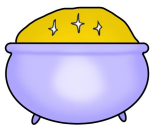
Connect with us!

Website: https://www.cascademineralogicalsociety.org
Club Facebook: https://www.facebook.com/CasMinSoc/
Facebook Groups: https://www.facebook.com/groups/1168207926650075
Show Facebook: https://www.facebook.com/cascadegemandmineralshow
Instagram: https://www.instagram.com/cascaderockclub/
YouTube Channel (Please like and subscribe):
https://www.youtube.com/channel/UCaGIJxaWFAtV_JjgZRm9ESA

This month remember
to wish a
Happy Birthday to
Christina Loperman on March 5
Ariyana Bennett on March 7
Soraya Deeser on March 7
Aidan Cerenzie on March 10
Linda Nash on March 11
Jordan Tyler Reed on March 11
Alaina Pelton on March 15
Scott Medlin on March 17
Bill Davis on March 18
Lloyd Shoemaker on March 18
Paul Ahnberg on March 22
Julie Galliani Manso on March 27
Gina Lisak on March 28
Jacqueline Pattie on March 31
and also remember
to wish a
Happy Anniversary to
John & Brenda Haworth on March 28 (59 years)
Morgan Dale & Nora Quinn on March 29



Tips, suggestions, recipes and experiments printed in this newsletter are the experiences and/or opinions of the individuals submitting them. We are not responsible for their authenticity, safety, or reliability. Caution and safety should always be practiced when trying out any new idea.

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Postal, or Email, Exchange Bulletins are welcome.
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Show Display Case Presenters Peggy Shashy	904-655-3241	14thebirds@bellsouth.net
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Show Event Volunteer Recruiter		
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Spinning Wheel Angie & Brian Bayer	253-569-0245	Text to her number (no email)
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Raffle Master Roger Pullen	206-387-3214	Phone calls only. No email or texting.
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Instagram Gina Manso	425-281-3502	ginamanso51@gmail.com
All Other Social Media Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
West Seattle Timebank Volunteers Linda Jorza	206-478-1642	ljorza@gmail.com
Videographer – YouTube Channel	Vacant	

2023 CMS Dues are $30 per year per family
Pay online, by mail, or at our meetings.
New mailing address: Cascade Mineralogical Society, c/o Ananda Cooley, 300 Lenora St. - PMB 6145, Seattle, WA 98121
You can pay your dues via credit card!! We now accept all cards through our website or at the meeting.
You can renew your membership or enroll as a new member and pay your dues all in one shot online. You will find it under the “Membership” tab on our website. http://www.cascademineralogicalsociety.org

The object of the Society shall be to stimulate interest in the study of the earth sciences, lapidary arts and related subjects. This Society is affiliated with the American Federation of Mineralogical Societies; the Northwest Federation of Mineralogical Societies; and the Washington State Mineral Council.

Our Club is a Member of these Federations and Associations

AFMS: The AFMS governs our Northwest Federation. http://amfed.org/index.html
The bulletins are published quarterly. You can find the news bulletins at http://amfed.org/news/default.htm

NFMS: The Northwest Federation is our home federation. To keep up on the goings-on in our own backyard. http://northwestfederation.org/
The link for the news bulletins is http://northwestfederation.org/Newsletters.asp

ALAA: The American Lands Access Association, Inc. represents the rockhounding interests of 325 gem & mineral clubs/societies in 47 States and the District of Columbia.
The association's purpose is to promote and ensure the rights of amateur fossil and mineral collecting, recreational prospecting, and mining. The use of public and private lands for educational and recreational purposes. They also carry the voice of all amateur collectors and hobbyists to our elected officials, government regulators, and public land managers. http://amlands.org
The front page also has a lot of current news, rockhounding restrictions or lack of, etc. http://amlands.org
ALAA also publishes a quarterly newsletter. To keep up on the news and lobby efforts on our behalf, check out http://amlands.org/

Washington State Mineral Council: The Washington State Mineral Council is dedicated to the location and conservation of rock and mineral sites of interest to the rockhounds of Washington state. https://mineralcouncil.wordpress.com/
You can find local rock and gems shows and planned field trips. It's a great resource if you want to plan on an outing.
Also check out “Misc. News” for all the latest updates on collecting sites around Washington. https://mineralcouncil.wordpress.com/news-updates/
When the weather is good, they have regular monthly field trips. So take advantage of these great outdoor rockhounding adventures! The field trip details are under “Field Trips” on the left side of the side. Check out the link for additional information for the time and place to meet and the field trip leader.
You can find all this information and a whole lot more about what is happening in our state at https://mineralcouncil.wordpress.com/

Rockhounding 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.

from the AFMS website

Our meetings are now on YouTube. The meeting will be available, at the latest, on Sunday night following the meeting. Don't forget to “Like” and “Subscribe”! YouTube Link

To get information to the Tumbler via the Internet send it to greenrockdraggin@yahoo.com Please put the word "Tumbler" and subject in the Subject Line. The deadline is the 20th of each month.

NFMS Needs Your Canceled Postage Stamps

Every year the NFMS collects postage stamps from its member clubs. They have a stamp company that buys them, and in turn, these funds are donated to cancer research. Every year NFMS donates around $5,000.

On letters that you receive, tear the corner with the stamp off. Try to leave about 1/4" of the envelope around the stamp. Be careful not to damage the stamp. Place the stamps in a plastic baggie and bring them to the meeting. Our member, Mike Blanton, collects the stamps and turns them over to the NFMS at the regional rock and gem show. You can give them to Mike as often as you want throughout the year.

Collecting the stamps is another way we rockhounds give back to our community.

Don't Forget To Show Your Membership Card At These Retailers

The following businesses are loyal supporters of our rock club.
Show your membership card at the following stores and get a 10% discount on most purchases.

Jerry's Rock Shop – 804 W Valley Hwy, Kent, WA 98032
Minerals, rough or polished rocks, lapidary machines, lapidary supplies, polishing grit, fossils, rock hounding tools, beautiful display specimens, jewelry, and much more. *Please be aware there are a few items they can't offer the 10% discount on.*
Jerry is a great supporter of our club. They make it possible to have nice door prizes at our meetings.

Blackjack Metal Detectors and Mining Equipment – 101 Park Ave N, Renton, WA 98057
They sell beautiful mineral specimens, fossils, books, metal detecting and gold panning equipment and supplies.
Chris Holden is a CMS member!

New for Members Only – New Texting Service

We are busy and often forget that CMS has an upcoming meeting or event. Therefore, we have a texting service to remind members of CMS meetings and events.

Everyone is automatically entered into this service. You can opt out anytime by responding with STOP.

Scan Me

For quick access, you can scan the following codes.

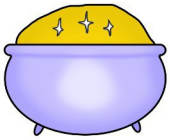
Access CMS Club Instagram page

Access our CMS YouTube channel

Access our CMSclub website for the latest on meetings and club events

Access CMS Facebook Groups

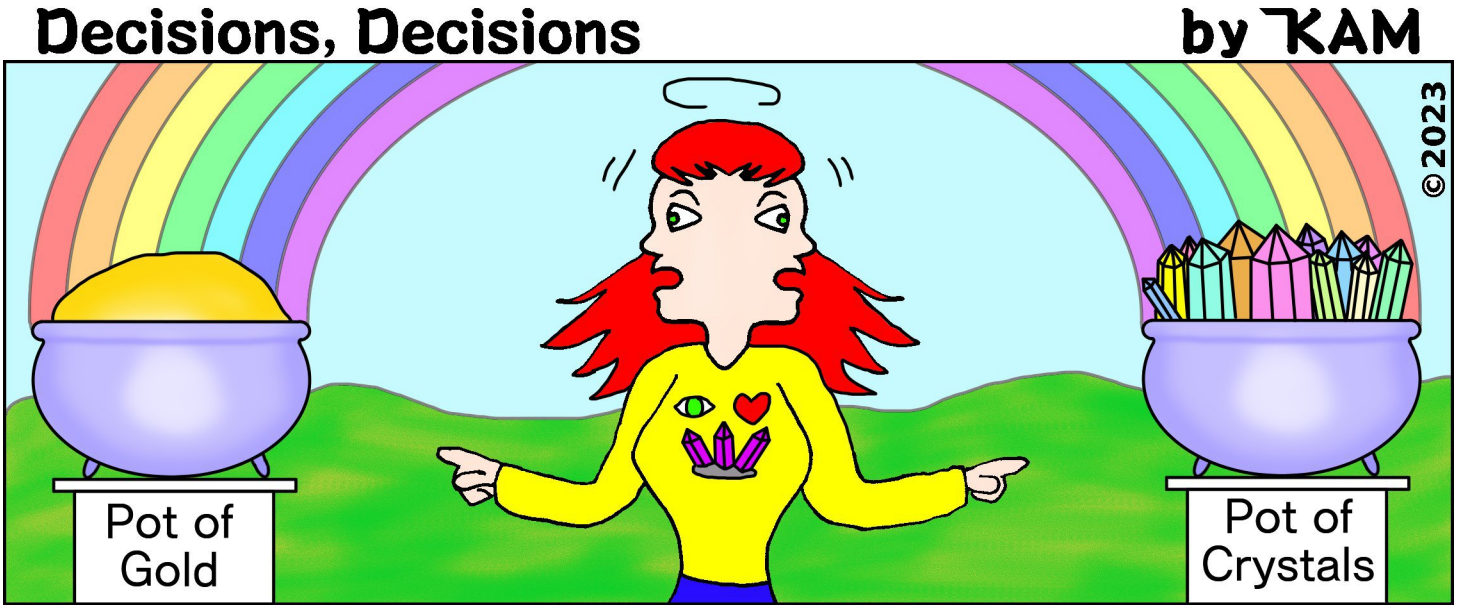
March

Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2	3	4 *East Kingco Show*
5 *East Kingco Show*	6 Board Meeting 7:00 pm	7	8	9 General Meeting 7:00 pm	10 *Panorama Show*	11 *Panorama Show* CMS Field Trip
12	13 National Jewel Day	14	15	16	17 St. Patrick's Day 	18
19	20	21	22	23	24 *Rock Rollers Show*	25 *Rock Rollers Show*
26 *Rock Rollers Show*	27	28	29	30	31	

CMS Show Committee Meeting:…Monday, March 6……6:30 pm to 7:00 pm
CMS Board Meeting:……Monday, March 6……7:00 pm to 8:00 pm
CMS General Meeting:……2nd Thursday, March 9……7:00 pm to 9:00 pm

Lapidary Class Hours:……By appointment, call to set a time & day for your lesson (425) 226-3154
Lapidary Shop Hours:……Most Tuesdays…… 2:00 pm to 5:00 p, call ahead (425) 226-3154
Lapidary Shop Hours:……3rd Saturday…… by appointment only (call a few days ahead to set time)

More Field Trip info can be found on Page 15
More Show info can be found on Page 16



CMS Show Committee Meeting Minutes February 6, 2023

by Pete Williams, 2023 Secretary

Attendees: Kat Koch; Linda Jorza; Pete Williams; Rich Russell; Paul Ahnberg; Mike Blanton; Charles Benedict; Ananda Cooley; Diana Horsfall; Chris Vitellaro

Meeting began at 6:36.

The committee reviewed a revised layout of the show floor plan. There was space for 3 demonstrators and no kids area. Turn-out in the kids area in previous shows was so low so not worth having a special area.

Chris Vitellaro, Show Coordinator, reviewed a timeline with detailed actions to prepare for the show. She recommended that everyone on the committee have access to One Drive where all show folders are saved. She will also send out a prep list for volunteers to sign up for each task and there will be a brainstorming list for 75th anniversary ideas. A 75th anniversary banner will cost between $65-$90 depending on the size. Paul, reported that several food vendors have shown an interest in our show.

CMS Board Meeting Minutes February 6, 2023

by Pete Williams, 2023 Secretary

Meeting began at 7:49.

The club now has 91 family memberships and around 270 people. The club's liability insurance covers all club events, but the coverage for the show is being reviewed by the insurer. Since we will likely go over 100 families, the cost will be higher at next renewal.

Kat would like to have classes begin in the Spring in our shop as well as demonstrations, such as knapping. Also, getting a repeater for a better WIFI connection is being explored.

Meeting adjourned at 8:15

CMS General Meeting Minutes February 9, 2023

Not available at time of printing.

From the Top of the Rock Pile.... by Kat Koch

Our February was another good meeting. Almost 40 members attended, most of which displayed what they make or collect. It was interesting to see everyone's interests. Plus, I always enjoy these types of meetings as we have the opportunity to talk and visit one another.

We missed our three Young Tumblers, Mason, Bentley, and Jude. I hope we see you at our April meeting, where we have fluorescent rocks and minerals and anything else we can find that change color under black light. We scheduled this meeting as the kids are on a school break, and our young tumblers won't have to worry about school the next day.

We encourage you to attend our meetings as our club is more than just the field trips. We always try to have an educational and entertaining topic. It's also an excellent opportunity to visit with each other. Plus, get your questions answered if you have a problem cutting or polishing or need a rock or mineral identified. Everyone is welcome to bring guests of any age to our meetings.

So mark your calendars now – our meetings are always the 2nd Thursday of the month except for August and December. August is our annual picnic at Lake Wilderness, and in December, we have our Holiday Dinner and election of officers.

I also want to remind everyone that our show needs volunteers. If anyone is interested in helping, contact Chris Vitellaro. Her contact info is on page 2 of this issue of the Tumbler.

We continue to get new members weekly by registering online or in person at our monthly meetings. We welcome each of you to our great rock and gem club. When you attend our monthly meeting, please introduce yourself to me, as I look forward to meeting everyone.

I also appreciate all the members that renewed their membership!

I am looking forward to seeing everyone at the March meeting.

General Meeting – Thursday, March 9th

Topic: Rock & Mineral Identification with Roger Danneman, our club Field Trip Guide Identifying rocks and minerals found in Washington. This will also be a good opportunity to get your questions answered on identifying rocks and minerals in general.

Mineral identification is the first step in understanding the formation of a rock and its history. You learn to "read the rock" to understand Earth's history at any given location where the rock is found in an outcrop. This allows geologists and us to understand what the environment was like at the moment the rock formed. Was there

a volcano erupting or does the rock tell us that it formed deep inside a magma chamber? Was the rock formed by the burial of an ancient beach? Was the rock formed by compressive forces deep within the crust as continents collided and new mountains were forming? The clues to these widely different environments of formation are “written in the rock.” The first step in understanding the rock’s history is being able to identify, characterize and quantify the minerals that compose the rock. Rocks are fascinating to a geologist because every rock has a story to tell. As we read the rock from one location to the next, it helps us piece together the fascinating story of the Earth.

Show 'n Tell: Bring something you want to be identified.

General Meeting – Thursday, April 13th

The following meeting has been planned for April because the Kent, Renton, and Covington School Districts are on spring break, so all our Young Tumblers plan on attending this fun meeting as there is no school the next day. Bring your friends too.

Topic: Fluorescent Follies!!

Not all rocks are what they seem. We have all heard about shape shifters in sci-fi movies. Some rocks and minerals are real life color shifters?

The club will have a collection of fluorescent rocks for everyone to see. It is interesting to see the different colors rocks become under short or long-wave UV lights.

We will then examine members' rocks and see what happens under UV light.

Show 'n Tell: This is a fun meeting for everyone. Gather up your rocks and bring them to the meeting. Lets see if they are fluorescent!!

General Meeting – Thursday, May 11th

Topic: Metaphysical Minerals with Kim Villines of Earthlight Gems (Tentative)

It has been sometime since we have had a meeting on this topic. We are aware a lot of our members are interested in the metaphysical properties of minerals and also the seven chakras.

Paul, CMS Board Director of Programs, is working with Kim to be a presenter at this meeting.

Show 'n Tell: Bring to the meeting what you consider your lucky rock, mineral or piece of jewelry.

Looking For Volunteers

Videographer: Needed at our general meetings: A volunteer to videotape our meetings. Up to you if you want to edit the video or not. We have free editing software to post the video to our YouTube club channel. We meet on Thursday, and the video needs to be uploaded by the following Sunday.

Historian: Copies of the Tumbler, pictures from club events and club officers, and other memorabilia from the club. Put everything including the Tumbler issues in a scrapbook. The club will reimburse you for any expenses to preserve our history. In addition, various members have older content they can provide you.

If you decide you can help out, text or call Kat Koch. president@cascademineralogicalsociety.org or 425-765-5408.

What are Mineraloids? by Kat Koch

Definition: Mineraloid is an amorphous inorganic substance that would otherwise have mineral attributes. It also lacks a definite chemical formula or crystal structure.

There is a class of minerals, Mineraloids, that is rarely mentioned, as the members of this class are often classified as minerals or gems. The members of this class lack the necessary crystalline structure to be truly classified as such. Amber, pearl, jet, and petrified wood are the products of organic processes that further remove them from full mineral status. Although these materials are found naturally, some are treated as gemstones and are included in most mineral references.

Types of Mineraloids

There aren’t official classifications of mineraloids, but most fall under one of four categories:

Glass: Hard, inorganic solid with random atom arrangement and no crystal structure (often from cooling too quickly)

Animal-Based: Formed from parts of an animal (shell, skeleton, tissue, etc.)
Plant-Based: Made from secretions (tree sap) or parts of a plant, often that have fallen off
Liquid: Fluids with a definite composition that can crystallize into minerals at certain temperatures
The animal-based and plant-based categories can be combined into the broader "organic" category. However, the liquid category is small, only covering two substances.

The categories above only cover some mineraloids, though. Opal, for instance, isn't organic, liquid, or glass, so why is opal a mineraloid? It lacks a crystal structure and has an "n" in its chemical formula, meaning part of its composition (amount of water) varies from one opal to the next.

Each category can also have different subtypes. For example, the glass may be volcanic glass or impact glass (formed from meteorite impact), to name a couple. Animal-based mineraloids may be created by the animal (pearls) or from their remains (ammonites).

Most Mineraloids form at low temperatures and low pressures found at Earth's surface and in shallow subsurface environments. Materials such as opal, psilomelane, chrysocolla, limonite, and various supergene materials crystallize from gels or colloids in the shallow subsurface. These materials eventually transform into minerals with time, heat, or pressure. These low-temperature mineraloids often have a smoothly rounded or hemispherical (mammillary), grape-like clusters (botryoidal), pea-like clusters (pisolitic), or icicle-like (stalactitic) behavior pattern.

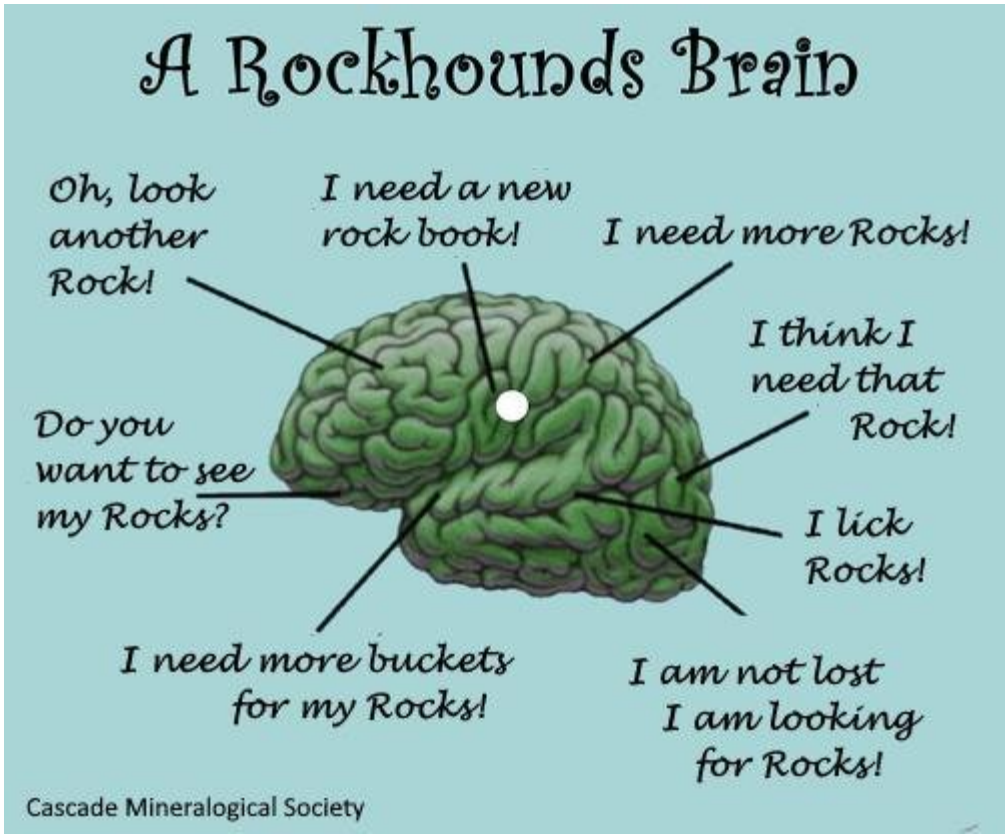
The following is a sample of the most common Mineraloids:
Amber (Succinite - fossilized tree resin)
Chrysocolla (Hydrated Copper Silicate)
Jet (Very Compact Coal)
Lechatelierite (Lightening Strike Nearly Pure Silica Glass)
Limonite (Hydrated Iron Oxide)
* Mercury (A Liquid at Normal Temperatures)
Moldavites (Meteor Impact Silica Glass)
Mookaite (Organic Material from Marine Shelves)
Obsidian (Volcanic Silica Glass)
Opal (Hydrated Silica)
Pearl (Organically Produced Carbonate)
Petrified Wood (Fossilized Organic Matter)
Psilomelane (Hydrated Manganese)
Pumice (Expanded Volcanic Glass)
Shungite (A Lustrous Black Nearly Pure Carbon)
Tektites (Meteor Impact Silica Glass)
* Water (A Liquid at Normal Temperatures)

* NOTE: Water and mercury are classified as mineraloids. They are the only natural inorganic substances with a definite chemical composition and are liquids at room temperature. They are also the only two liquids that crystallize into minerals within a range of temperatures and pressures available at the Earth's surface. Ice is only considered a mineral when naturally occurring, such as icebergs, glaciers, etc. Ice cubes are not considered a mineral.

Bibliography: Geology.com, Wikipedia, Dictionary.com, Merriam-Webster Dictionary, Minerals.net, Galleries.com, Mindat.

CMS is Celebrating 75th Years in 2023!

Happy Birthday CMS
75 years is such a milestone for our club.
In the summer on 1948 three Boeing employees starting laying the ground work for CMS.
By the time they obtained their IRS tax number there were 14 members.
When Boeing divested itself of their employee clubs in 2010,CMS didn't know for a few years if we would survive.
Would they be surprised and proud to know their idea for a rock and gem club now the end of January our membership of 100 families or 222 individuals.
We have thrived and grown with a lot of work from the Board and our membership.
I want to thank all the volunteers that help run the club.
We would not be such a successful club without you!!
Thank you to each and every one of you for making CMS a success!



Stop, I have enough rocks!
Quote by No One

World's Oldest DNA Discovered In Greenland by Kat Koch

In 2006 an expedition to the Kap Kobenhavn Formation, Greenland, they found 41 usable DNA fragments, two million years old, hidden in quartz and clay. The formation is a sediment deposit almost 328 feet thick and located at the mouth of a fjord in the Arctic Ocean. A team of 40 researchers from Germany, Sweden, Denmark, France, Norway, the UK, and the USA unlocked the secrets of the DNA fragments.

The biological remains were primarily unknown as fossils were rare during this period. However, now the ancient environmental DNA (eDNA) shows a rich animal and plant life existed.

The DNA fragments show an open boreal forest ecosystem with mixed vegetation of birch, poplar, and thuja (arborvitae) trees and various Arctic and boreal shrubs and herbs. Macrofossils (preserved organic remains large enough to be visible without a microscope) and pollen records had not previously detected many of these plants and shrubs at the site. The DNA findings confirm the presence of hair and mitochondrial DNA from animals, including reindeer, mastodons, geese, and rodents, all ancestral to late Pleistocene relatives and present-day animals. The finding of the mastodon DNA shows the mastodon range was considerably further north than previously known. Also, marine species, including horseshoe crabs and green algae, support a warmer climate than today.

The reconstructed ecosystem has no modern comparison. The survival of ancient eDNA probably relates to its binding to mineral surfaces. The findings open new areas of genetic research and demonstrate that it is possible to track the ecology and evolution of life assemblages from two million years ago using ancient eDNA.

Bibliography: Daily Mail – US, Wikipedia, Nature, Semantic Scholar, Biology Dictionary

It Happened in Seattle on January 26, 1700 by Kat Koch

On January 26, 1700, the Cascadia subduction zone ruptured, causing a 9.0 earthquake! The quake lasted 5 to 7 minutes. As a result, the entire Pacific Northwest ocean coastline dropped three to six feet. Plus, the movement of the earth caused a 33-foot high tsunami that also played havoc along the ocean coast.

The Cascadia subduction zone runs from Vancouver Island, British Columbia, to Point Arema, Northern California. The length of the subduction zone runs 600miles and around 70 to 100 miles off the shoreline. There have been 43 earthquakes along this zone in the last 10,000 years.

The most surprising evidence of the tsunami comes from Japan. Japanese historical records showed on January 26, 1700, a destructive tsunami struck their coast. American Indian legends also support the earthquake occurring.

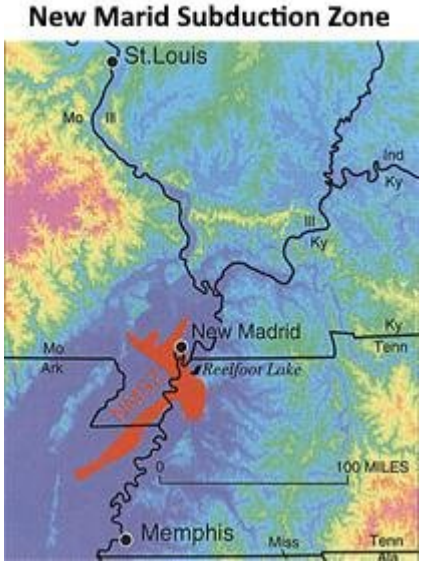
Another intensive earthquake occurred a month earlier at 1 pm on December 25, 1699, in New Madrid, Missouri.

A French missionary traveling with a group of explorers up the Mississippi noted in their log on December 25, 1699, that they were startled by a short period of ground movement. Their journal is the first known account of earthquake activity in the New Madrid zone.

The New Madrid zone also had a famous series of earthquakes starting on December 16, 1811. The first quake registering 7.0 or larger. During the following two months until February 7, 1812, hundreds of aftershocks registered 5.0 to 6.5, and thousands of smaller ones with a magnitude of 4.0- 5.0 were recorded. These earthquakes were felt and recorded in personal journals as far away as Louisville, Kentucky, and Cincinnati, Ohio.

The New Madrid zone remains the most active seismic area in the USA east of the Rockies. It averages about 200 small quakes per year.

Bibliography: History Link, Oregon.gov, Seattle Times, Wikipedia, Jumpstart Insurance, Missouri Dept. of Natural Resources, Smithsonian Magazine



Montana Agate

Montana Moss Agate is a semi-precious stone that is found along the Yellowstone river and its tributaries, mainly between Sidney and Billings Montana.

As with other agates Montana Agate is a form of chalcedony that has a waxy luster and is semitransparent to translucent. The main color ranges from white to gray but can be found in grayish-blue or shades of pale brown to almost black.

Its most recognizable feature is the moss-like, fern-like, or tree-like inclusions. These can be black, brown, or red and sometimes orange and yellow. These colors are caused by embedded minerals. Iron oxides and hydroxides give the yellow, brown, and red colors, copper oxide gives the green and red, and manganese oxide give the bluish and brown colors.

Montana Agate shows some wonderful tree and fern forms as well as mountain scenes.

from The Panorama Prospector, 7/22

Ringing Rocks, Montana by Kat Koch

You can find this unique geological formation about 18 miles east of Butte, Montana, west of Whitehall, and north of I-90 off Pipestone Road.

The rocks in this unusual geologic area will chime when tapped gently with a hammer. Geologists don't quite understand why the rocks chime. The boulders no longer ring if removed from the pile. It is believed that the ringing is a combination of the composition of the rock and the stacking pattern that has developed as the rocks have eroded away.

The rocks are unusual type of igneous rock that geologists call gabbro. Gabbro contains no quartz or alkali feldspar and contains ferromagnesian (iron and magnesium) minerals and plagioclase feldspar rich in calcium. The amount of ferromagnesian minerals equals or exceeds that of plagioclase feldspar.

If you should visit the ringing rocks please don't disturb this natural phenomenon!

Bibliography: Visit Montana, U.S. Depart. Of the Interior – Bureau of Land Management, Geology.com, Georgia State University – Hyper Physics, Mindat.org.

Young Richard's Almanac by Dick Morgan

As we enter spring, it is time to prepare for rockhounding trips to see what the warmer weather has freed from hidden places. Sharp eyes can see material, such as Ellensburg blue, that was out of sight before the freeze.

Safety – WTF by Ellery Borow, AFMS Safety Chair

Safety - Wow, that's fun (WTF). When we back our cars out of the driveway, we (should) look back behind the car first. When we cross the street, we (should) look both ways before crossing.

Crossing the street can be a complicated task. Is there a pedestrian crossing or crossing guard? is it a two-lane road or a six lane? Is there a traffic light, a "walk"/"don't walk" signal? Are there typically eight to ten cars per minute passing by, or eight to ten cars per hour? Do the cars honor the red color traffic control device where red means stop? Crossing-the-street skills are taught, stressed, practiced, practiced and practiced some more until they become second nature, done without much conscious thought.

We study driving manuals, grinding machine instructions, rock-cleaning chemical labels, safety-exit maps and all manner of safety guidelines in our great hobby. We memorize them, understand them, utilize them so much that their content becomes second nature.

Whether we are crossing the street or using the rock saw, we do not constantly refer back to the instructions. In those instances, our safety training works in the background while we enjoy the walk or take pleasure in slabbing the stone. In other words. we are being safe as well as experiencing the Wow, that's fun!

In a perfect world, we would have read, studied, had a class or otherwise have learned to be safe, and then applied that learning. In an imperfect world, traffic signals sometime don't work well or an important part of the rock saw malfunctions or breaks—and we, all of a sudden, need to make judgements as to how to stay safe.

Safety is being prepared ahead of time with the appropriate learning, and having available common sense, judgement, experience, thoughtfulness, understanding and, sometimes, a sense of urgency to respond when our prior learning is insufficient.

For the unexpected, it helps to have another person nearby within earshot; to have, or have available, a person with a variety of experiences which might help; a telephone or cell phone available with emergency numbers to call; a plan B, C, D, E; an instruction book, just in case; and an understanding that it is wise to expect the unexpected.

We all want one another to be safe. We all want the Wow, that's fun in all we do.

Your safety matters; it is in the instructions.

from AFMS Newsletter, 5/22

Polishing Rocks by Jim Retzer

One of the most common comments I here from people getting started in gem, mineral, rock, and fossil collecting is how to cut and polish rocks they collect. Once they go to a show and see the cut and polished specimens, they get excited and what to see how their material will look when polished and ask how do they do it? It sounds like a simple question, but it really is more complex than one thinks. To answer this there is some information that must be considered. First, what is your desired result? Do you just want polished rocks and display them in a bowl or jar? Do you plan on making something out of them like jewelry or other art forms? do you want to display them as cut and polished slabs? Or maybe you like spheres, obelisks, or cube forms. There are many reasons and ways to cut and polish stones, so to answerer the original question the result sought is particularly important. You do not want to spend money on equipment that is not going to accomplish what you really want, and you do not want to buy equipment that will not hold up to years of use.

To go into the how of polishing rocks would take volumes of articles. There are many books, articles and web sites written about this subject. Here I am not going to cover the technical information but just give an overview of the more common procedures used in the lapidary arts.

Most new rockhounds that want polished rocks start with a rock tumbler. This is the easiest way to start polishing rocks. The simplest tumbler to start with is a rotary barrel tumbler. They come in size from small 1 ½ pound compacity up to ones that will do over 25 pounds. No matter the size the process is the same. The basic knowledge you gain about the rock polishing process, when you tumble rocks, gives you a good foundation when advancing to other lapidary work.

All stone polishing work uses the common process of using coarser to finer grits. Grit is a generic name for abrasive particles used to smooth a material. You may have knowledge of grit as it pertains to sandpaper. It comes in various degrees of coarseness that is identified by a number. The number refers to how many of each particle can fit through a 1 square inch filter. The smaller the grit number the coarser or more abrasive the grit. In lapidary two different materials are used, Silicon Carbide and Diamond. Silicon Carbide is used in most lapidary work whereas diamond is manly used in cabochon and faceting work as well as on saw blades. Silicon Carbide Grit comes in two types, graded and ungraded. Graded grit has particles that are very close to the same size whereas Ungraded grit has a wide range of particle sizes. In tumbling you will see grit sold as coarse, medium, and fine. Coarse refers to ungraded grit ranging from 60 to 90 and is usually labeled as 60/90. Medium grit, also ungraded, ranging from 150 to 220 and is labeled 150/220. Fine grit is usually graded 500-grit.

The final phase in stone polishing is the polishing itself. This final step is usually done with a fine powder substance such as Cerium Oxide, Aluminum Oxide, Titanium Oxide, or a variety of other polishes. In the case of cabochon and faceting work super fine grits of diamond are used either on a wheel or in a paste. Diamond polish is from 14,000 grit

to 50,000 grit.

Now back to the tumbler. One of the most common tumblers is the Lortone 3A or 33B. In the case of the 3A it has one drum that has a 3-pound capacity whereas the 33B has two 3-pound drums. In a larger capacity is the Thumler's Model B, a 10-pound tumbler. These may seem high priced, but they will last you for many years. This is just a sample of quality tumblers available that are well known and have been proven to be dependable over time. If you do get a tumbler, make sure you get a quality name brand tumbler that will last for many years. Many of these tumblers come as a kit with quality instructions and enough grit and polish to do 1 or 2 loads of rock.

Your next step in lapidary could go one of two ways. Some buy a rock saw first but some will by a multi-wheel cabochon machine. If you go the rock saw route first, I would recommend a Trim/Slab saw. This is usually an 8 or 10 inch saw with a diamond blade that can be used to trim a slab to prepare it for further work or use it to slab small rock. Most of these come with a vise to hold the rock and a drive system to get quality slabs. A dedicated trim saw is usually smaller and is harder to cut quality slabs with and a dedicated slab saw does not have a table system to use for trimming slabs also they are quite larger.

If you take the step into a cabochon machine, and research what is out there, you will be quickly overwhelmed. An easy way to start cutting cabochons is with a multi-wheel machine. This gives you everything you need to make quality cabochons in a complete system. A multi-wheel machine will come with 6 wheels that are diamond coated or impregnated. They usually consist of 2 hard wheels in 80 and 220 grit. These are hard steel wheels with bonded diamond grit. The next 4 wheels are soft bonded diamond wheels that have a foam backing that are usually 280, 600, 1200, 3000. They have side, full face pad wheel that is used for final polish. There are several quality machines available including the CabKing, Diamond Pacific Genie, Kingsley North Cabber, as well as several generic brands. Cabbing machines come in 6" and 8" wheel size. The 6" works well for the general hobbyist and is the most cost effective for general hobby use. The CabKing and the Diamond Pacific come with everything you need to use it right out of the box, with some easy setup. They also come with great information and instructions.

The next more common rock polisher is a vibrating or reciprocating lapidary polisher This is a round plate mounted on a motor that provides a vibrating or reciprocating motion that is designed to abrade and polish with minimal assistance. They come in size from 10" on up. They usually come with 2 plates. One plate is used for the grinding and pre-polish stages. During this phase you add grit and water, as you would with a tumbler. The grit used with a vibrating or reciprocating lap must be graded grit. There are some variations in the steps from user to user but in general it is 80-grit, 220-grit, 600-grit, polish. I add an 800-grit step before polishing. The polishing is done in a separate plate that has a polishing pad in it.

These are some starting points for those interested in polishing their rocks. There is plenty of other equipment and lapidary interest you can look into. Two other interests in rock polishing are Sphere cutting and Faceting. I am not that familiar with these, though I have done some of it in the past. If you want to look into these aspects of our hobby, there are club members that can direct you as well as a wealth of information on the internet and in many publications.

from The Panorama Prospector, 6/22

How Do Crystals Form? 18 Fun Crystals Facts by Sheila Stratton

Crystals form in many different ways depending on the item that is crystallizing. Some occur due to rapid changes in temperature or pressure – such as with the production of diamonds – while others form through evaporation or other reactions however, crystals cannot form within a liquid without some sort of core on which to grow.

1. Diamond crystals are formed when pressurized molten lava cools rapidly.
2. Chemists working through Purdue University, New York University and Argonne National Library created crystals of DNA large enough to see without a microscope.
3. The provincial mineral of Ontario, Canada, is the amethyst.
4. "Crystal" glasses commonly used in dinner ware are actually not made with true crystal, despite their name and appearance.
5. Researchers discovered the largest crystals in the world in a mine in Chihuahua, Mexico. The largest of the gypsum crystals discovered measured over 36 feet long and 6 feet across.
6. If the ocean evaporated, the crystallized salt left behind would measure 4.5 million cubic miles.
7. In addition to their use in jewelry and for decoration, people have also used crystals for their positive "energy" and as good luck charms.
8. The oldest recorded objects on Earth are zircon crystals from western Australia. Researchers estimate these crystals date back over 4.4 billion years.
9. Scientists have discovered silicate crystals within icy comets, and they believe these crystals formed through exposure to solar flares.
10. The crystal gypsum is commonly used in drywall, so you may have gypsum in your home right now.
11. The bedrock beneath the streets of New York City contains a variety of crystals, including opal, garnet, tourmaline, beryl and more.
12. In the year 1885, during construction in New York City - near Broadway and 35th street – laborers discovered a 10-pound garnet beneath the ground. The garnet sold for just $100 – after adjusting for inflation that amount equates to just $2,300 today!
13. Researchers now believe the planet's core consists of an aggregation of iron crystals. Original theories led researchers to believe that the core consisted of a single iron crystal 1,500 miles wide.

14. The largest diamond ever recorded was discovered in South Africa in 1905. The diamond, known as the “Cullinan diamond,” measured a whopping 3,106 carats.

15. The Cullinan diamond was eventually cut into over 100 individual stones and is now part of the British Regalia. The royal family set the largest stone – at a modest 530 carats – into a royal scepter.

16. Though crystallized snow contains only water, as it collects on the ground, it picks up many pollutants such as soot and mercury.

17. Sugar is one of the most common crystals used today. The average U.S. citizen consumes approximately 130 pounds of sugar per year.

18. A pink diamond by the name of “The Sakura” set a world record in May when it sold at auction in Hong Kong. A private buyer purchased the diamond for a whopping $29.3 million.

from The Panorama Prospector, 5/22

The Parable of the Geode by Glynis Hull

A little girl was walking past a small crater where people had dug out rocks over the years. She had never ventured into the hole before but today she saw something that caught her attention. She gingerly made her way down the steep path into the hole. There in the walls of the hole were round rocks sticking out the sides. She looked around and found a stick. She started scraping away the dirt and sand around one of the round rocks. When she got it out of the wall, she was disappointed because it was only a dirty gray bumpy rock. Why people would come and dig such ugly rocks confused her. She had only collected pretty rocks. She shrugged her shoulders and put the rock in her coat pocket. Maybe someone could solve the mystery for her.

When she got home, she showed her mother the ugly rock and expressed her confusion about why anyone would want such a rock. Mother suggested they visit the local rock shop to ask the owner, Dave, if he knew why people sought such ugly rocks. Dave told them to follow him into his work room. He took the rock and put it into a tool that squeezed it with a big, heavy chain. All of a sudden there was a loud pop and the rock broke in two. The little girl gasped with delight. Inside the rock was a fairy land of beautiful, gleaming crystals. Dave told her that over millions of years minerals had soaked into a lava bubble slowly making the wonderful crystals she now saw. She was the first to ever see the rocks inside beauty that had been covered with an ugly matrix. From then on, the little girl looked for the beauty inside all those she met.

from The Panorama Prospector, 10/22

Sodalite

A member of the feldspathoid mineral group having a chemical composition of Na4Al3Si3O12Cl. The feldspathoid mineral group includes nepheline, leucite, nosean, hauyne, lazurite, canrinite, tuptupite, and melilite. These are rare aluminosilicate minerals that contain abundant calcium, potassium, or sodium. Sodalite occurs in igneous rocks that crystallized from sodium-rich magmas. This is the origin of the name "sodalite." These magmas also contained so little silicon and aluminum that quartz and feldspar minerals are often absent.

It is usually found in massive opaque samples but when found in its crystal form it is usually transparent to translucent. Well-formed crystals are rarely found but, when found as a crystal it forms in the isometric (cubic) crystal system and Hextetrahedral class. In its usually massive habit it has poor cleavage and when fractured it produces small conchoidal fragments.

Sodalite is known for its bright-blue color by may also be grey, yellow, green, or pink and is often mottled with white veins or patches. It can sometimes be found intertwined with White Calcite.

Sodalite produces a white streak and has a mohs scale hardness of 5.5 – 6 with a specific gravity of 2.2 – 2.3. Its main diagnostic properties are its blue color and association with other feldspathoid minerals, especially nepheline. It often produces a weak orange fluorescence under shortwave or long wave ultraviolet light.

Although somewhat similar to lazurite and lapis lazuli, sodalite rarely contains pyrite (a common inclusion in lapis) and its blue color is more like traditional royal blue rather than ultramarine. It is further distinguished from similar minerals by its white (rather than blue) streak.

First discovered by Europeans in 1811 in the Ilimaussaq intrusive complex in Greenland, sodalite did not become important in modern times as an ornamental stone until 1891 when vast deposits of fine material were discovered in Ontario, Canada. Samples of ornamental stones and trade items can be found as early as 2600-2000 B.C.

from The Panorama Prospector, 1/22

Don't Ignore This Just Because It Looks Weird, Believe It Or Not, You Can Read It...

I cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdgnieg. The phaonmneal pweor of the hmuan mnid Aoccdrnig to rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh?

from Golden Spike News, 1/23

Young Tumblers News

Just a reminder that all Young Tumblers under 15 can easily earn "Rock Bucks."
Earn $2 “Rock Bucks” for attending a meeting.
Earn an additional $3 "Rock Bucks" if you bring something for Show 'n Tell and tell us about your item.
The "Rock Bucks" can be spent like real money at our meetings or club auctions.
You can save your "Rock Bucks" during the year and spend them just like cash on auction items you would like, or you can buy raffle tickets at our monthly meeting.
Join us at our meetings and build your rock-buying piggy bank!

Want To Earn Some Extra Rock Bucks?

Fill out the form below and bring it to a meeting to receive $5 Rock Bucks!

Your Name _____ Your Age _____ Your Birthday _____

What do you like to collect? _____

How many do you have? Rocks _____ Minerals _____ Fossils _____ Arrowheads _____

Where do you keep your collection? _____

What is your favorite item in your collection? _____

Why is it your favorite? _____

Your favorite item in your collection, did you [ ] Find It [ ] Buy It [ ] Was a Gift [ ] Door Prize Win

Do you like [ ] Rocks [ ] Minerals [ ] Fossils [ ] or Everything

Does anyone else in your family like rocks? [ ] No [ ] Yes Who? _____

Have you been on a field trip with the club? [ ] Yes [ ] No

Besides club field trips, do you go rock hunting with family or friends? [ ] Yes [ ] No

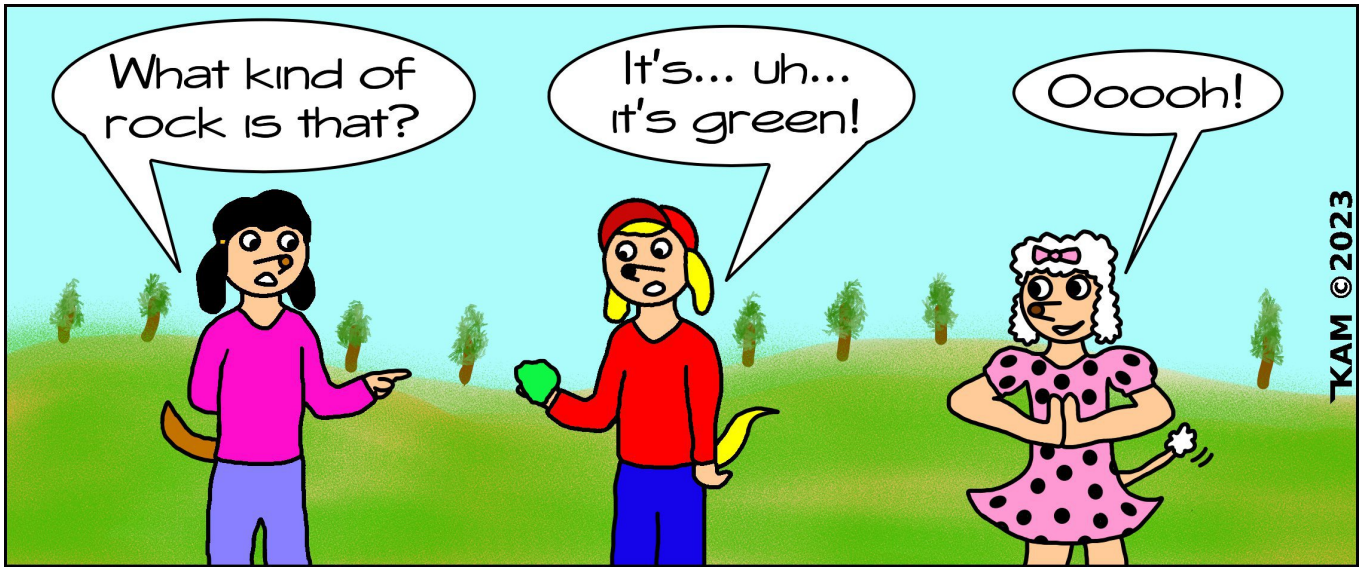
If the rock club had a program where you could earn various rockhounding badges (similar to the Scout badges) would you be interested? [ ] Yes [ ] No

At the next meeting you attend, please bring your favorite items and this completed form to Show 'n Tell and receive an additional $5 Rock Bucks for a total of $10 Rock Bucks!

Upcoming CMS Field Trip by Roger Danneman

On March 11th we'll be going to the Mt. Baker area for agate, dunite, gneiss, jasper, and jade. I'm thinking first to meet at Ol One Lane Bridge on the middle fork of the Nooksack River to collect Dunite, which is a "jade like" green rock. It's prevalent in the river rock and easy to collect. Although previously I was calling it diopside, it was determined that the green rock is dunite which is primarily composed of olivine. The inside is a pretty green, but the skin does not polish well in a tumbler, so it might not be something everyone will want to collect. The best use is to cut and then polish. I'll send out details in the pre-trip e-mail, but my plan is to meet and collect for a couple of hours at Ol One Lane Bridge and then to head to the Swift Creek Bridge for agate, gneiss, jasper, and potentially jade. If you aren't interested in the dunite, you can meet us at Swift Creek. Again, details to be sent via e-mail. For Swift Creek it's best to have waders to get into and cross the stream to access the gravel beds. Hoping for some good weather.

Roger Danneman (roger.danneman@gmail.com ; 425-228-8781 or 425-757-3506 cell).



Shows

March 3 – 5: Friday, Saturday & Sunday 10 am - 5 pm
Tualatin Valley Gem Club, *64th Annual Rock and Mineral Show*
Forest Grove National Guard Armory
2950 Taylor Way
Forest Grove Oregon

March 3 - 5: Friday & Saturday 9:30 am – 5:30 pm; Sunday 9:30 am – 5:00 pm
Oregon Agate and Mineral Society, *72nd OAMS Gem and Mineral Show*
OMSI
1945 SE Water Avenue
Portland Oregon

March 4 & 5: Saturday 10 am – 6 pm; Sunday 10 am – 5 pm
East KingCo, *Annual Rock and Gem Show*
Pickering Barn
1730 10th Ave NW
Issaquah, WA

March 10 & 11: Friday 9 am - 6 pm; Saturday 9 am - 5 pm
Panorama Gem and Mineral Club, *Annual Show*
Stevens County Fairground
317 West Astor
Colville, WA

March 24 - 26: Friday & Saturday 10 am – 6 pm; Sunday 10 am – 4 pm
Rock Rollers Club of Spokane, *62nd Annual Gem, Jewelry and Mineral Show*
Spokane County Fair & Expo Center
N. 604 Havana
Spokane WA