

The CMS Tumbler



July 2023

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

Next Meeting:
July 13, 2023
7:00 p.m.

American Legion Hall
25406 97th PI S
Kent, WA

The Program is about
Mt. St. Helens

The Show & Tell Theme
is Volcanic Rock

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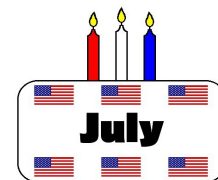
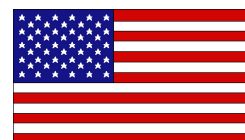
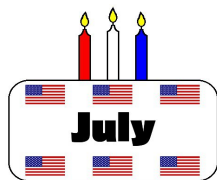
Website: <https://www.cascademineralsociety.org>
 Club Facebook: <https://www.facebook.com/CasMinSoc/>
 Facebook Groups: <https://www.facebook.com/groups/1168207926650075>
 Show Facebook: <https://www.facebook.com/cascadegemandmineralshow>
 Instagram: <https://www.instagram.com/cascaderockclub/>
 YouTube Channel (Please like and subscribe):
https://www.youtube.com/channel/UCaGIJxaWFatV_JjgZRm9ESA



This month remember
to wish a
Happy Birthday to
Mike Blanton on July 2
Alyssa Elliott on July 2
Christopher Whitney on July 2
Alexia Deeser on July 4
Damond Brandt on July 5
Christina Vitellaro on July 5
Richard Russell on July 5
Jesse Alexander on July 16
Virginia Bird on July 18
Michelle Brown on July 30
Roger Pullen on July 30



and also remember
to wish a
Happy Anniversary to
Nik & Michelle Brown on July 15



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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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President Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
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Director 3 - Programs Paul Ahnberg	941-704-2063	runhikebird@icloud.com
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2023 Show Committee Chairs

Cascade Coordinator Christina Vitellaro	425-351-4737	bluefirtree@comcast.net
Cascade Co #2 Peggy Shashy	904-655-3241	14thebirds@bellsouth.net
Cascade Co #3	Vacant	
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Show Silent Auction (shared) Noelle Barnes	206-914-0514	noelleb@outlook.com
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Show Raffle Case Display Terri Gerard	206-437-0240	eyeballgraphics2002@yahoo.com
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Show Demonstrators Richard Russell	253-736-3693	richru1@yahoo.com
Show Load In/Out		
Show Display Case Presenters Peggy Shashy	904-655-3241	14thebirds@bellsouth.net
Show Road Signs		
Show Event Volunteer Recruiter		
Show Refreshments Angie & Brian Bayer	253-569-0245	Text to her number (no email)
Spinning Wheel Angie & Brian Bayer	253-569-0245	Text to her number (no email)
Show Website Kat Koch	425-765-5408	vendorchair@cascademineralogicalsociety.org
Show Vendor Chairman Kat Koch	425-765-5408	vendorchair@cascademineralogicalsociety.org
Show Food Trucks Paul Arhnberg	941-704-2063	runhikebird@icloud.com

2023 Committee Chairs

Club Historian	Vacant need volunteer	
Donations Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
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Meeting Greeters Angie & Brian Bayer	253-569-0245	Text to her number (no email)
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Refreshment Angie & Brian Bayer	253-569-0245	Text to her number (no email)
Raffle Master Roger Pullen	206-387-3214	Phone calls only. No email or texting.
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Facebook Club Page Gina Manso	425-281-3502	ginamanso51@gmail.com
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 need volunteer	

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 site. 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

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.



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



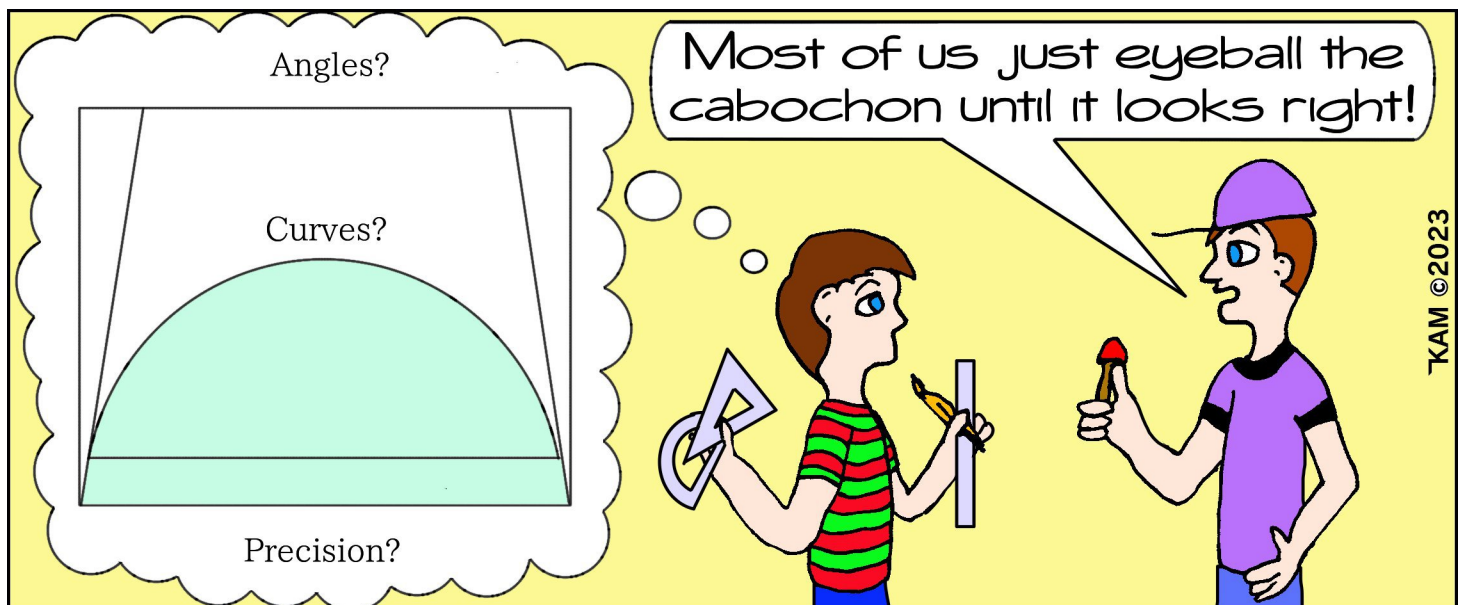
Access CMS Facebook Groups

Sun	Mon	Tue	Wed	Thur	Fri	Sat
Have a Safe and Happy 4th of July!						1
2	3	4	5	6	7	8
9	10 Board Meeting 7:00 pm	11	12	13 General Meeting 7:00 pm	14	15 <u>Greenwater Trip</u>
16	17	18	19	20	21 <i>Tenino Show</i>	22 <i>Tenino Show</i>
23 <i>Tenino Show</i>	24	25	26	27	28	29
30	31					

CMS Show Committee Meeting: ... Monday, July 10 6:30 pm to 7:00 pm
 CMS Board Meeting: Monday, July 10 7:00 pm to 8:00 pm
 CMS General Meeting: 2nd Thursday, July 13 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 & Board Meeting Minutes June 5, 2023

by Pete Williams, 2023 Secretary

Show Committee 6:38

Attendees: Kat Koch; Linda Jorza; Pete Williams; Rich Russell; Mike Blanton; Ananda Cooley; Diana Horsfall; Chris Vitellaro; Lee Oliver; Paul Ahnberg; Roger Danneman; Peggy Shashy

We were informed by the College that they will begin charging \$200 per day for a food truck. This would cost an additional \$400 for one food truck. Other options included not having a food truck or asking the vendor to share the cost. This is still in work.

Only 2 designs were submitted for the 75th anniversary banner. They will be brought to the next meeting to ask for input. Other items voted on were to have \$75 in the raffle; to provide a rock related coloring page to be handed out to kids (these could be put in plastic bags, the club has 300); to have a display case with items related to the history of our club (badges, newsletters, etc.); and to get more information on cloth tote bags which potentially be sold.

A work party will be held on July 29 to fix the liners on the federation cases or any other repairs needed. More details will be provided later.

Board Meeting 7:31

Items discussed included: the club now has around 118 family memberships; a work party is needed to fix the tarp on our shop and to maintain the equipment (a date will be arranged via email); we have had no luck in getting any nearby city to provide space for a rock shop; and we still need folding lamps for the show-and-tell table.

Meeting adjourned at 7:48

CMS General Meeting Minutes June 8, 2023

by Pete Williams, 2023 Secretary

The entire meeting consisted of all attendees enjoying games of rock bingo. Everyone left with some type of rock, mineral, fossil, or related item. Some other news mentioned were: the next field trip will be on June 17 to Little Naches; the next NFMS/AFMS show will be in August; and our Show will be moving to the Kent Commons next year on June 28-29. Save those dates.

From the Top of the Rock Pile.... by Kat Koch, CMS President

I want to show my appreciation to several members who do a lot for our club and mostly go unrecognized. They quietly do various tasks or contribute to our club in other ways, often volunteering hours and hours or storage space. I thank the unsung volunteers that do so much for our club and seldom receive an acknowledgment.



<i>Jennifer Russell</i>	<i>Rich Russell</i>	<i>Keith Morgan</i>	<i>Roger Danneman</i>
<i>Pete Williams</i>	<i>Bev Williams</i>	<i>Diana Horsfall</i>	<i>Mike Blanton</i>
<i>John Cornell</i>	<i>Dave Cornell</i>	<i>Terri Gerard</i>	<i>Chris Vitellaro</i>
<i>Angie Bayer</i>	<i>Brian Bayer</i>	<i>Charles Benedict</i>	<i>Kamera Muralt</i>
<i>Ananda Cooley</i>	<i>Linda Jorza</i>	<i>Paul Arhnberg</i>	<i>Peggy Shashy</i>
<i>Gina Manso</i>	<i>Roger Pullen</i>	<i>Noelle Barnes</i>	<i>Lee Oliver</i>

I apologize if I have missed someone. It takes many people behind the scenes to make our club run smoothly, and I thank each of you!

Our gem show is fast approaching. Chris needs several more volunteers as much prep work still needs to be done. Elsewhere in this newsletter is her call for help. It takes a village to put on a show of our size! *Please consider helping her.*

A lot of effort goes into putting on a show like ours. The venue, advertising, dealer support, food, displays, activities, set up and tear down, and much more go into the planning of our annual show. We have several new vendors and activities planned this year. Please pass the word around about our upcoming show. Our attendance goal this year is 5,000 visitors.

On July 29th at 10 am, a show and lapidary shop work party is planned at Diana's house. We will need a few burly men to help with the lapidary shop. We will also need a few other members to fill 100 grab bags with polish rocks, fill 60 prospector bags, and price the club items we will sell.

Your volunteering has a lot of value as all the profits from our show go towards obtaining an indoor shop and a new meeting room. We have been



notified we have about 1 1/2 years to 2 years to find an indoor lapidary and meeting place. The location of the home where the shop is now is going to be sold. Our monthly meeting room fees are increasing annually, so we hope to find a space to accommodate both.

So please help out – the show and club need you!

This a reminder that the Billings Montana show is on August 4th through 6th. The NFMS and AFMS combined show and only happen every 7 years. Not only is it a big show, but they also have numerous free speakers and classes. Montana is dinosaur fossil country, so there will be speakers on this and many more topics. We also get to see material from areas outside of the Pacific Northwest. It would make a great family vacation. It is a show on steroids!



We continue to get new members online or in person at our monthly meetings. Our membership is presently at 124 families! 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 each of you.

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

Upcoming Meetings Information by Kat Koch

General Meeting – Thursday, July 13th

Topic: Mount St. Helens, Paul Ahnberg will be giving the presentation.

Paul has been taking a months-long class on Mount St. Helens. It has included not only in-class studies but also a few trips to see Mount St. Helens. Paul says, "One thing I quickly recognized is that there is much more to the Mount St Helens story beyond the geology and eruption aspects." This meeting should be a fascinating lecture.

Show 'n Tell: Bring a sample of volcanic rock from your collection.



General Meeting – Saturday, August 12th

Topic: Our annual club picnic at Lake Wilderness. Our picnic is always a pleasant event on the lawn among the trees.

For lunch, it is a potluck picnic. So bring a dish to share. If you don't cook, pick up something from the market. If you are unable to contribute anything, that's okay too. We would rather have you join us on this beautiful day among friends than not. It is always enjoyable to visit with one another.

We generally have around 25 to 35 members attend.

Bring your own plate and silverware.

Setup is 11:30 am, and lunch at noon. We usually wrap things up by 3:30 pm.

The Arboretum has plenty of free parking.

Following lunch, we have a club auction. Our auctions are always a great chance to pick up items at a fraction of their retail cost. You are welcome to donate items to the auction. All proceeds go to the club treasury to cover expenses.

Our Young Tumblers can also spend their "Rock Bucks" at the auction they have saved, just like cash for items they want.

Afterward, Lake Wilderness is nearby for swimming, plus various play areas for the younger kids.

Our annual picnics are always a great family event!



General Meeting – Thursday, September 14th

Topic: Pre-Gem Show Rally and then "I Made It," "I Found It," and "I Bought It."

This meeting is a fun new activity on our calendar. "I Made It," "I Found It," and "I Bought It." You may bring up to 3 items for each category. Items must have been made, found, or bought within the last year. Winners of each category receive a prize.

Members will vote for their favorites in each category, and then only 1 prize per adult and 1 prize per Young Tumbler for each category will be awarded.

Plan on bringing items, as this should be a fun evening as we get to mingle with each other and talk rocks!

Show 'n Tell: They are your above entries.

Made
Found
Bought

General Meeting – Thursday, October 12th

Topic: Rock'in Good Halloween Costume Contest

Dress up a rock, mineral, or fossil for Halloween.

You can paint it, put a hat on it, or dress it up in a Halloween costume. It can even be a haunted scene.

Be creative, and let your imagination run wild!

We will give 1st and 2nd prizes to both adults and Young Tumblers.

Preceding our Halloween Rock Costume contest, we will have a recap of our show.

Show 'n Tell: They are your above entries.



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. I would also like issues of the Tumbler, going back as far as we can, saved on a CD. Various members have older content they can provide you. The club will reimburse you for any expenses to preserve our history.

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



CMS is Celebrating 75 Years in 2023!

Happy Birthday CMS

75 years is such a milestone for our club.

In the summer of 1948, three Boeing employees started laying the groundwork for CMS.

By the time they obtained their IRS tax number, there were 14 members.

When our club broke away from Boeing in 2010, CMS didn't know for a few years if the club would survive.

Wouldn't they be surprised and proud to know their idea for a rock and gem club, that as of July 2023, CMS has a membership of 124 families?

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 every one of you for making CMS a success!



June Field Trip Report by Roger Danneman, CMS Field Trip Guide

Our June 17th Field Trip was to Little Naches for Thunder Eggs, LilyPad Jasper, and Leaf Fossils. There was rain and heavy morning fog leading up to and going over Chinook Pass, but once over the pass we had beautiful blue skies. Temps were in the 60s and by afternoon in the low 70s. Our meeting spot was on NF-19 by the Little Naches Campground. We had 18 people, 3 dogs, and 11 vehicles on this trip. Very pleasant conditions for digging. We spent 2 1/2 hours at the Thunder Egg site. I have to admit to some trouble finding the Lily Pad site. I took the first main right which went up into the Jungle Creek burn area. I did find a couple pieces of jasper up there and Randy found a nice chunk (6-8 pounder?) of petrified wood. We didn't take much time to search up there, but because of the disturbed soil from machinery and fire, it

could be worth prospecting. There is some logging going on, trying to reclaim the burned timber. After another miscue that took us down a dead end road, the 3rd time was a charm and we loaded up on Lily Pad material. After that we stopped at the mud stone formation for leaf fossils. WA State geology maps peg this as a 35 million year old mudstone. So the carbon imprints and leaf outlines we find embedded in that stone, are that old. I even found a tiny fossilized leaf that had crumbled out of a layer. A few nice specimens were found. Certainly a fun day.

List of attendees: Julie & Gina M., Becky P., Phillip T., Chris V., new members Dave & Jessica N., Annie S., Gina & Michael L., new member Randy P., new member Marion R., Chris W. and son, guests Martha & Sandy & Avis, and of course me.

Next field trip is on July 15th to Greenwater area for black agate, jasper, and opal.





What Do The National Gemstone Of Argentina And Colorado's Official State Mineral Have In Common? by Kat Koch

Are you drawing a blank? They are both Rhodochrosite!

Rhodochrosite is a manganese carbonate mineral. It is found in only a small number of locations worldwide in association with other manganese minerals.

The mineral ranges in color from light pink to bright red. In its purest form (rare), it is a deep red rose color. Deep Red Rhodochrosite is rarely found as well-formed crystals, so they are considered precious mineral specimens when found. It is a trigonal crystal system. Meaning a "three-dimensional geometric arrangement having three equal axes separated by equal angles that are not right angles."

The most common color of Rhodochrosite is varying shades of pink. The pink colors happen when the manganese is replaced with iron, calcium, and/or magnesium. This replacement changes the composition, hardness, and color of the

mineral. The environment and the amount of manganese replacement have a major effect on the formation of the mineral. When it forms along mineral veins in pockets, Rhodochrosite crystals can grow. Banded material can also develop as stalactites when water drips from manganese-rich rocks.

Argentina is the largest source of banded material where stalagmites form in long-abandoned Inca silver mines. When the Incas discovered the red crystals, they believed the mineral was the blood of their fallen rulers turned into stone. The first mention of Rhodochrosite appeared in 1873 when writers named the Argentinian specimens Inca Rose.

Until the 1500s, the Incas mined this beautiful gemstone but also silver. During the 1600s and 1700s, Jesuits excavated the mine for copper, silver, and gold. This old Inca mine, the Capillitas Mine, continues to boast massive quantities of this highly prized gem.

The formation of Rhodochrosite occurs in cavities and fractures of sedimentary and metamorphic rocks. The mineral can be found associated with silver deposits, with only a few silver mines producing Rhodochrosite as a byproduct. South Africa is by far the largest producer of manganese. Worldwide, South Africa, Brazil, Gabon, and Australia accounted for approximately 73% of manganese ore production. The USA has not produced any significant quantity of manganese ore with a content greater than 20% since 1973.

In the US, sources have been found in Colorado and Montana. The Sweet Home Mine, on Mount Bross, Alma, Colorado, is known for its intense red Rhodochrosite crystals.

In the 1870s, the Sweet Home mine started as a silver mine. During this period, Rhodochrosite was considered a waste rock. For the first few decades, the mine failed to make a profit and faced a lot of competition as more and more mines opened. Soon the red crystals were recognized for their worth and gained in value. Rhodochrosite then became the mine's sole focus.

The Sweet Home Mine produced some of the finest Rhodochrosite in the world—vibrant, cherry-red crystals. The mine is also known to have turned out some large pieces. The outstanding quality of the Rhodochrosite found here helped it to become Colorado's state mineral in 2002.

According to GIA, in 1992, the Sweet Home Mine produced its largest specimen, the "Alma King" - a Rhodochrosite crystal measuring 14.25 centimeters on one side sitting on a quartz matrix more than 2 feet long. The Alma King is currently in the Denver Museum of Natural History. In 2004 active mining ceased at the Sweet Home Mine.

The USA is 100% reliant on imports of manganese ore and alloys. Iron and steel manufacturing is the primary (90%) domestic use of manganese. The other 10% is used in producing fertilizers, animal feed, dry cell batteries (including those for electric vehicles), and chemicals for water treatment.

As a side note, I found this photo with the attached notation. I can not find any further history of this destruction or why the military ordered it. I find it odd since Argentine refers to it as "Argentine's Day of Infamy."

A Rhodochrosite stalactite cavern was discovered in November 1986. Around a year later, the Argentine Military and Federal government ("Argentine's Day of Infamy") ordered this series of caverns to be destroyed. The overall cavern was a series of interlocking small caverns measuring 50 ft in width by 20 ft in height. The stalactite diameters were up to 1.5 ft. This photo covers a 15 ft in height by 8 ft in width section of one cavern.

Photographed by JA Saadi, January 1987.

Bibliography: Wikipedia, Geology, Oxford Languages Dictionary, Science Direct, US Environmental Protection Agency (EPA), National Jeweler, Era Gem, 2018 Symposium - Mineral Museum, New Mexico Bureau of Geology & Mineral Resources



Banded Rhodochrosite



**Rhodochrosite Stalactite
or Stalagmite**



**Found in the Sweet Home Mine,
Alma, Colorado**



Zultanite and Csarite by Stef Olsen

Zultanite and Csarite are copyrighted trade names for gem diaspro from a specific locality in Turkey. Diaspro crystals exhibit pleochromism (they are trichroic), meaning that the color differs when seen from different angles (or crystallographic directions) in transmitted light. But that is different from the color change that depends on the light source: in daylight the stones usually appear green but change to pinkish brown or red in incandescent light. Similar color change occurs in the gemstone alexandrite. Diaspro exhibiting this color change phenomenon is exclusive to Turkish stones, and these gems are highly valued.

Diaspro has a hardness of 6.5-7, almost as hard as quartz and sufficiently hard for use in jewelry. But diaspro has perfect cleavage and is brittle: knocking the stone in the right spot will split it in two; it is best suited to less exposed jewelry not worn daily. Ultrasonic cleaning is not recommended.

"Synthetic Zultanite" is seen for sale, but some claimed Zultanite, natural or synthetic, is just glass with color

change caused by rare earth elements. Gemologists should be able to verify a natural stone.

Non-gem diaspore mineral is not rare: with gibbsite and boehmite it forms the aluminum ore bauxite.

from Palos Verdes Tumbler, 6/23

Realgar by Kat Koch

I came across this beautiful picture of Cherry-Red Realgar, and it perked my interest.

Realgar is an arsenic sulfide mineral that occurs near hydrothermal vents along with orpiment, arsenolite, calcite, and barite. This mineral is often called "ruby of arsenic" and "ruby sulfur." Because of the arsenic content, always wash your hands after handling Realgar specimens.

Before powdered metals like aluminum, titanium, and magnesium, Realgar was used to manufacture fireworks to achieve the white color.

Definitions: Orpiment - a common arsenic sulfide mineral that decayed from Realgar.

Arsenolite - is an arsenic mineral that forms in cubic crystals.

Calcite - is a common quartz-like crystal mineral.

Barite - is a barium sulfate mineral.

Realgar was also used to kill rodents, insects, and weeds before someone developed arsenic-based herbicides and pesticides. In 16th-century England and medieval Spain, it was used to kill rodents.

Until Realgar became known to be an arsenic poison and carcinogen, it was used to make leather to remove hair from animal pelts. There are now substitutes for this process, and now rarely used in leather manufacturing.

The ancient Greeks understood that Realgar was poisonous. The apothecaries of ancient Greece used Realgar to make a medicine called "Bull's Blood." The descriptions of deaths by drinking "Bull's Blood" match what is known today as arsenic poisoning. It is believed that Themistocles and King Midas used "Bull's Blood" to commit suicide.

The Roman Empire used Realgar as red paint. It has been found that in very early artworks from India, China, Egypt, and Central Asia, Realgar was used as a red paint pigment. During the Renaissance, the Europeans used it in fine art painting, but by the 18th century, its use had died out.

Realgar occurs with calcite, orpiment, barite, and arsenolite in the lead, silver, and gold ores. It is mined in Bohemia (Czech Republic), Hungary, and Saxony (Eastern Germany). In the US, it occurs in the geyser deposits of Yellowstone National Park; Manhattan, Nevada; and Mercur, Utah.

The secondary mineral underneath the pictured Realgar specimen is Picropharmacolite. Picropharmacolite is a rare but widespread arsenate mineral that forms from the oxidation of arsenic sulfides as they react with surrounding calcium rocks. Usually found as small to microscopic pearly white botryoids with a radiating structure as silky fibrous aggregates or tiny spine crystals.

Bibliography: *Wikipedia, Minerals.net, Encyclopedia Britannica, Mindat, International Gem Society.*



Safety Story by Ellery Borow, AFMS Safety Chair

There are a thousand safety stories out there, but only one will be told here.

The winter was cold. A layer of ice, a layer of about 16 to 20 inches of dense snow, and on top, another layer of about one- and one-half inches of ice had built up on the roof. The judgement was that there was too much weight for the roof. It had to be shoveled off. The roof was too slippery to stand on for the needed shoveling. Another roof snow-clearing plan was devised. Instead of shoveling, ladders were set up on either side of the roof. The snow and ice was going to be pulled off the roof with a "roof rake." Or rather, that was how it should have worked. After several tries it was determined that the top layer of ice was too thick for the roof rake to do the job. The top ice layer had to be hammered and broken-up with the raking tool before the all the ice and snow could be raked off. To clear the roof, every square foot of ice had to be hammered with the long-handled raking tool. After 9 straight hours of hammering, hammering, hammering, and pulling the accumulated ice and snow, the roof was finally cleared of its accumulated burden.

The tools and ladders were put away and a pat on the back was applied for a job well done. Time for hot cocoa.

The next day told a different story. Both hands were sore and swollen. The right more than the left. What had happened? Thick padded winter gloves had been worn to protect the hands from the vibration and shock of hammering. However, those well-padded gloves had not provided sufficient protection. Additional shock and vibration protection, or many rest breaks taken, were needed to protect the hands.

We in the rock hobby know what we need to do to be safe – but is that enough? Are we always doing enough to

protect our body parts, the people collecting minerals beside us, activity when using the 24" slab saw, or carrying that load as we set up for a show? There are many instances where we may be nudging the edge of being safe and where it might be wise to be extra mindful of what we are doing.

With the possibility of a great deal of hammering shock to the hands, it may be wise to use nylon or leather padding on the hammer handle – along with thick gloves to protect one's hands. There may be instances where not just earplugs, but earplugs and earmuffs together might be a better option to protect one's hearing. There may be instances where wearing not just safety glasses but also a safety eye shield should be considered. Even when one thinks they can carry a load, it may still be wise to have help.

How much safety is enough? In many instances it can be a judgement call as to how much safety is needed. Please judge wisely. Your safety matters. Oh, the hand swelling did go down, but it took a while. A lesson learned – again.
from AFMS Newsletter, 4/23

Aluminum: As An Element, A Metal, And In Minerals And Rocks by Andrew Hoekstra

Aluminum is the most abundant metallic element in the earth's crust (twice as common as iron), and the third most common element in the crust (after oxygen and silicon). Yet aluminum was more valuable than gold not much more than one hundred years ago. The French emperor Napoleon the 3rd is said to have reserved aluminum cutlery for himself and special guests, while the rest had to be content with gold; the French treasury displayed ingots of aluminum next to the crown jewels. In 1884 the Washington Monument was capped with a 9" pyramid of aluminum, the largest casting of the metal ever made at that time, which was displayed at Tiffany's jewelry shop before it was placed on top. Aluminum was chosen for its conductivity and because it wouldn't stain. Years later, after lightning melted a bit of the tip, a crown of small lightning rods was attached to the pyramid. Metallic aluminum is almost never found in nature. Minerals containing aluminum include the feldspars, kaolinite, kyanite and andalusite (aluminosilicates), the zeolites, turquoise, many garnets, jadeite, spinel, beryl, topaz, staurolite, epidote, zoesite, muscovite, spodumene, and lepidolite. Because aluminum readily forms an oxide, it easily becomes bound into rocks, while less reactive elements sink to the earth's core. Aluminum is light - less dense - so it should be no surprise that continental rocks, which have risen to the earth's surface, are richer in aluminum than the oceanic crust or the underlying mantle (which is not molten magma – and continents don't float on it). Aluminum metal was precious and rare; until methods were invented to extract it from rocks, where it exists in compounds, tightly bonded to other elements. Aluminum compounds like alum (sulfate salts of aluminum) have been in use since ancient times, but the metal was first isolated in the nineteenth century. Only in the 1880's were commercial production methods developed to produce aluminum metal from ore (using the Hall-Heroult Process and the Bayer Process). Aluminum metal and its alloys are light, non-reactive and corrosion-resistant, non-toxic, conductive (thermally and electrically), splinter-proof, and non-magnetic, and with its decreasing cost the metal has become ubiquitous, with many uses both familiar (foil, cans, pots and pans, furniture, and airplanes) and less familiar (capacitors, transformers, and other electrical/electronic equipment).

Aluminum is present in many common rock-forming silicate minerals, including the feldspars. But aluminum is commercially extracted from the minerals gibbsite, boehmite, and diaspore found in the ore rock bauxite. Bauxite is a fairly common and widespread rock, with large reserves in Guinea, Australia, Vietnam, Brazil and Jamaica. Australia produces the most alumina (aluminum oxide) from ore, and China produces the most aluminum metal. The major expense of producing aluminum is the electricity needed for electrolysis to extract the metal from molten aluminum salt (alumina). Aluminum smelters are often located near cheap sources of power, such as hydropower, even if far from the source of ore. Recycling of aluminum is profitable because it uses far less energy (about 95% less) than producing metal from ore. There was a factory in Carson, CA (now closed), where aluminum cans went in one end and rolls of aluminum sheet came out its other end – the cans were stripped of their paint in a rotary kiln, the metal melted, and then extruded as coils of new sheet.

Aluminum salts also have many varied and important uses. Sulfates of aluminum, like alum, are used in water treatment, hide tanning, textile dyeing, paper manufacture, and baking powder. Aluminum oxide (alumina) is used as an abrasive, in catalysts, and as a drying agent or absorbent. Other aluminum salts are used for these same purposes and in a variety of other manufacturing processes.

via Palos Verdes Tumbler, 5/23; from Delvings, 4/20

Lidar by Scott Ryan

The Washington State Department of Natural Resources website has a great interactive web page about lidar, showing different ways of viewing the landscape.

<https://data-wadnr.opendata.arcgis.com/apps/the-bare-earth-how-lidar-in-washington-state-exposes-geology-and-natural-hazards/explore>

Want to play with the lidar maps yourself?

Dig in! - <https://lidarportal.dnr.wa.gov/>

from West Seattle Petroglyphs, 6-7/23

Lidar can stand for either "light detection and ranging" or "laser imaging, detection, and ranging" and is used by satellites to make 3d maps, amongst other uses.

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!



Red, White & Blue Stones

X E W J E S I O U Q R U T
 Y T E N R A G U V T Q B Y
 M I Y C A R N E L I O N O
 Q L V A Q U A M A R I N E
 U W P F O B Y H P L Y C P
 E O V N T Y U M I X B W K
 R H O D O C R O S I T E U
 I K X Y L E T I L A D O S
 H G F M C B H D A S V O G
 P T A W U U N L Z F P I V
 P S M I L K Y Q U A R T Z
 A H B R Z C G P L R A E P
 S V O J I L E N I P S Y E

Red Stones

Carnelion
 Garnet
 Rhodocrosite
 Ruby
 Spinel

White Stones

Howlite
 Milky Quartz
 Onyx
 Opal
 Pearl

Blue Stones

Aquamarine
 Lapis Lazuli
 Sapphire
 Sodalite
 Turquoise

Field Trips

The club or clubs sponsoring the field trips are shown in italics. When known I have listed a phone number and contact person for each sponsoring club below the listed trips. If you are not a member of the sponsoring club, you should phone and ask permission to go on their field trip.

Some information from the Washington State Mineral Council webpage (<https://mineralcouncil.wordpress.com>).

July 15 *Cascade Mineralogical Society* - Field Trip to **Greenwater** - agate, jasper, common opal
 First site- black and red agate, common opal; dig sites next to road.
 Second site - ?
 Roger Danneman Roger.Danneman@gmail.com or 425-757-3506 text

July 22 **Sauk River Bars** - 11 am from Darrington Rock Show - Travertine

Navajo Sandstone

Navajo sandstone is a geologic formation — one of four formations comprising the Glen Canyon Group. It is found in southern Nevada, northern Arizona, northwest Colorado, and especially Utah. Popular sites in several national places are made of Navajo sandstone: Red Rock Canyon National Conservation Area, Zion National Park, Capitol Reef National Park, Glen Canyon National Recreation Area, Grand Staircase-Escalante National Monument, and Canyonlands National Park.

Navajo Sandstone often lies above Kayenta sandstone, and the two layers sometimes intermix in fingers. This creates vertical columns and cliffs of over 2000 feet. On top of the cliffs is often a layer of gently rounded light pink or white Navajo sandstone.

This is a sedimentary rock which began as sand deposited at the bottom of a shallow sea. Over time the sand came to be buried deep underground, and iron-oxide slowly coated the quartz crystals. Later, a reducing fluid of water and hydrocarbons permeated the stone dissolving the iron and often bleaching the sandstone white. Navajo sandstone comes in many colors and patterns which are affected by how porous it was and on whether it had certain other rock features like fractures when minerals filtered through it. Solutions containing hematite, goethite, and limonite changed the color of the sandstone as it filtered through. The resulting colors can be black, brown, pink, red, orange, salmon, peach, gold, and yellow.

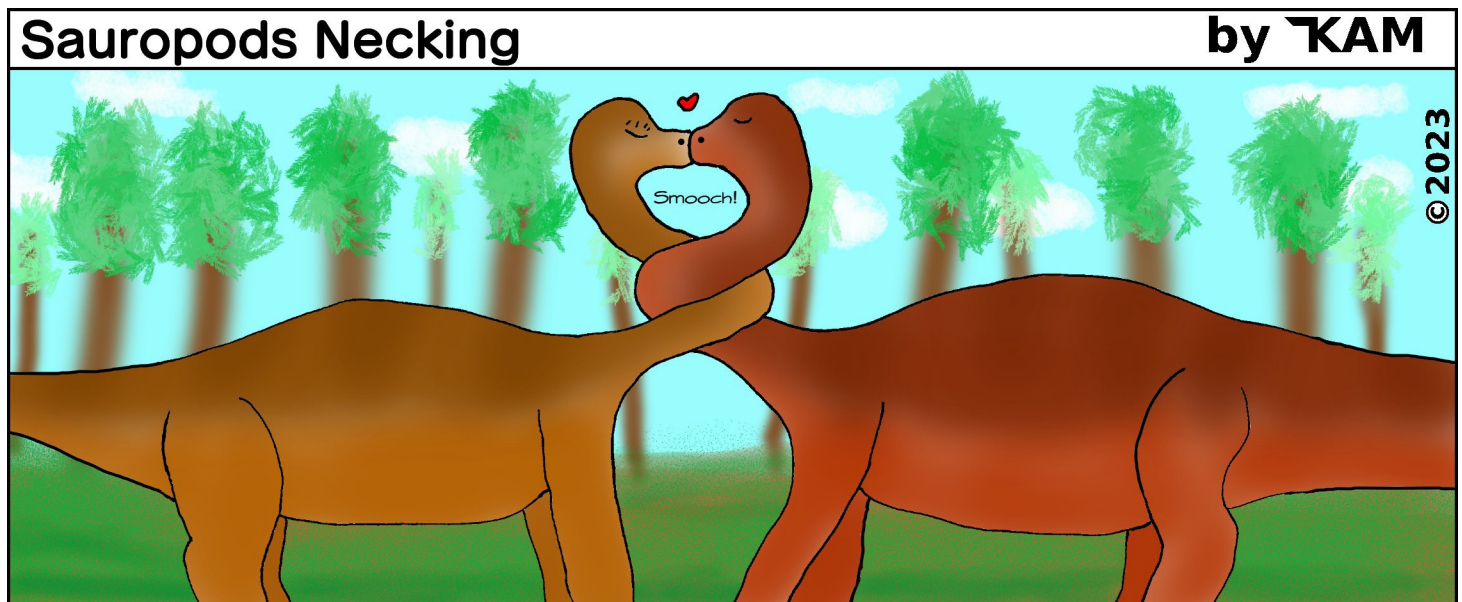
from Maplewood Rock and Gem Club, 2/23

Hematite is heavy because it's made of 70% iron. The name comes from the Greek word for blood, because it's often red.

from Maplewood Rock and Gem Club, 2/23

Young Richard's Almanac by Dick Morgan

In selecting a mate for life you should find someone you love and can talk with, have some similar likes, can make life enjoyable, has their own interests when you have to be apart. A person that respects and puts up with you when you have a bad day and has a shoulder to put your head on.



Uses of Fluorescence in Ultraviolet (UV) Light

Thwart counterfeiting: UV-sensitive inks and threads in passports, currency, driver's licenses and other.

Criminal ID: UV dyes may be added to pepper spray and other liquids expelled on the 'wrong' person.

Forensics: Locate semen, blood, urine, bile....

Hunting: Hunters may use UV lights to track a bleeding animal.

Pest control: Scorpions glow under LW ultraviolet light; Pest control technicians may use UV light to track urine trails of rodents.

Sanitary compliance: Used in the hospitality industry to detect pet and human bodily fluids to gauge life cycle of mattress and carpet restoration.

Analysis and authentication of minerals, gems and collectibles: Similar materials may look alike in ordinary light, but fluoresce differently under UV light; Identification and sorting of ore minerals, such as tungsten-bearing Scheelite: fluorescent doping of synthetic gemstones; blue fluorescence used in grading of diamonds.

Chemical markers: Green Fluorescent Protein used in genetics and biochemistry.

from Daisy Mountain Rockchips, 11/16

Uses (and Usefulness) of Dolomite

Dolomite is used in the same ways as is limestone.

A magnesia (MgO) source.

Uses of Chert

Historically -- Flintknapping (method of shaping flint) created tools and arrow/spear heads.

Firestarter, even in early firearms (such as the flintlock).

Gemstone.

Building or facing stone.

Paving or curbing stone.

Sharpening stone (novaculite).

Mill balls (grind glazes and other materials used in the ceramics industry).

Clay additive in ceramics industry (Flint was roasted to 1000oC to remove organic impurities and create cristobalite. This was then milled to a very fine size. Today quartz has replaced flint, however some potters still use the term "flint" to refer to siliceous additives.)

from Daisy Mountain Rockchips, 12/17

Shows

June 30 & July 1: Friday & Saturday 9 am - 3 pm
Rockhound "Pre-Estate" Blowout Sale (Cash Only)
12224 42nd Ave. NE
Marysville, WA

July 14 – 16: Friday 12 am – 8 pm; Saturday 9 am - 5 pm; Sunday 10 am - 4 pm
1120 Rock Club, Annual Show
Rutland Centennial Hall
215 Shepard Road
Kelowna, BC

July 21 – 23: Friday & Saturday 9 am - 6 pm; Sunday 9 am - 5 pm
Washington Agate and Mineral Society, 2023 Rock & Gem Rendezvous
Tenino City Park
On Park Avenue
(next to the Quarry House and swimming pool)
Tenino WA

Red ochre (a form of hematite) is used as a pigment for paint.

from Maplewood Rock and Gem Club, 2/23

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