



# The CMS Tumbler

June  
2022

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

Next Meeting:  
June 9, 2022  
7:00 p.m.

American Legion Hall  
25406 97th PI S  
Kent, WA

The Program is the history  
of the Green River

The Show & Tell  
Theme is something you  
have collected from a  
river, stream or beach

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## Connect with us!

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](https://www.youtube.com/channel/UCaGIJxaWFatV_JjgZRm9ESA)

This month remember  
to wish a

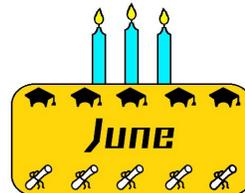
Happy Birthday to  
Michelle Patterson on June 2  
Noelle Barnes on June 5  
Leonard Bahr on June 7  
Isaac Fu on June 11

Charleen Shoemaker on June 11  
Michael Watson on June 11  
Shelley Opel on June 16  
Tammy Fredricks on June 17  
Becky Patterson on June 21  
Margaret Squires on June 27  
Brenda Haworth on June 29  
Dick Morgan on June 29

and also remember

to wish a

Happy Anniversary to  
Dan & Stephanie Bariault on June 8  
Robert & Christine Waddell on June 8 (8 years)  
Christina & Russell Loperman on June 22 (9 years)



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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.

New Club Mailing Address:  
Cascade Mineralogical Soc.  
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Renton, WA 98057

Keith Alan Morgan, Editor  
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Postal, or Email, Exchange  
Bulletins are welcome.  
Email preferred.  
[greenrockdraggin@yahoo.com](mailto:greenrockdraggin@yahoo.com)

**2022 Elected Officers**

Title	Name	Phone	E-mail
President	Kat Koch	425-765-5408	<a href="mailto:president@cascademineralogicalsociety.org">president@cascademineralogicalsociety.org</a>
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(Shared Position)	Garry Hartzell	425-681-7162	<a href="mailto:santacruz1@yahoo.com">santacruz1@yahoo.com</a>
Director 2 - Field Trips	Roger Danneman	425-228-8781	<a href="mailto:roger.danneman@gmail.com">roger.danneman@gmail.com</a>
Director 3 – Programs	Paul Ahnberg	941-704-2063	<a href="mailto:runhikebird@icloud.com">runhikebird@icloud.com</a>
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**2022 Show Committee Chairs**

Cascade Show Chairman	Kat Koch	425-765-5408	<a href="mailto:president@cascademineralogicalsociety.org">president@cascademineralogicalsociety.org</a>
Cascade Show Co-Chair #1			
Cascade Show Co-Chair #2			
Show Treasurer	Pete Williams	425-228-5063	<a href="mailto:petewill02@gmail.com">petewill02@gmail.com</a>
Show Silent Auction	Michael Blanton	425-271-8757	<a href="mailto:mblanton41@hotmail.com">mblanton41@hotmail.com</a>
Pre-Show Raffle Case & Donation Requests	Zach Pratt	253-600-8520	<a href="mailto:zachpratt25@gmail.com">zachpratt25@gmail.com</a>
Show Raffle Case Display and Distribution of Prizes			
Show Demonstrators	Richard Russell	253-736-3693	<a href="mailto:richru1@yahoo.com">richru1@yahoo.com</a>
Show Load In/Out	Zach Pratt	253-600-8520	<a href="mailto:zachpratt25@gmail.com">zachpratt25@gmail.com</a>
Show Display Case Presenters	Garry & Kathy Hartzell		
Show Road Signs			
Show Event Volunteer Recruit			
Show Refreshments for Vendors & Volunteers			
Spinning Wheel	Angie & Brian Bayer	253-569-0245	Text to her number (no email)

**2022 Committee Chairs**

Club Historian			
Donations	Kat Koch	425-765-5408	<a href="mailto:president@cascademineralogicalsociety.org">president@cascademineralogicalsociety.org</a>
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Library	Diana Horsfall	425-226-3154	<a href="mailto:dianahorsfall@comcast.net">dianahorsfall@comcast.net</a>
Meeting Programs	Paul Arhnberg	941-704-2063	<a href="mailto:runhikebird@icloud.com">runhikebird@icloud.com</a>
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Shop Reservations	Diana Horsfall	425-226-3154	<a href="mailto:dianahorsfall@comcast.net">dianahorsfall@comcast.net</a>
Public Relations	Kat Koch	425-765-5408	<a href="mailto:president@cascademineralogicalsociety.org">president@cascademineralogicalsociety.org</a>
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.
Show & Tell	Michael Blanton	425-271-8757	<a href="mailto:mblanton41@hotmail.com">mblanton41@hotmail.com</a>
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Instagram	Gina Manso	425-281-3502	<a href="mailto:ginamanso51@gmail.com">ginamanso51@gmail.com</a>
All Other Social Media	Kat Koch	425-765-5408	<a href="mailto:president@cascademineralogicalsociety.org">president@cascademineralogicalsociety.org</a>

2022 CMS Dues are \$25 per year per family

Pay online, by mail, or at our meetings.

New Mailing Address: Cascade Mineralogical Soc., C/O 1207 N Landing Way #1051, Renton, WA 98057

*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.

Every member of the club should be receiving a copy of the Northwest Newsletter. If you are not receiving a copy contact Mike Blanton in person or by telephone at (425) 271 -8757 or by computer at [mblanton41@hotmail.com](mailto:mblanton41@hotmail.com)

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

Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2	3	4
5	6 Board Meeting 7:00 pm	7	8	9 General Meeting 7:00 pm	10	11 Little Naches Trip
12 West Seattle Show	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

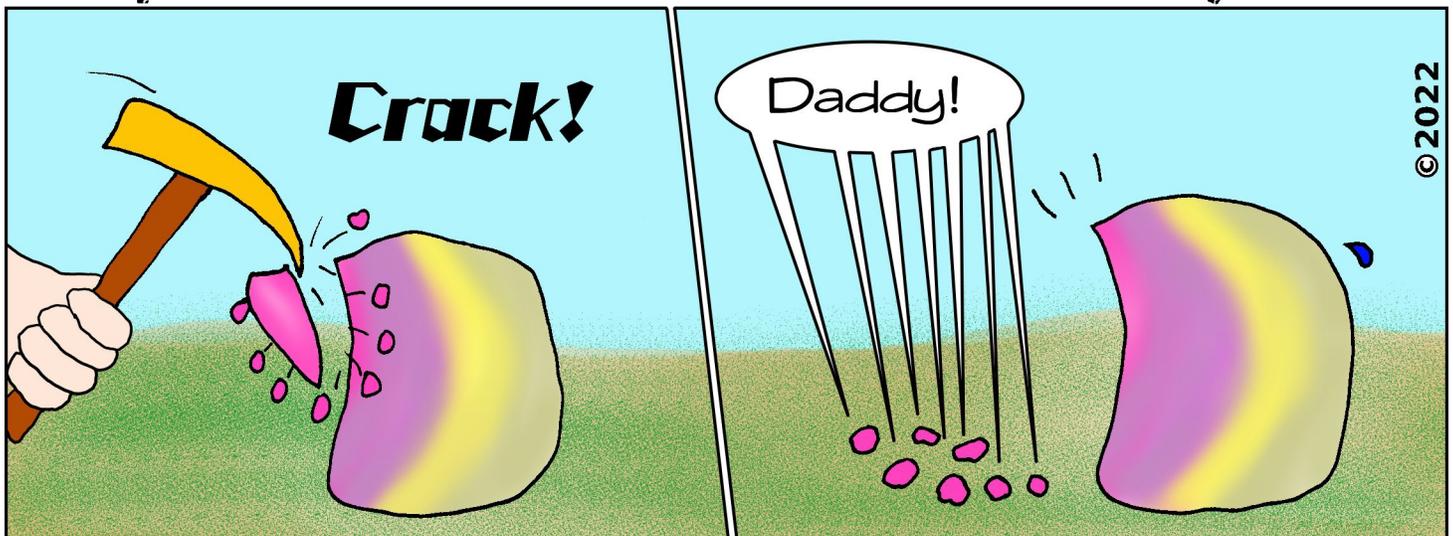
CMS Show Committee Meeting:...Monday, June 6.....6:30 pm to 7:00 pm  
 CMS Board Meeting:.....Monday, June 6.....7:00 pm to 8:00 pm  
 CMS General Meeting:.....2nd Thursday, June 9.....7:00 pm to 9:00 pm

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

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

# Chips

by TAM



## 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

Alexandrite is named after Tsar Alexander II of Russia because it was discovered on his birthday.

## CMS Board Meeting Minutes May 9, 2022

No meeting.

## CMS General Meeting Minutes May 12, 2022

by Pete Williams, 2022 Secretary

Tonight we had our first livestream on YouTube. Zach Pratt is running this for the club. Those who can't attend the meeting in person can now view on YouTube. The president and vice president of the West Seattle club were in attendance.

There are only 5 booths remaining to be sold for our August rock and gem show. The members co-op booth is also filled. Kat was able to get a courtesy booth on September 9-10 at the Lake Wilderness arboretum. Volunteers are needed to staff the booth. A signup sheet was available at the meeting.

The next club field trip is May 14 at First Creek. The program for the June club meeting is the 55-million-year history of the Green River provided by Zach Pratt.

Program: Joan and Glen from Jerry's Rock Shop gave a presentation on the natural wonders in western states.

Meeting Adjourned: 8:15 followed by show and tell and the raffle.

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

Thanks to Zach Pratt's efforts, our general meetings are on YouTube. We do have to work out the camera positioning for the entire meeting. Please give us a month or 2 to get things right. The club intends to make this YouTube Live Stream a permanent thing – so hang in there.

Our show plans are well underway. The booth spaces are just about sold out. We need a load of volunteers for this event. James will have a sign-up sheet listing the positions he needs help on at the meeting. So be prepared to step up and volunteer. The show will be held at the Green River College gym on August 20 & 21, 2022.

The club needs volunteers now and then. The ten board members plus a few regular volunteers can't run the club and be relied upon to volunteer for everything. CMS is again approaching a membership base of 100 families with about 210 individuals. We are now considered a large club, and it takes many hands to keep it functioning, growing, and offering the classes that members would like to have. When we need something covered the club needs you to seriously consider volunteering.

Remember, you are always welcome to bring guests to our meetings or field trips.

We continue to get many new members every month. So if you are a new member, please be sure to come up and introduce yourself at our meeting. That way, I can tie your name to your face.



Welcome  
New Members

## General Meeting – June 9th – Thursday @ 7 pm

*Topic:* Our member, Zach Pratt, will be giving a presentation on the history of the Green River and what is found in the river. Zach is also a member of the Black Diamond Historical Society.

*Show 'n Tell:* Something you have collected from the Green River, or a river, stream, or beach.



Green River Rail Crossing

## General Meeting – July 9th – Thursday @ 7 pm

Annual Potluck Picnic in the Park & Auction

Please note we have changed our annual picnic from a Sunday to a Saturday to accommodate our members that attend religious services. Our potluck picnic will be held at the Lake Wilderness Arboretum, Maple Valley. It is on Saturday, July 9th; setup time is 11 am, and lunch is at noon.

The Arboretum provides a beautiful shaded spot on the lawn, picnic tables, and free parking. You will need to bring a potluck dish or food item, your own table settings, and plates. Also, it would be much appreciated if you would like to donate something to the auction. All funds raised from the auction help cover the club costs and keep our dues low.



Following lunch and having enjoyed some "rock talk," we will hold our annual summer club auction. It is an excellent opportunity to pick up some great bargains. Our Young Tumblers can also spend the "Rock Bucks" they have collected throughout the year.

The Arboretum is next to Lake Wilderness Beach. So you can take the family swimming afterward.

## General Meeting – August 11th – Thursday @ 7 pm

*Topic:* Our Cascade Gem and Mineral Show will be in 1 week. James Starke Show Chairman, will speak on the plans for the show. It will also be the last call for volunteers.

Then Jim Cerenzie and his son Adian will tell us about their rockhounding adventures and their YouTube channel Vug Meister.

*Show 'n Tell:* Something you found rockhounding.



## Looking For Volunteers

The club has a courtesy booth at the *Maple Valley Arboretum Plant Sale on Saturday, September 10th*. It just requires handing out club information and telling them about our club. There will be some yardrock for sale, but all you need to do is write a sales ticket. The Arboretum handles all cash and credit cards.

*Time slot- need 2 people: Saturday 9:45 am to 2:00 pm.*

*Need at our general meetings:* A volunteer to take pictures (with your cellphone is fine) during the Show 'n Tell portion. Then write a short article on Show 'n Tell with photos for our Tumbler each month. If you are hesitant about your writing abilities, Kat would be more than happy to proofread your article before submitting it to Keith, our Tumbler editor. The publication deadline is the 18th of each month. *Need one member or a couple.*

If you can help out, contact Kat at [president@cascademineralsociety.org](mailto:president@cascademineralsociety.org), or you can go to the contact page on our website and send a message.



## NFMS Contest Winners 2022

The (NFMS) Northwest Federation of Mineralogical Societies' Contest is held annually among all the clubs in the region.

*2021 Best Website – CMS – Mark Hohn, Webmaster*

*1st Place Large Bulletin – Keith Morgan, CMS - October 2021*

*1st Place Adult Article A – Historical – Kat Koch, Mining History of the Carbon Valley, January 2021*

*1st Place Adult Article C – Club Activities - Roger Danneman, September Field Trip Report, October 2021*

*1st Place Adult Article D – Paleontology – Kat Koch, Are Scarabs and Dung Beetles the Same?, March 2021*

*1st Place Written Feature – Message – Kat Koch, Activity for Preschoolers, January 2021*

*1st Place Cartoon – Drawn Feature – Keith Morgan, June 2021*

These winners have now moved to the (AFMS) American Federation of Mineralogical Societies' national contests. I sure hope our club does well nationally. We have placed in various categories in previous years but never 1st or 2nd Place in any division. I wish our club good luck!



## If You Are Looking For A Good Rockhounding YouTube Channel & Website

Check out the YouTube channel "Currently Rockhounding" <https://www.youtube.com/c/CurrentlyRockhounding>.

This channel is a little different than most other rockhounding channels in that it's a mixture of rockhounding, lapidary, and geological education. He is located in Spokane, WA, so he also does a lot of videos of stuff in our state.

On his website, you will find a lot more interesting information. <https://currentlyrockhounding.com>. On the website, you can find podcasts, a library, field trip information, and so much more.

The birthstones of June are Pearl, Moonstone, and Alexandrite.

## NFMS Regional Gem and Mineral Show

Hillsboro, Oregon 2022

Friday, September 30, 10 am – Sunday, October 2, 6 pm

Wingspan Event & Conference Center

801 NE 34th Ave., Hillsboro, OR 97124

Weekend Pass \$7

Regional shows are larger with more vendors, plus you see the material we don't generally see locally.

They also have free lectures and educational classes.

They generally plan field trips to the area.

If you are interested, you can also attend the awards banquet for NFMS.

This show is almost in our backyard. Mark your calendars



## NFMS Regional & AFMS National Combined Gem and Mineral Show

Billings, Montana

August 4th to August 6th, 2023

These combined shows only come around once every 7 years to our area.

This show is the big kahuna of club-produced shows.

A big gem show with vendors from all over the USA.

It is an excellent opportunity to see material from all over the USA and worldwide.

They also have free lecture series and educational classes.

Guided field trips to the area.

If you are interested, you can also attend the awards banquet for NFMS & AFMS.

Mark your calendar and plan on attending. You won't be disappointed.



## How Roger Danneman Became A Rockhound

*Roger Danneman is our clubs' Field Trip Guide! Roger is in his 5th year as Field Trip Guide and has done an outstanding job. I asked him to tell us how he got into rockhounding. Kat Koch*

### How I Got Into Rock Hounding by Roger Danneman

I think everyone at some time in their life has picked up a rock and marveled at its beauty or maybe wondered why it was so different from all the other common rocks or was curious about how long ago and the circumstances in regards to its formation. I was no different.

I grew up on the rolling prairie of Minnesota farmland which didn't present many beautiful rocks to me. Every spring, my Dad would organize a rock hunt in the fields before planting (corn and soybean plus feed for our animals) and pay us kids a penny for every rock we found bigger than our fists. However, these rocks were "collected" to prevent them from damaging farm machinery. They were then unceremoniously dumped in the corner of the grove, never to be thought of again. So most of the beautiful rocks I saw were on store shelves, which I'd see during our annual family summer trips.

After college, employment at Boeing relocated me to the Pacific Northwest. When I first saw Mt. Rainier, I couldn't believe my eyes. In my opinion, the Cascade and Olympic mountains were gorgeous on a clear day, unrivaled by any other scenery. So taking a drive up into the mountains became a favorite pastime. After a while, I noticed that Boeing had a Rock and Mineral Club. It was listed every week in the Boeing Newspaper, back when they had a paper. But between work and playing various sports, summer camping, and home projects, my schedule stayed pretty full. Nevertheless, I would occasionally pick up a few rocks and shells at the beach and

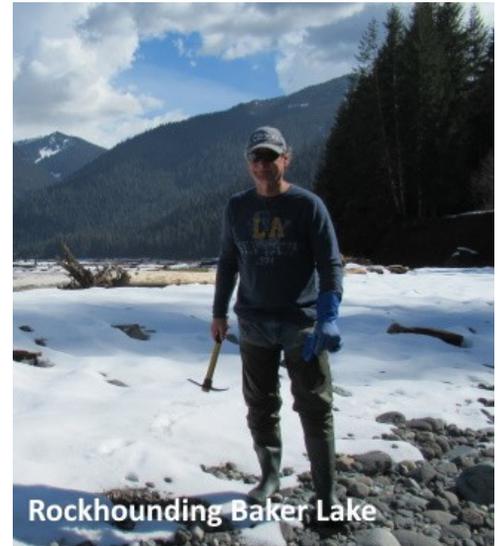


marvel at the rocks in souvenir shops.

It wasn't until I retired that it dawned on me that these rocks and minerals have names and categories, and maybe the earth sciences would be worthy of studying more in-depth. So I bought a book. And then it became a few books. And my list of web links grew and grew, and I realized that I could find some of these rocks myself if I knew where to go. That brought me to join a few Mineral Council trips with Ed Lehman and then to the CMS club. In my 2nd year in the club, I started leading the field trips. I think this is the 5th year I've been doing it. I remember at first that hiking with tools in and rocks out didn't seem very appealing to me, but at some point, I either got better conditioned physically or more prepared mentally to reach those out-of-the-way places. After venturing into First Creek with Phillip one early spring day and uncovering a huge pocket of crystal and plentiful agate nodules, I figured the hikes were worth it as long as I was mobile. Rockhounding is a good excuse for me to get some exercise and experience the beauty of nature that is out there. I don't like the heat, so July and August trips are better spent at a river site or under a tree canopy.

I enjoy the field trips, meeting new members, seeing what everyone collects, and sharing what I think I know, but I'm constantly still learning. I have quite an extensive collection of display pieces, but I'd like to venture more into the area of crafts and jewelry with the rocks I collect, cut, and polish.

One note of caution: if you over collect like I have the last few years, one day, you'll have to reckon with the size of your rock stores. My solution (besides my rock garden) was to dig out and populate a dry creek bed with my excess rock. So on these really rainy days, I can enjoy a small drainage creek running through my fenced-in garden space.



Rockhounding Baker Lake



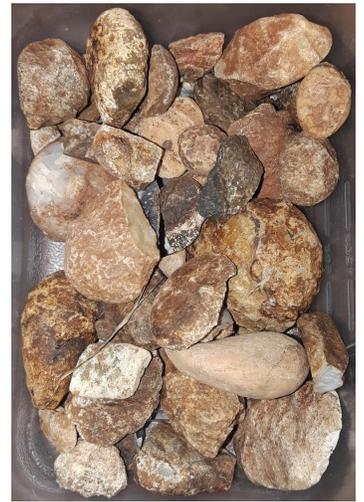
Backyard Dry Creek

**May Field Trip Report** by Roger Danneman Field Trip Guide

On Saturday May 14th we went to First Creek for agate, jasper, and crystal geodes. It was a wet day but fortunately not very soggy or cold. We had 18 people and 2 dogs in 11 vehicles. The sweet spot seems to be 2 miles in so that's where we always hike to, but the area is so large and varied that you can choose to dig in the pits, or search in the rockslides, or climb up to the rock outcrops, or go all the way to the top of the ridge and enjoy the views. The rockslides can be pretty sketchy trying to navigate so I was relieved that everyone made it back to the parking lot unscathed. Just a little rubbery legged and muddy from all the effort, but I could tell from the conversations that everyone had a great time. It was a little comical how dirty some of us were. Wished I had my camera out then. Most of what I collected on this trip was large seam agate found in the rockslides, so my pics reflect that. Others had gotten a nice collection of agate nodules pounded out of the rocky outcrops. Wood ticks didn't seem to be an issue. This is really one of the premier sites for rock hounding.

Next trip scheduled is to Little Naches on June 11th for thundereggs and lily pad. Late season snow could impact this trip, so stay tuned.





## Do You Know a Diamond When You See It? by Kat Koch, Cascade Mineralogical Society

### *Herkimer Diamonds*

Legend quote from the herkimer-diamond-mines-e-store website, "Though we have no proof of exactly how the Herkimer Diamond quartz was first discovered, it is a topic full of local lore. One legend claims that two Revolutionary War soldiers happened upon some Herkimer Diamonds lying loose in the soil. Sure they had struck it rich. The soldiers brought what they assumed were genuine diamonds back to their commanding officer, General Herkimer. Should the soldiers find more crystals simply lying in the dirt, General Herkimer hoped to fund and win the War! A visiting mineralogist from New York City examined the gemstones and discovered the mistake in their assumption.

In the 1800s, Albert Taber owned property adjacent to the Herkimer Diamond Mines property. Taber had a habit of exploring the woods surrounding his property for hours, sometimes at night and almost always alone. After a bad fall on some ice in the middle of the woods, Taber was knocked unconscious. He lay there in the snow for several hours before anyone found him, at which point it was too late. When the search party returned with Taber's body, they discovered his pockets were full of brilliant, clear crystals. From this point forward, locals have found Herkimer Diamonds on what was

once Taber's property."

About 500 million years ago, Herkimer Diamonds started forming in a shallow sea, collecting the sediment from the Adirondack Mountains to the north. The magnesium carbonate and calcium sediments accumulated and formed the dolomite bedrock currently known as the Little Falls Formation (formerly known as the Little Falls Dolostone). While buried, vugs were formed by acidic waters in which the double-terminated quartz crystals grow. Black shiny flakes of Anthraxolite sometimes surround or leak from these pockets.

According to Mindat.org, "Anthraxolite is a hard, black lustrous graphitic coal. Ancient sedimentary rocks are changed in hydrothermal ore deposits to form Anthraxolite. Also frequent as inclusions in quartz crystals, especially those of the "Herkimer-type" from dolomitized rocks."

While the dolomite formation is of the Cambrian period, the quartz within the vugs formed during the Carboniferous Period. During the Cambrian, Dolostone covered Herkimer County when it was also the bottom of a sea. This sea spanned across North America.

Herkimer Diamonds are found in vugs (hollow pockets) in Herkimer County and Mohawk River Valley, New York.

Are all Herkimer Diamonds double-terminated quartz crystals? Yes.

Are all double-terminated quartz crystals Herkimer diamonds? No.

Herkimer refers to the location where these unusual quartz clusters are found.

Herkimer Diamonds are naturally faceted quartz, each having 18 facets and 2 points. A natural rough diamond is exactly that, a rough appearing glass-looking stone.

The natural diamond must be cut to give it smooth faces (facets) and a geometric shape. On a hardness scale, a genuine diamond scores a Mohs of 10. Herkimer Diamond crystals are 7.5 on the Mohs scale.

The attached photos show two very different crystal structures.

More recently discovered Herkimer-Style Diamond double-terminated quartz crystals have been found in Wales, Hungary, France, Italy, Canada, Mexico, Pakistan, China, and others.

### Cape May Diamonds

Legend quoted from the Cape May Herald, "The Cape May Diamonds were originally found by the Kechemeché, a Lenape tribe found in the Cape May area. The Kechemeché believed the gems contained a supernatural power and could bring about fortune, success, and well-being. They were used by the tribe in trades, as well as given as gifts."

Quartz, in its pure, pristine state, is transparent. As quartz crystals grow, they develop flaws, such as bubbles and inclusions of other minerals — that damage the transparency.

Cape May Diamonds have been hunted and gathered since the early 1800s. These quartz crystals are washed ashore as smooth rocks. Because of their clarity, scientists believe the Cape May stones were also formed in vugs. The quartz stones are not diamonds and are often mistaken for sea glass as they are worn down like seaglass. On the hardness scale, they are around 7.

These lovely little stones are found on Sunset Beach, Cape May Point, Delaware. Sunset Beach has a large chunk of concrete sticking up out of the water. This cement chunk is the remains of an old concrete ship that was intended to be sunken as a breakwater. However, while the ship was waiting for its fate, a heavy storm ripped the ship from its mooring. The ship hit a sand bar and sunk at its current location. This sunken ship is believed to force the Cape May Diamonds to wash ashore in this area.

Imagine some crystal starts floating down from the Upper Delaware River. For thousands of years, they were tumbling and brushing against rocks all along the way to smooth them out. Finally, these quartz stones come to rest at Sunset Beach. Sometimes you will hear or see these stones referred to as Delaware Bay Diamonds. Herkimer Diamonds and Cape May Diamonds can be faceted into beautiful stones for jewelry.

*Bibliography: Wikipedia, herkimer-diamond-mines-e-store website, American Geode, Herkimer Diamond website, Etsy, Mindat.org, Penn Live Patriot-News, Cape May 4U, Encyclopaedia Britannica, Merriam-Webster's Dictionary*



Rough Natural Diamonds



Cape May Diamonds



Beach Rough

Polished

## You Are How Old? 4.566 Billion Years Old! Really? You Don't Look That Old by Kat Koch

*"Don't wake me for the end of the world unless it has very good special effects." -Roger Zelazny, American Poet and Sci-Fi Writer*

I was roaming around YouTube the other day and happened upon a video about finding the oldest meteorite ever found on Earth. So I decided to research this as sometimes what you see on YouTube is what I refer to as "Click Bait" and

is not always correct or accurate.

In the Erg Chech sand sea, a meteorite was found in May 2020 in the Sahara Desert, southern Algeria, near Bir Ben Takoul. They named the meteorite EC002, and it has been dated to be 4.566 billion years old. Finding primeval space rock is rare, plus this is the oldest known example of magma from space. Scientists found several meteorite pieces in the dune totaling 70 pounds. EC002 is the largest and oldest piece.

The present solar system configuration is about 457 billion years old. The sun was first formed around 4.6 billion years ago. It is estimated that the Earth is only 4.543 billion years old.

Stony meteorites consist of two groups:

1. chondrites, which have small, round particles (known as chondrules) inside of them,
2. and achondrites (which includes all meteorites from Mars), which don't.

Approximately 60,000 meteorites have been found on Earth. However, only a little over 1,000 of them have been documented. A surprising discovery in our lifetime was that around 3% of all meteorites originate from Mars. It was proven in 1997 when the Mars Pathfinder landed on Mars, and soil samples were analyzed.

94% of the meteorites found are stony, consisting mainly of rock-forming (silicate) minerals.

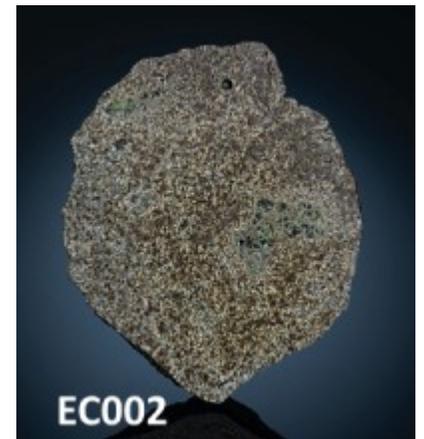
86% of all meteorites are chondrites and contain silicate minerals that show evidence of having been melted a very long time ago. While some chondrites contain organic matter like amino acids, they all contain various elements inside them.

EC002 was confirmed to be a chunk from a protoplanet that formed before Earth was even formed. The meteorite rock consists mainly of volcanic rock, leading experts to believe it came from the crust of a very early planet. The team describes EC002 as relatively coarse-grained, tan, and beige, plus spotted with yellow and green bits. The meteorite is also 58% silicon dioxide, making it even rarer than others previously found on Earth, as this mineral is commonly found in the volcanic regions on our planet.

*Bibliography: Wikipedia, YouTube – Discovery in the Sahara Desert, The Print – India, Forbes – Ask Ethan, Oxford Dictionary, DailyMail.co.uk*



EC002 was named after its landing site in Algeria's Erg Chech dune sea.



Some information about Martian Meteorites can be found on page 14.

### Young Richard's Almanac by Dick Morgan

As many of us are entering our twilight years a new class of graduates are entering the work force. Hopefully they can continue the innovations we saw in our lifetime.

### An American First: Rockhounding & Fossil Collecting in a National Monument by Jennifer Haley, AFMS Historian

Rockhounding and fossil collecting, as you know, are not allowed in the United States national monuments. However, when the BLM initial planning process began for the Mojave Trails National Monument in California, Rockhounds got involved. Rockhounds were very aware this was their one and only chance to possibly keep their collecting sites accessible within the new monument.

Rockhounds showed up, got involved and stayed involved during the initial planning process. Rockhounds learned how to submit public comments in the articulate way BLM management needed them presented, so the comments could be included in the official planning. Rockhounds submitted more public comments than any other organization or category of individuals involved in the planning process.

This was and is, amazing feedback for all Rockhounds. Many thought their aspirations too high a hill to even try to climb. Many thought the environmental groups already had the BLM planning "in the bag," given the amount of lobbying money and attorneys they have at their use. Others leaned on their hope, hoping they could still collect in what has been one of their favorite collecting areas for more than 100 years. Rockhounds realizing last chances can be huge opportunities for success, worked together with American Lands Access, their societies, federation, the AFMS and the BLM. Rockhounds realized entitlement wouldn't get them anywhere, but doing good work and working together would.

What's up next? Although rockhounding and fossil collecting is currently allowed in the Mojave Trails National Monument, the next phase of planning the monument is coming up this year. Rockhounds will be showing up, getting involved, and staying involved again.

History is alive, always adding to its growth rings, as the future becomes our present and then our past. It will be up to Rockhounds to decide what our future will be. What Rockhounds have accomplished so far in the planning of the Mojave Trails National Monument, is monumental. If Rockhounds succeed in their efforts, and establish the approval of rockhounding in the final phase of the monument, it will be a major breakthrough for Recreational Rockhounding's future.  
from the AFMS Newsletter, 6/22

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## Field Trip Safety

The U.S. Forest Service provides these safety tips for rockhounding field trips:

- Stay out and stay alive; abandoned mines are potential killers. Rotten timbers, open shafts, toxic gases, and a lack of oxygen can be deadly.
- Rockhounding is mostly a rugged and dirty pastime. Clothing, especially footwear, should be serviceable and adequate for hiking in rugged terrain, digging, and weather conditions. Boots are recommended.
- Be prepared for extreme weather conditions including rain or snow at any time of the year. Temperatures in the winter can drop below 0 degrees and summertime temperatures can be over 100 degrees. Carry extra food, water, clothing, fuel and other supplies.
- Always tell someone where you are going and when you plan to be back.
- Always wear proper protective equipment (gloves, safety glasses, etc.) when striking or breaking rocks.
- Rockhounds may unknowingly create hazards through careless digging. Undermining the root of a tree is both destructive and dangerous, as it may cause the tree to fall. Tunneling through unsupported soil or under overhanging banks that may cave in on the digger are unsafe practices. Deep or steep-sided pits or trenches should be filled upon completion of digging, as they pose a hazard to both people and livestock.
- Be aware that the roads leading into the digging sites may be used by heavy trucks carrying logs, gravel, livestock or other products. Travel at your own risk. Unimproved roads can be dangerous to travel when wet, muddy or snowy. Rockhounds should inquire with the BLM or USFS about possible road closures and fire restrictions prior to visiting the rockhounding sites.
- Rattlesnakes may be found in certain areas during the warm months. Watch for them in rock slides, around damp areas, under old buildings, ledges, etc. Prompt medical treatment is always advisable if bitten.
- In the spring, wood ticks are found in sagebrush and timber fringe areas, where they can hang on the tips of bushy twigs and transfer to any person or animal that brushes past. Ticks can carry spotted fever and other infections. They should be removed promptly, and the bites should be treated.
- Protect your pets by keeping them under control at all times.

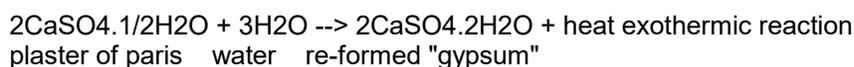
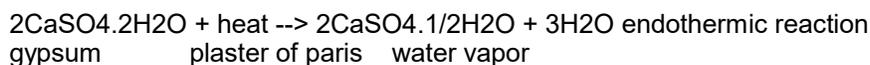
via the AFMS Newsletter, 4/22; from Flatirons Facets, 3-4/22

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## Definition of the Month: Plaster of Paris by Steve Mulqueen

Plaster of Paris – a term synonymous with gypsum plaster, a white powdery substance used in the construction industry, arts and crafts, and hundreds of other applications. The raw material used in making plaster of Paris is gypsum, an industrial mineral extracted from the Earth. Plaster of Paris may be the oldest form of a manufactured building material, having been used by the Egyptians during the construction of the pyramids at least 4,000 years ago.

Deposits of gypsum may occur with minor amounts of undesirable components such as limestone, dolostone (rock containing dolomite), halite, sylvite and detrital material such as clay or shale. Most of these impurities are removed by selectively mining the gypsum resource or during the crushing, screening and milling processes. Plaster of Paris is produced by heating gypsum in a rotary kiln to a temperature of 300° F (150° C). During the baking process, most of the water molecules that are locked in the mineral's chemical structure are driven off by the intense heat. A fine powder is formed by the decrepitation of gypsum granules as a result of the violent reaction caused by the high temperature. The chemical transformation that converts gypsum into plaster of Paris is a reversible reaction and is detailed below:



When the dry powdered plaster is mixed with water, an exothermic reaction occurs, transforming the substance back to a solid form similar in composition to the natural gypsum mineral. The most common use of plaster is for the manufacturing of drywall used in the construction industry.

At fossil dig sites, a liquid slurry of plaster of Paris is applied to gauze, cheesecloth or burlap to form a composite material known as modroc. This substance is used by paleontologists in preparing plaster casts for preserving, excavating and transporting large fossil specimens. Plaster is also a great medium for making casts of trace fossils such as animal tracks. Fossil replicas can also be made from plaster. Any gypsum residue remaining on the original fossil can be easily removed with water, as a direct result of its high degree of solubility.

Plaster of Paris gets its name from the extensive gypsum deposits and abandoned mines that occur within and beneath Paris, France. The Mines of Paris (in the French language carrieres de Paris or "quarries of Paris") consist of

large abandoned underground workings beneath the city and some of the large idle surface mines located in the hills that overlook the city. The early mining operations for gypsum at Paris date back several hundred years.

There are three main networks of underground drifts and galleries beneath Paris, the largest known as grand reseau sud ("large south network"). A portion of the extensive subterranean excavations can be legally explored by accessing an entrance at Place Denfert-Rochereau. The underground workings have been informally named 'The Catacombs' and are frequently toured, mostly by local Parisians.

Paris is located within the Paris Basin, a thick sequence of sedimentary rock units consisting of beds formed in shallow marine, inland sea and non-marine environments. The oldest rock units deep within the basin were deposited during the Cretaceous Period. Thick layers of gypsum are of Bartonian Age, formed during the Late Eocene epoch.

#### Sources

See numerous listings on the internet by searching under key phrases such as: plaster of Paris, gypsum, industrial minerals, grand reseau sud, 'The Catacombs' of Paris, the Mines of Paris, and the Paris Basin.

from the Rockhound Rambling, 6/21

## The Field(s) of Mineralogy, A Layperson's Observations by Angie Guzman

I suppose you could say there are many "facets" to mineralogy. First is the "Eureka!" moment of discovery followed by study of the raw material - to see what it's made of. Generally, next comes large scale processing of ore along with experimentation to find logical uses. Eventually, design of synthetics comes into play; then studies of minerals found deep within the earth's richness. Ultimately, the search leads to the heavens for asteroids, meteorites and other celestial bodies (moon rocks, for example).

Recall that first time you spotted something that caught your eye to awaken your interest in minerals? It could have been a plain or odd-looking rock that may have contained hidden "gems"; or was it something that glistened, something you couldn't possibly avoid giving your attention to? Using our natural curiosity, just leaning over the object gives rise to an unearthing of a world you hadn't previously known existed, mineralogy. Close inspection of the treasure using just your naked eye, reveals colors, shapes and the naturally occurring beauty that attracted you to it in the first place. That is the "aha moment"!

Studying your find, looking at it under a microscope or other detail device, you spot definitive forms, they're crystals! You realize it's not just a rock but a mineral that appears unique. But wait, it has other things under and around it, a different looking crystal, other colors and a "matrix". Before you know, you've opened the door for more research and knowledge. And so it goes.

Others dig deep into the surface of our planet and bring up ore to be processed. "Ore dressing" is a process that extracts minerals from commercial ore. Usually, ore dressing is done on a huge scale. In reality the process goes back centuries to around 970BC. There are phases and procedures for sizing, sorting, classification, etc., of the ore. Once the minerals are extracted, they are further studied for appropriate uses. At some point, someone said something like, "...I think we can make this in the lab!" Thereafter, synthetic gems popped out of labs by the hundreds. Many synthetics are virtually equal in chemical formulation, optical structure and physical appearance to their original, natural counterpart. These synthetics have a thriving marketplace in technology, for industrial uses and in jewelry. They are, however, less valuable than natural gems and, for that very reason are "grown" under extremely strict guidelines. An old adage comes to mind, "Let the buyer beware."

Discoveries are not limited to Earth. Outer space is abundant with minerals. Near-Earth asteroids are silicate rock made up of oxygen and silicates. Nickel, platinum, gold, magnesium and other precious metals make up metallic asteroids. There are few asteroids that are a combination of silicate and metallic. But, not to be outdone, the near-Earth asteroid Itokawa consists of olivine and pyroxene and is similar to the meteorites that had pelted Earth in the past. In fact, Hayabusa, a Japanese robot spacecraft, landed on Itokawa in 2005 and returned collected materials to Earth in 2010.

There are many fields of mineralogy. In learning about mineralogy, we increase our understanding of minerals. And so it is, many people study minerals to see why one is red or blue, some collect them, others employ spiritual meanings, some trade or sell theirs, many display theirs, some craft theirs into jewelry and some just dig 'em up for profit and/or fun. No matter the reason, minerals are a part (medicinal, too) of our daily lives. When we find that special mineral, whether here on this planet or out there in outer space, we're thrilled. I know I am!

Our quest for knowledge is insatiable. The more we know the more is our understanding and appreciation.

Be safe. Be well.

via The Council Reporter, 1/21; from MSSC Bulletin, 5/20

## When You Are Out There

When out in the fields, woods, on the beach or where ever you are, be aware of your surroundings. Do not become a victim of the elements. There are a lot of critters out there both big and small. Have your First Aid Kit updated every spring so you are ready for everything that comes along. And by the way do not forget to take it along on your adventures! Besides that, you should have emergency instruction left with someone as to where you are headed, so if you do not return, when expected, someone will know. Please do not go out alone.

Be prepared and considerate of others.

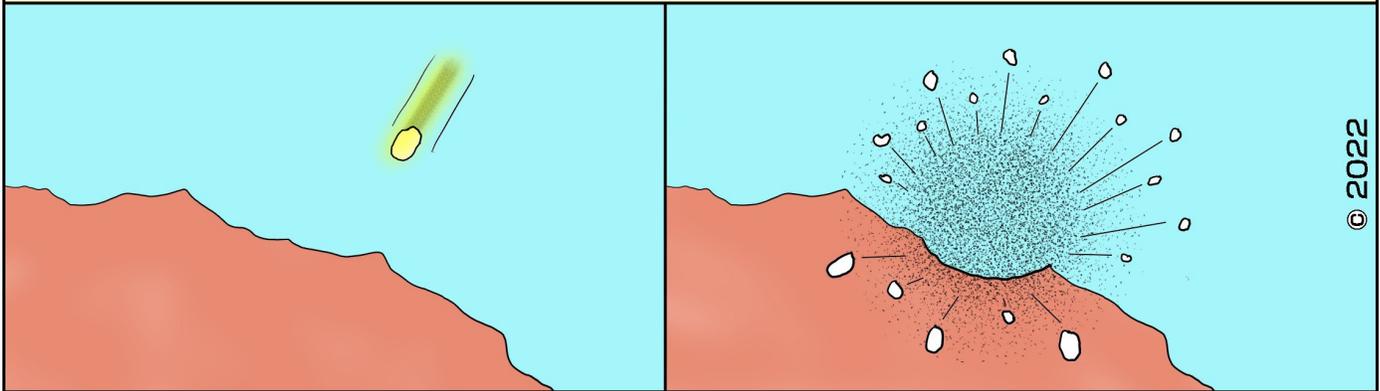
via The Hard Rock News, 6/22; from Yakima Rock and Mineral Club News, 5/22

# Young Tumblers News

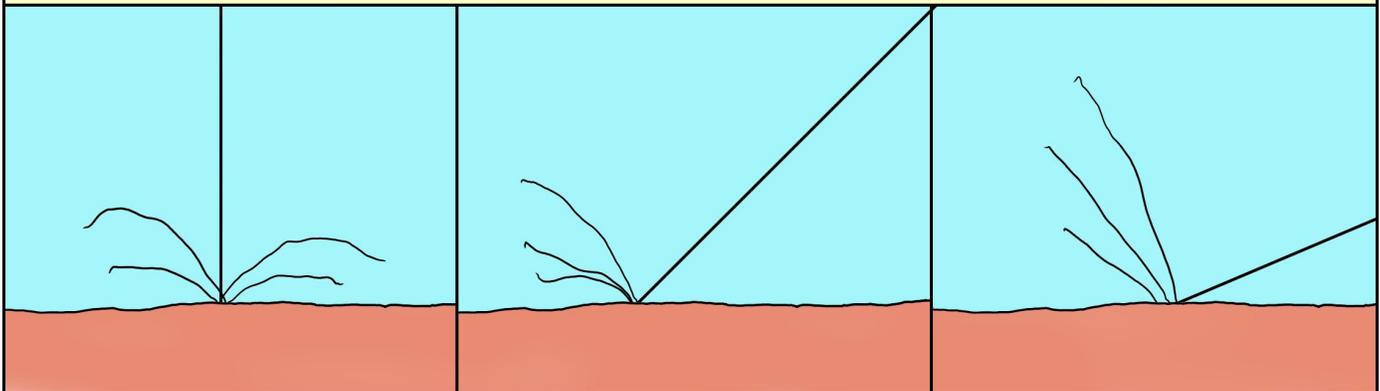
Helping Children Understand: Martian Meteorites

by Keith Alan Morgan

When a meteor hits a planet it will throw rocks into the air.



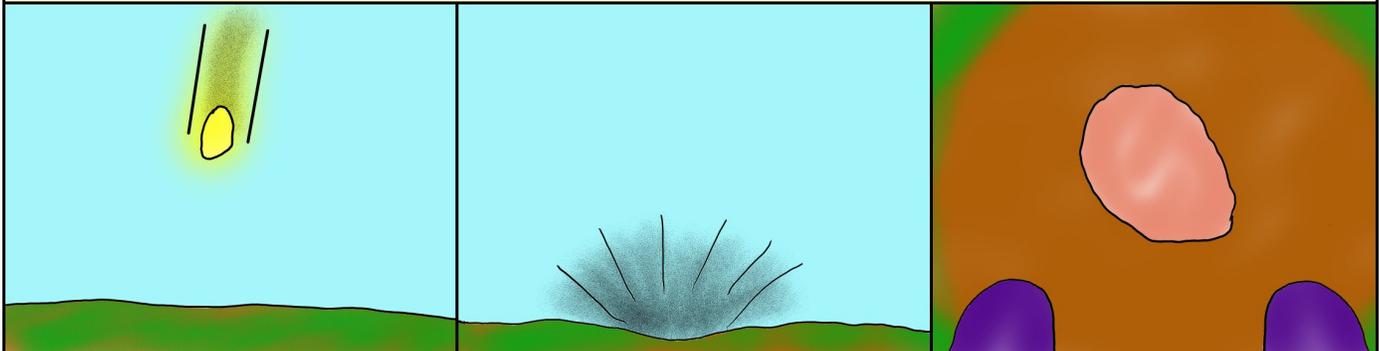
Depending on the angle of strike the thrown rocks can be sent very high.



As Mars is smaller than Earth with less gravity and a thinner atmosphere, it requires less force to send the rocks into space.



Eventually the former pieces of Mars reach Earth and, surviving passage through the atmosphere, become meteorites.



### 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>).

**June 11** *Cascade Mineralogical Society - Little Naches - Thunder Eggs, Lily Pad Jasper, Leaf Fossils*  
*Roger Danneman [roger.danneman@gmail.com](mailto:roger.danneman@gmail.com) 425-757-3506 cell and text*

**June 23–26** *All Rockhounds Pow Wow – Madras, Oregon – Meet at the Jefferson County Fairground before 8:00 am*  
*- Petrified Wood, Thunder Eggs, Agate & Jasper*  
*Larry Vess [vessel3755@gmail.com](mailto:vessel3755@gmail.com) or (253) 473-3908*

Geodes are like the Tootsie Roll Pop of the geology world because underneath the hard exterior lies a surprise center!

from the The Red Stick Rockhound News, 1/14

### 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

## Ode to a Rock Sphere by David Springer

While hounding I seek a rock of shape and size,  
with approximately equal dimensions—at least to the eyes.

I mist it while scrutinizing colors, fractures, and flaws,  
and bag it for later if it passes these laws.

At home we gaze at it and imagine the ball within,  
and mark off our cuts to start the rock saws again.

We first cut the cube, and from there it depends,  
whether hardness or flaws dictate how many cuts at the end.

Generally it's a full day when cutting your preform,  
provided your saw motor does not heat up much past warm.

All this toil yields a spiky and oily ball that looks a bit unreal,  
that sits in kitty litter awaiting its turn with the coarse diamond wheel.

Once all bumps are softened, and the many spikes are erased,  
we select our grind cups sizes and clean out the old rock paste.

We set it in the strange 3-headed machine, adjust tension and run,  
and crack a knowing smile as yet another project has begun.

Whilst spinning, we watch it and gage its rotation,  
while our mind wanders off to our coming vacation.

We cannot leave to answer the phone, talk to a friend or stretch our legs,  
else that rock incorrectly rotating will quickly become an egg.

So we don our headphones, sit back (within reach) and relax,  
for anywhere from 2 hours to several days for the grinding to pass.

Our enemies are differential hardness and lack of cementation,  
that lead to deformations, flaws, and lamentations.

Over time that spinning project from hell,  
begins to assume a spherical shape quite well.

We then switch our focus on the flat spots that remain,  
and continue to grind until a true sphere is attained.

Next comes the grits from 100 to 10,000 and then a polish,  
to progressively scratch out the scratches until all flaws are abolished.

The excitement builds up as each grit stage is achieved,  
and up on reaching the finish you are indeed quite relieved.

As you have created something of beauty,  
much more beautiful than you would have believed!  
from Rockhound Rambling, 1/22

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## Shows

***June 11 & 12:*** Saturday & Sunday 10 am - 5 pm  
**West Seattle Rock Club, Annual Show**  
Alki Masonic Temple, 4736 40th Ave. SW, Seattle, WA

***June 17 - 19:*** Friday 10 am - 5 pm; Saturday 10 am - 5 pm; Sunday 10 am - 4 pm  
**Lower Umpqua Gem & Lapidary Society**  
Reedsport Community Center/City Hall, 451 Winchester Ave, Reedsport, Oregon