The CMS Tumbler

August 2025

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

Club Picnic: August 16, 2025

11:30 am - Set-up
12:00 noon – Eating

Lake Wilderness Arboretum
Lake Wilderness Park
22520 SE 248th
Maple Valley, WA

The Picnic takes the place of The August General Meeting.

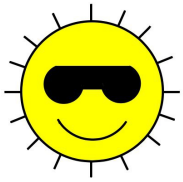
Bring a favorite meal for pot luck. Bring plates, utensils, and cups.

Table of Contents

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/UCaGlJxaWFAtV_JjgZRm9ESA

This month remember to wish a Happy Birthday to



Nancy Funk on August 1
Erica Dunham on August 9
Gerry Pacheco on August 9
Les Church on August 10
Travis King on August 11
Ananda Cooley on August 12
Terri Gerard on August 13
Devin Gurley on August 14
Michele Maidman on August 15
Erica Petty on August 16
Megan Petty on August 16
Breanna Post on August 19
James Richardson on August 19
Evan Blondell on August 22
Brandi Blanchfield on August 23
Kinsley Brott on August 27

and also remember to wish a Happy Anniversary to

Scott & Lauri Miles on August 12
Daniella Pratt & William Cook on August 13
Jae & Mike Cites on August 18
Larry & Sheila Clark on August 23
Robert & Nan Li Merriman on August 25 (15 years)
Michele Maidman & Gerry Pacheco on August 30
Erica Dunham & Chris Norris on August 31

Membership Mailing Address:
c/o Ananda Cooley
300 Lenora Street
PMB 6145
Seattle, WA 98121

Keith Alan Morgan, Editor
3802 W Tapps Dr. E
Lake Tapps, WA 98391

Postal, or Email, Exchange Bulletins are welcome.
Email preferred.
greenrockdraggin@yahoo.com

2025 Elected Officers

President Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Vice President Noelle Barnes	206-914-0514	geonoelleb@outlook.com
Treasurer Ananda Cooley	206-683-7787	cascademstreasurer@gmail.com
Secretary Pete Williams	425-228-5063	petewill02@gmail.com
Director 1 – At Large Lee Oliver	253-878-2151	loliver4252000@gmail.com
Director 2 - Field Trips Roger Danneman	425-228-8781	roger.danneman@gmail.com
Director 3 – At Large Programs Paul Ahnberg	941-704-2063	runhikebird@icloud.com
Director 4 - At Large Richard Russell	253-736-3693	richru1@yahoo.com
Director 5 - At Large Linda Jorza	206-478-1642	ljorza@gmail.com
Past President Malcolm Wheeler Sr.	253-569-5185	facetguru@aol.com
Show Coordinator Lee Oliver	253-878-2151	loliver4252000@gmail.com
Postage Stamps Michael Blanton	425-271-8757	mblanton41@hotmail.com
Mineral Council Diana Horsfall	425-226-3154	dianahorsfall@comcast.net
Mineral Council Ananda Cooley	206-683-7787	cascademstreasurer@gmail.com

2025 Show Committee Chairs

Cascade Coordinator Lee Oliver	253-878-2151	loliver4252000@gmail.com
Cascade Co #2 Michele Maidman	206-395-5270	maidmmm@yahoo.com
Cascade Co #3 Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Book Display Cases		
Show Display Cases Roger Danneman	425-228-8781	Roger.Danneman@gmail.com
Mail Flyers Michele Maidman	206-395-5270	maidmmm@yahoo.com
Show Treasurer Pete Williams	425-228-5063	petewill02@gmail.com
Show Silent Auction Richard Russell	253-736-3693	richru1@yahoo.com
Show & Raffle Donations Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Show Volunteer Recruiter		
Show Website Kat Koch	425-765-5408	vendorchair@cascademineralogicalsociety.org
Show Vendor Chairman Kat Koch	425-765-5408	vendorchair@cascademineralogicalsociety.org

2025 Committee Chairs

Club Historian Jim Cerenzie	253-638-1478	jcerenzie@yahoo.com
Donations Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Field Trip Roger Danneman	425-228-8781	Roger.Danneman@gmail.com
Health & Welfare Bev Williams	425-228-5063	britbev1957@outlook.com
Library Diana Horsfall	425-226-3154	dianahorsfall@comcast.net
Meeting Greeters Angie & Brian Bayer	253-569-0245	angiemc61@msn.com
Meeting Programs Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Membership Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Newsletter - Tumbler Editor Keith Alan Morgan	253-316-9935	greenrockdraggin@yahoo.com
Shop Instructors (Temp) Roger Danneman	425-228-8781	roger.danneman@gmail.com
Shop Reservations – *Winter Shop Closed*		
Public Relations Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Refreshment Angie & Brian Bayer	253-569-0245	Text to her number (no email)
Raffle Master Jarrod Da	425-306-2501	jarrod.da@comcast.net
Show & Tell John Cornell	253-335-3617	outhouse2hole@gmail.com
Webmaster Gina Manso	425-281-3502	ginamanso51@gmail.com
Facebook Group Roger Danneman	425-228-8781	Roger.Danneman@gmail.com
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

2025 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 Lands Access Association; and the Washington State Mineral Council.

Our Club is a Member of these Federations and Associations

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/

Washington State Mineral Council

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

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.

We Need Your Canceled Postage Stamps

Our club is going to continue to collect canceled postage stamps. Even though we are no longer members of the NFMS, we will continue to collect them and turn them over to the NFMS. They have a stamp company that buys them, and these funds are donated to cancer research. Every year NFMS donates around $2,500.

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 will turn them over to the NFMS. 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

These three retailers are huge supporters of our club. Please seek them out when looking for lapidary items and supplies.

Don't forget to show your membership card and receive a 10% discount on most items!

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.

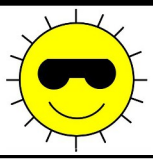
Access CMS Club Instagram page

Access our CMS YouTube channel

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

Access CMS Facebook Groups

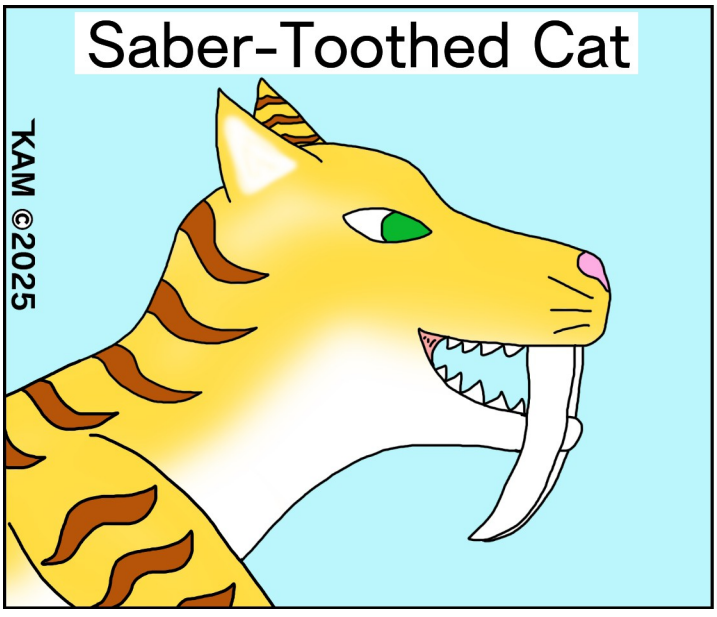
August

Sun	Mon	Tue	Wed	Thur	Fri	Sat
	Club Picnic at Lake Wilderness Arboretum				1 Everett Rock Sale	2 Everett Rock Sale
3	4	5	6	7	8 Puyallup Show	9 Puyallup Show
10 Puyallup Show	11 Board Meeting 7:00 pm	12	13	14	15	16 ***Club Picnic***
17 Maplewood Show North Seattle Rock Sale	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

CMS Show Committee Meeting:…Monday, August 11…….....6:30 pm to 7:00 pm
CMS Board Meeting:……....Monday, August 11…….....7:00 pm to 8:00 pm
CMS General Meeting:……....3rd Saturday, August 16……Set-up 11:30 am, Eating 12:00 noon to 3:30 pm

No General Meeting this month, the Picnic takes it's place.

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 July 7, 2025

by Pete Williams, 2025 Secretary

Attendees: Kat Koch; Pete Williams; Rich Russell; Mike Blanton; Paul Arhnberg; Diane Horsfall; Noelle Barnes; Lee Oliver; Michelle Maidman; Ananda Cooley; Roger Danneman

Show Committee 7:09

This show was the most profitable we have ever had. Profits will be used to help complete our show currently being completed on Roger's property. The Board agreed to purchase 3 dozen black table cloths that are on sale for next year's show. Other items discussed include: having only 2 entry tables next year; purchasing only 2 dozen donuts each day along with bagels; buying pizza for the set-up crew on Friday; having better instructions on how to use the credit card. Our show was advertised on KOMO TV without our knowledge. Potentially, we could get that next year.

A show chairperson is needed for next year's show. This would only involve ensuring everyone performing their assigned duties.

Board Meeting 7:38

There are now 134 family memberships with 3 more new members from the show and 1 renewal. Our July meeting is being cancelled as the flooring in our meeting hall is being re-done. The August meeting will be the picnic at Lake Washington Arboretum on August 16th. Interested members can participate in a tailgate sale prior to the picnic. The club will purchase sandwiches or chicken for the picnic.

There has been no response in inquiries about participating at the Puyallup Fair or having a display at Valley Med Center.

Meeting adjourned at 8:09

CMS General Meeting Minutes July 10, 2025

by Pete Williams, 2025 Secretary

The general meeting was cancelled as the flooring in the American Legion Hall was being re-done.

From Atop the Rock Pile

by Kat Koch, 2025 President

Our 2025 Gem Show is now behind us. Financially, for our club, it was a success.

As I sit here thinking about our past shows, I thank Mark Hohn. In January 2013, I served as a director on the board of our club. Shortly thereafter, Mark joined the club and also volunteered for the board. Mark also joined the club and board in 2013, and he volunteered to put together a membership database. We had 13 paying members and 4 lifetime members. In 2015, I became club president and asked Mark to design a new website for us. Mark even went a step further and gave the website the ability to register and pay dues online, whether as a new member or for renewal. He then tied website membership entries to update the two membership databases automatically.

Every year, until we withdrew our membership in 2025 from the NFMS and AFMS, our website won 1st Place in the NFMS (all northwest clubs) and placed anywhere from 2nd Place to Honorable mention with the AFMS (all clubs in the USA).

Our club had not had a gem show for about 5 to 6 years as we couldn't find a reasonably priced venue. We had been having our show at the Puyallup State Fairgrounds. The Fairgrounds continually raised the cost of the venue to the point where we could no longer afford the location. Our membership had also been in severe decline ever since Boeing divested itself of all hobby clubs, and we were required to change our name and move our meetings off Boeing property.

In late 2017, Mark found that Green River College had a Student Union that we could afford to resume our Gem Show again in 2018. Our show was successful and grew to the point where we moved to the College's Gym in 2021. In 2023, the board approved moving our show to the Kent Commons Community Center for our 2024 Gem Show. With our change of date and move to Kent Commons, our visitors count grew to 3,200.

Sadly, Mark passed away on April 1, 2024, at the age of 66 after a battle with Myelodysplastic Syndrome (MDS).

My whole point of writing about Mark is that he meant so much to our club. He was very diligent in finding an affordable show venue for us and was the show chairman for 3 years. The profit from the shows started our fund for an indoor shop. Our show account now has approximately $42,000 to support an indoor shop. He would be amazed at how our show has grown and become so successful. He was a great friend and club member to all and is greatly missed. I am so thankful for everything he did for our club.

Although our 2025 show was a financial success, we didn't have nearly as many visitors as we did last year.

We had done our regular advertising on Facebook, Instagram, and numerous Seattle and festival & fairs sites.

Additionally, KOMO News mentioned our gem show as one of the things to do in the area. I have spoken to several other clubs, and their attendance and vendor sales were also seriously down. I believe it was due to the economy.

If you're a new member, we're thrilled to have you join our fantastic rock club! Your presence at our monthly meetings is highly valued, and we encourage you to take the opportunity to introduce yourself. I look forward to meeting you.

Since our membership continues to grow weekly, I hope more members will attend our monthly meetings. The larger our meeting attendance is each month, the easier it will be to book quality speakers.

When planning your estate, we invite you to consider making a donation to our club. We accept various types of gifts, including cash, stocks, real estate, and other assets. All property and monetary donations will be held in our savings account to help us acquire and operate an indoor shop, as well as a space for monthly club meetings. Thank you for your support!

2025 Meetings

Date Correction – Your President Had a Senior Moment

August 16th – Lake Wilderness Arboretum Picnic (Maple Valley) and Club Auction

Join us for a potluck in the park! Please bring your favorite potluck dish, rolls, drinks, desserts, or etc.

Enjoy a relaxing day in the park, catching up with friends and engaging in some "rock talk."

After lunch, we will hold a club auction. We welcome any donations that members would like to contribute. Our Young Tumblers can also spend their "Rock Bucks" at the auction just like real money.

It's a great opportunity to pick up some fantastic bargains!

September 11th – Amber – The Most Amazing Discoveries Found in Amber

We are going to show a video of the most unusual and amazing things found in Amber. It isn't just insects.

Show 'n Tell: An item that has something trapped inside or a picture rock, thunder egg, or geode that looks like it has an insect, animal, scenery, or face inside.

October 9th - Tom Prang on Archeology & Geology

Many of our members may recognize Tom as a vendor from our gem show and many other shows. His booth is "A Point in Time."

I've given him the freedom to discuss whatever interests him, and he is always fascinating to listen to at his show booth. This meeting promises to be both informative and engaging.

Show 'n Tell: A fossil of any type.

Turbidites are sea-bottom deposits formed by slope failures where rivers have deposited large deltas.
via CMS Tumbler, 10/15; from USGS Twitter feed, 9/29/15

Field Trip Report for July 12 Greenwater by Roger Danneman

On Sat. July 12th we went into the Greenwater area for black agate, misc. jaspers, and opal. It was a gorgeous day, thankfully not too hot up there. We had a big group with 12 vehicles, 24 people, and 1 dog. The black agate site is deep in the woods off of FR7222. We dug there for about 3 hours. Then we went to the slide area off of FR 72 where some nice green agate and jasper can be found. Usually early in the season after snow has subsided is best time to collect there. High up the steep slope is the source of the material but it erodes out during winter and spring. I mainly wanted to show the group where that spot was located. We collected there for a 1/2 hour and a few nice pieces were found. Then we went to a rocky outcrop above the end of the paved portion of FR70 that yields a jasper with colors in red, green, and gold. It was a long day and the on-site pics of the material don't show it very well, but if you've seen my Field Trips Display at our Kent Commons Show in June you've seen how well the collectible material will polish.

The group consisted of 23 people and 1 dog in 12 vehicles: Scott & Laurie M.& friend, Andrea M, Chris V., Ben K. group of 4, Kayci E., Jarrod D., Michelle M., Gary & Kristina, Noel B. with dog Kingsley, Daniel S., The Roy N. family of 6, and of course me.








Geologist [jee-ol-uh-jist] noun

Geologists are scientists with unnatural obsessions with rocks. Often too intelligent to do monotonous sciences like biology, chemistry, or physics, geologists devote their time to mud-worrying, volcano poking, fault finding, bouldering, dust collecting, and high-risk coloring.

from Panorama Gem & Mineral Club News March 2025

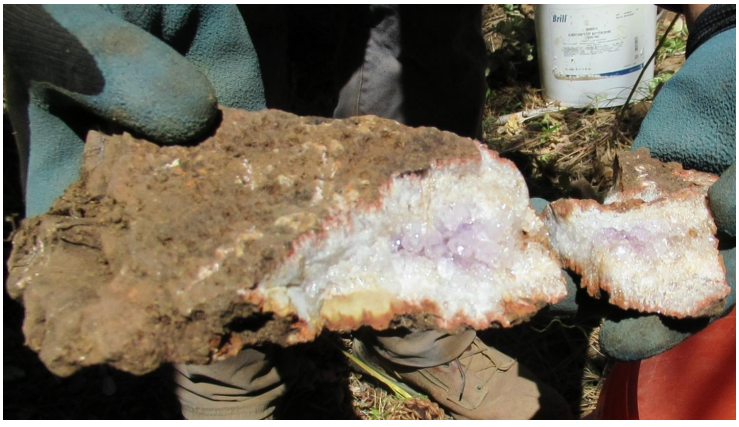
Field Trip Report for July 19, 2025, Crystal Mountain by Roger Danneman

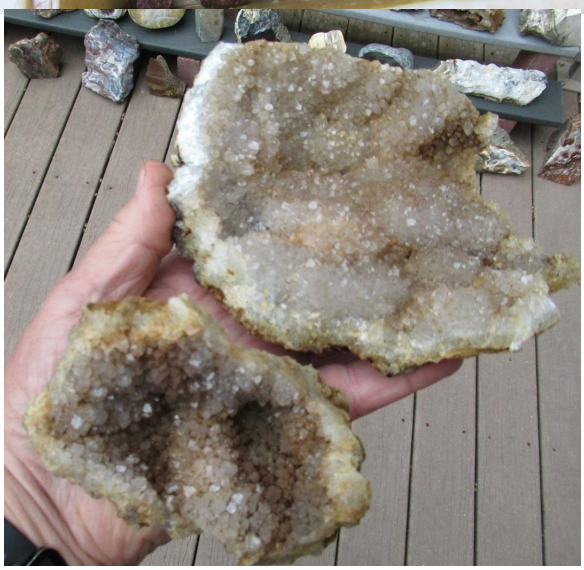
On Sat. July.19th we went to Crystal Mountain north of Ellensburg for geodes, crystal plates, jasper, and agate. A lucky break in the weather kept the temperatures in the low to mid 60s. 1st stop was a site where we've been busting through soft basalt and finding crystal lined geodes and agate nodules. Special thanks to Peggy for helping folks identify their finds at that site. 2nd stop was to a ravine where we find crystal and multi-colored jasper/agate. More of a challenging road to get into that site but I love the colorful material and interesting patterns we find in the rocks there. This site is on our schedule again in October, but last year we had to hike in because rain made the road impassable. That's why I wanted to make sure we got in there during a dry season.

The group consisted of 22 people in 15 vehicles: Nik B., John & Dave C. (thanks for all your help at both sites), Paul A. & Peggy S. (thanks for all your help at the geode site), Kelly G., Terry F., Arleaha W. +2, Philip T., Michele M., Ben K. , Jarrod D., Will & Drew C., Noel B., Jonathan C., Jackie B. +2, and me.

Remember our CMS summer picnic at Lake Wilderness Arboretum on Saturday Aug. 16th. Potluck at 12:00 with an auction of club and donated rocks to follow. There was also some talk of a tailgate trading party at 10:00 AM or so. More details to follow. Mike's idea.

Other than the picnic, there are no scheduled trips in August. If a trip should arise, I'll send out an announcement.





Arthropleura by Kat Koch

An artist rendering of a millipede the length of a car crawling through ancient forests, and you'll have a good picture of an Arthropleura. This giant arthropod terrorized the Carboniferous period, spanning from 345 to 292 million years ago, combining features of both centipedes and millipedes and growing up to 8 feet in length.

First discovered in 1849 during the construction of a railway near Friedrichsthal, Germany, Arthropleura has consistently attracted considerable artistic and scientific attention, yet has historically been known from mostly fragmentary remains.

Recent CT scans of fossilized specimens have revealed stalked eyes, suggesting it spent time both on land and in water. Complete exoskeleton fossils found across Europe and North America confirm this wasn't just a one-off freak of nature, but a successful predator that dominated its ecosystem for millions of years.

Bibliography: MSN News, Wikipedia.

Sea otters have a favorite rock they keep at all times for cracking open seashells. They even have pockets near their chest to store it.

from Skagit Gems, 5/25

Richard Morgan's Funeral Service by Keith Morgan

On June 30, 2025 Richard Morgan's funeral service was held at the Tahoma National Cemetery at 2:30 pm. It was a lovely day and it was held in an outdoor structure surrounded by trees. It was attended by family members and some members of the club.

The ceremony focused on his serving in the army, that when drafted he did his duty. There was a military rifle salute. We were warned that it would be loud and that it was okay to cover our ears. The bugler did cover his ears, and after firing I wondered if the riflemen had ear protection I couldn't see.

The flag was unfolded and refolded and presented to the family, then the urns containing the ashes of Richard Morgan, and his wife Patricia Morgan, were taken off to be placed in their alcove.

Antarctica Ventifacts by Bob Chutney

Ventifacts are simply wind-shaped rocks. They are formed by strong winds carrying particles of dust, silt, and sand at high speeds. Dust grains are suspended in the air, and can be carried from ground level to extreme heights; larger silt and sand grains slide, roll, or bounce along the surface (a process called saltation). The particles collide with rocks on the surface of the ground abrading them in a process much like sand blasting.

Ventifacts are typically found in arid areas where there is little or no vegetation to cover the rocks or hold soil in place, and where periodic high winds occur. The winds abrade the ground surface, removing and transporting grains, causing deflation of the surface and leaving mostly rocks behind. The result is desert pavement, where closely packed rocks of pebble to large cobble size cover the ground with little intervening sand or gravel. A few classic examples of desert pavement where ventifacts occur are the Atacama Desert of Chile and Argentina, the Gobi Desert in Mongolia, the Mojave

Desert, CA, (especially Death Valley), the Skeleton Coast of Namibia, and Rocky Flats between Golden and Boulder, CO, where seasonal Chinook winds have been recorded at up to 147 mph.

Antarctica, a continent covered in ice, would seem an unlikely place for ventifacts. But, although only 2% of the continent is ice-free, parts of that are very favorable for the formation of ventifacts. Antarctica is technically a desert, with an average of 6.5 inches of precipitation per year. It has no vegetation. It has extremely high winds and a large supply of dust and fine sand derived from grinding of bedrock by the glaciers. The cold temperatures reduce chemical weathering. There are also very fine-grained lithologies suitable for formation of ventifacts.

The ventifacts in the FCGMC collection were collected from the McMurdo Dry Valleys, on the west side of McMurdo Sound in southern Antarctica. The Dry Valleys are one of the most arid places on earth, almost never seeing precipitation. Some studies suggest there has been no significant precipitation there in more than two million years. Intense katabatic winds funnel down the valleys from the cold, high mountains, often reaching speeds of 200 mph. Sand, dust, and even snow and ice crystals blast the rocks lying on the surface and shape and polish them.

Most of the Antarctica ventifacts were formed from pieces of dolerite (Jurassic Ferrar Dolomite), an intrusive form of basalt. The dense, aphanitic to very fine-grained texture of the dolerite aids in the formation of ventifacts by being easily shaped and polished, but homogenous and hard enough that it doesn't disintegrate during the wind sandblasting. Ventifacts take several forms including faceted, etched, grooved, pitted, and polished. The FCGMC specimens exhibit all these forms; many of them have several forms, suggesting movement of the ventifact or changes in wind direction during the eons it took to shape the ventifacts. One of the unique features of these ventifacts is that many of them are polished on both top and bottom and some are pitted or grooved on both sides. That suggests the rocks were tipped over at some point, allowing sandblasting on what used to be the bottom. Frost heave is likely responsible for most of the rotation of the ventifacts, although extreme winds may also play a role by flipping over thinner rocks, especially ones that have been become unbalanced due to deflation of the ground surface under the ventifact or erosion of a large part of the ventifact itself.

The most common characteristic of ventifacts in the collection is polish. Almost all the specimens are highly polished.

The classic ventifact is faceted with from one to four planar to sub-planar facets carved by the wind, often forming a keel or flat surface on the top, at the intersection of the facets. German scientists studying ventifacts created a system of nomenclature based on the number of facets or edges ("kanter" in German): einkanters, sweikanters, dreikanters, and vierkanters. I think they gave up counting after four, since I not seen reference to funfkanters.

Pits form when the wind blows at a high angle to the surface of the rock, carrying sand to form a dimple. Once the pits begin to form and deepen on a faceted plane, sand becomes trapped in them and swirls around with the wind, further grinding, deepening and widening the pits.

Grooves or flutes are also common. They develop parallel to the wind direction when wind- transported grains impact the rock and slide or bounce along it, creating long narrow depressions in the rock.

Complex ventifacts combine several forms, which appear to be superimposed on each other. From studying the FCGMC Antarctic ventifacts, I believe there is a progression which starts with faceted faces, developed on a rock surface with a constant orientation to the wind. After primary facets are created, secondary facets may form across the original ones when either the rock is rotated or the prevailing wind direction changes. When facets are oriented at a high angle to the wind, small pits begin to form on the face, then grow into large pits. The pits often develop into grooves. This is evident in several specimens, where small pits and grooves can be seen developing on facets. Other specimens exhibit deep pitting on one or more facets. The most mature ventifacts have facets which are partially rounded or curved by extensive wind erosion. As erosion continues, ventifacts lose their upper parts and become fairly flat ones with only the lower parts of the original facets remaining. In extreme cases ventifacts have been almost completely obliterated by pitting and grooving. Some of them take on odd shapes with no resemblance to the original faceted ventifact. Another line of evidence which supports this evolution in shape is that ventifacts with distinct (well preserved) facets have much less polishing than ones with pitted or grooved facets, suggesting they have spent less time exposed to the wind, although polishing can also be a function of grain size of the rock and size of the wind-driven grains (we all know the 80-120-240-400 … mesh routine).

As wind erosion continues, pits and grooves eat into the rock, eventually destroying nearly all the primary and secondary facets.

Another type of ventifact in the FCGMC collection is formed from sandstone (Permian-Triassic Beacon Sandstone). The sandstone is coarser grained than the dolerite and the grains are not as densely packed as those of dolerite, making a softer rock. It is also not as homogenous, having distinct bedding planes. These characteristics lead to the creation of very unique ventifacts – bowls.

What probably starts as a pit on the face of a sandstone cobble enlarges to the point that sand becomes trapped in the pit and swirls around with centrifugal force, abrading the sides of the pit as it preferentially erodes a softer bedding plane and eventually forms a giant pit – a bowl. The center of the bowl often remains as a "core" that the windblown sand swirled around and didn't erode into. Some cores survive as odd conical ventifacts.

Ain't Nature wonderful?!?

from Four Corners Gem and Mineral Club, 11/24

Dead Camel Jasper by Jim Retzer

Dead Camel Jasper is a "picture jasper" similar to those found in the Owyhee Mountains region of Malheur County, Oregon. Some of it shows a similarity to Apache Rhyolite found in the Deming, New Mexico area but Dead Camel takes a

better polish.

The original Dead Camel Jasper was discovered by Philip Stephenson in the Dead Camel Mountains of Churchill County, Nevada. This is really not a new discovery but a new claim on a type of japer old timers referred to as Lahontan Jasper. Modern day Lake Lahontan is around 50 miles northeast of the Dead Camel Mountains, but the jasper deposit was named for the Lake Lahontan that was a large endorheic prehistoric lake during the Pleistocene that covered a large extent of northwestern Nevada.

Recently two other claims have been started in the area, they are the Dead Ringer, and Fire Ledge. Also in the area are Mescalero Jasper and Red Falcon Jasper. Mescalero is a very colorful jasper similar to Dead Camel but with more vibrant and intricate patterns of turquoise blue and varying shades of red and pink.

The cost of jasper from this region is getting expensive with rough going for $20-$30 per pound, though in larger volumes you can find it for $12-$18 per pound. Slabs can run anywhere from $12.00 to $60.00 depending on size, quality, and colors.

If you plan on going to the Camel Mountain area, be aware of your location and where private claims and private land is located. Though a lot of this area is BLM land, people claim it is their private land and even used armed threat to keep people off. Some of the dirt roads in the area have been blocked. Check out where you are going and the status of the land before you go out. If you are confronted, even though you know you are in the right, it is best to leave and avoid a dangerous situation.

from Panorama Gem & Mineral Club News, 2/25

One Liners for Laughs and Sharing Rockhound Joy by Jennifer Haley, AFMS Historian

There is always at least one person, if not more in each club, who are admired for their wit or just bringing a smile to your face whenever you are around them. During your monthly meetings, play time on field trips, working on your shows and in the lapidary shop, someone seems to have the spontaneous gift for creating wonderful smiles.

One of the earlier Rocks and Minerals magazines from nearly sixty years ago, had a section in some of their issues each year for wit. When I read these, I thought what a fun idea for clubs to pay attention to, and add to their newsletters and send in for their federation newsletters as well. Your juniors can be very clever, so I am sure you can gather some witty statements from them too. Some of your officers and chairmen may have some words of wisdom that have stuck with you, and those could be used also. Here are examples from the magazine. The title of this particular section for this issue was, “How I Became a Rockhound.”

• “I started picking up rocks on trips, then got to stopping at rock shops, then built a tumbler, bought a secondhand rock saw, and here I am-Rocks running out my ears!”

• “Rocks have always interested me, but due to the Tulas rock show I really went overboard. I never have had a dull minute since!”

• “I started out looking for uranium-and here I am.”

• “My mother made me do it.”

If you inspire your club members to get their minds behind this, I think you’ll find quite a few more smiles enjoying wit and humor. Enjoy your clubs and federations!

from AFMS Newsletter, 6/25

Rock On: Zoned Out

Minerals are defined as: naturally formed, inorganic and solid materials with a crystalline structure and predictable composition. In most minerals the chemical composition is similar throughout the structure, but in some minerals a phenomenon known as zonation can occur. When minerals form, they often do it in stages at different times. In some case these different growths can be separated by millions of years. In each stage of growth, a layer of different composition is created and uses the existing mineral to “grow”. An analogy of zonation is the different colored layers in a Gobstopper candy which has different flavors from the center to the outside.

A zoned mineral contains layers from the center to the rim that vary in timing of formation, composition, and sometimes other properties. Zonation often happens in crystals that form from magmas and hydrothermal solutions but is also visible in crystals formed in metamorphic rocks. The formation of a new zone on a mineral often results from changes in the conditions of formation along with changes in chemistry or simply changes in the composition of magmas and fluids.

Zoning is present in many minerals but in most hand specimens it is often not visible. Under a petrographic microscope, however, zonation is often very common and apparent where is zone has different colors and optical properties. In still other cases detailed chemical analyses are needed to detect zoning’s presence.

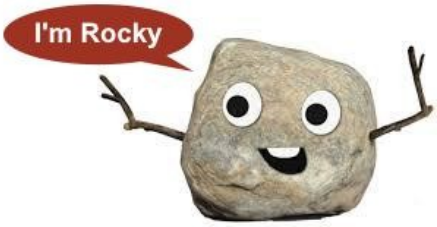
Most zoning is concentric, forming growth rings on the first crystal that is seen at the core. Occasionally, it is more complex and results in compositional zones that are difficult to explain and interpret. Complex zonation can happen.

from Four Corners Gem & Mineral Club, 10/22

Why did carnivorous dinosaurs eat raw meat?
Because they didn’t know how to barbecue.

from Crack the News, 7/25

Young Tumblers News



Rock Bucks

Just a reminder that all Young Tumblers under 15 can easily earn "Rock Bucks."

Earn $3 "Rock Bucks" to attend a meeting.

You can earn an additional $5 in "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!

Picnic Coloring Page

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).

August 16 & 17 *Puyallup Rock Club* - **Greenwater** - Meet before 9 am at Ranger Station in Enumclaw – Agate, jasper, opal - Bring digging & hard rock tools
Nate White (206)349-7054 nate.white77@gmail.com

Dinosaur Park Exhibit Spotlight: Hypsilophodon foxii by Jeff Bond

This little guy lacks the star power of some of the other dinosaurs found in its era—even "Othnelia" ended up more recognizable to the average Joe thanks to Jurassic Park, and it's no longer valid taxon! But its relative obscurity doesn't diminish its importance to science. With several excellent skeletons and nearly 150 years of study behind it, Hypsilophodon has taught us much about dinosaurs in general.

When first discovered on the Isle of Wight in Great Britain, scientists considered this animal a juvenile Iguanodon. "Darwin's Bulldog," Thomas Huxley, first described it as an adult of a smaller, separate genus in 1870. He based that description on two well-preserved specimens which helped him demonstrate that they had reached adulthood when they died. It was one of the first small dinosaur species described.

Many dinosaur books list an erroneous meaning for this taxon's name. They translate it literally as "High-Ridge Tooth" as if its teeth had high crowns or something. The teeth look nothing like that - more like teeny leaves than rugged mountains. Instead, the name copies the format of its more famous distant cousin, Iguanodon. In this sense, the name "Hypsilophodon" really means "Hypsilophus-lizard-like teeth." That lizard earned its name from having a high ridge of skin on its head, so the ridge meaning of the name has nothing to do with teeth at all. Ironically, Hypsilophus itself is no longer considered a valid taxon; it was subsumed into Iguana decades ago.

Several specimens of Hypsilophodon have included odd plate-like structures preserved near the front of their rib cages. Scientists originally interpreted them as thin plates of armor, which is one reason older pictures of the animal feature large crocodile-like scutes. In 2008, a study determined these structures were really intercostal plates. Rather than forming on top of their skin, these stiff cartilage plates grew between their ribs and may have stiffened their ribcages. Though scientists have not discovered their purpose as of 2017, a study conducted in 2010 disproved the idea that these plates defended the animal. This study did point out that birds have similar structures in their ribcages to help them breathe. If Hypsilophodon's intercostal plates performed a similar function, they could have made the animal capable of sudden bursts of speed. They may also have improved endurance. Either attribute would help a small prey animal like Hypsilophodon survive in a world of giant predators.

Some early reconstructions of Hypsilophodon and similarly small plant-munching dinosaurs showed it perching in trees. Scientists based this reconstruction on the animal's relatively long toes, which they imagined grew longer to better grasp branches. This led them to even reverse one of the toes in some cases to make them better resemble bird toes. During the 70's, a scientist named Peter Galton reviewed this and other long-standing theories about this species. He found that the shape of the foot bones made reversing the toe impossible. Moreover, the overall anatomy of the foot closely resembles forms seen in dinosaurs too large to climb trees. Besides, climbing a tree to escape a large theropod might not prove an effective strategy - doing so only means it doesn't have to bend down to eat you. Making consumption more convenient for a predator generally doesn't make for good survival strategy.

Much of what we know about Hypsilophodon in modern times relies on the work of the aforementioned Peter Galton. He owes his PhD to an exhaustive study on its anatomy.

Works cited: Galton, P. M. (1971). Hypsilophodon, the cursorial non-arboreal dinosaur. Nature, 231(5299), 159-161.

Butler, R. J., & Galton, P. M. (2008). The 'dermal armour' of the ornithopod dinosaur Hypsilophodon from the Wealden (Early Cretaceous: Barremian) of the Isle of Wight: a reappraisal. Cretaceous Re-search, 29(4), 636-642.

Galton, P. M. (2009). Notes on Neocomian (Lower Cretaceous) Ornithopod Dinosaurs from England–Hypsilophodon, Valdosaurus, "Camptosaurus", "Iguanodon" –and Referred Specimens from Romania and Elsewhere. Revue de Paléobiologie, 28(1), 211-73. (see page 216 for the origin of Hypsilophodon's name).

T. H. Huxley. 1870. On Hypsilophodon foxii, a new dinosaurian from the Wealden of the Isle of Wight. Quarterly Review of the Geological Society of London 26:3-12

from Golden Spike News, 7/25

Obsidian - Nature's Glass

Obsidian forms when lava cools so quickly that crystals don't have time to form, resulting in a smooth, glassy texture. It is commonly found in volcanic regions such as Iceland, Mexico, and the United States (notably in Oregon and California). This volcanic glass has a rich history, used by ancient cultures for crafting sharp tools and weapons. Its deep black or smoky-gray appearance often includes fascinating inclusions like snowflake obsidian or the golden sheen of gold-sheen obsidian. Modern uses extend to ornamental objects and metaphysical tools believed to shield against negativity.

from CBRGC Newsletter, 1/26/25

Shows

August 1 & 2: Friday & Saturday 9 am - 3 pm
Everett Rock & Gem Club, *Rockhound "Pre-Estate" Blowout Sale* (cash only)
12224 42nd Ave NE, Marysville WA

August 8 - 10: Friday & Saturday 10 am - 5 pm; Sunday 10 am - 3 pm
Puyallup Valley Gem & Mineral Club, *2025 Jim Christian Memorial Show In The Trees*
Tacoma Sportsmen's Club, 16409 Canyon Rd East, Puyallup, WA

August 10: Sunday 10 am - 4 pm
Fraser Valley Rock and Gem Club, *Annual Tailgate*
Aldergrove Legion, 26607 Fraser Hwy, Aldergrove, BC

August 16: Saturday 9 am - 5 pm
Shelton Rock and Mineral Society, *15th Annual Tailgate Rock Sale and Swap Meet*
MCRA, 2100 E Johns Prairie Rd, Shelton, WA

August 16 & 17: Saturday & Sunday 10 am - 5 pm
Maplewood Rock and Gem Club, *Annual Summer Rock and Mineral Sale*
Maplewood Clubhouse, 8802 196th St SW, Edmonds, WA

August 17: Sunday 11 am - 3 pm
North Seattle Lapidary & Mineral Club, *Annual Outdoor Rock Sale and Show*
Paramount Park, 15300 8th Ave NE, Seattle, WA

August 20 & 21: Saturday & Sunday 10 am - 4 pm
Fraser Valley Rock and Gem Club, *Annual Show*
Aldergrove Kinsmen Community Center, 26770 39th Ave, Aldergrove, BC