



the CMS Tumbler

September
2017

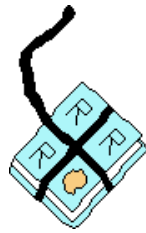
The monthly newsletter of the **Cascade Mineralogical Society, Inc.** Kent, Washington

Next Meeting:
September 14, 2017
7:00 p.m.

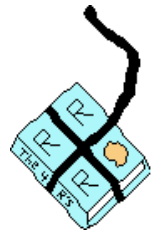
**American Legion Hall
25406 97th Pl S
Kent, WA**

The Program will be speaker
Karissa Smith, Emergency
Management Coordinator for
the City of Renton will speak
on the Geology of Cascadia.
The geology of our area affects
us all who live here. It should
be a very interesting presentation.

The Show & Tell Theme is a
Washington rock or mineral.



*This month remember
to wish a
Happy Birthday to
Jody Flores on September 3,
Angie Bayer on September 4,
Bill Flores on September 15,
Vicki Ruegg on September 22,
Betty Swift on September 25,
and also remember
to wish a
Happy Anniversary to
Paul & Shirley Stewart
on September 17 (56 years)*



This publication is an official bulletin of the Cascade Mineralogical Society Inc. (CMS).

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

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<u>Title & Name</u>	<u>Email Address</u>
President Kat Koch	president@cascademineralogicalsociety.org
Vice President Diana Horsfall	
Treasurer Richard Russell	
Secretary Pete Williams	
Director Roger Pullen	
Director Mark Hohn	showchair@cascademineralogicalsociety.org
Past President Bob Pattie	

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<u>Title & Name</u>	<u>Email Address</u>
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Cascade Show Co-Chair Kat Koch	president@cascademineralogicalsociety.org
Club Historian	
Donations Kat Koch	president@cascademineralogicalsociety.org
Federation Representative Michael Blanton	
Federation Representative Kat Koch	president@cascademineralogicalsociety.org
Field Trip Tony Johnson	
Health & Welfare Bev Williams	
Library Bob Pattie	
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Raffle/Display Stanley Loreen	
Shop Operations Bob Pattie	
Show & Tell Michael Blanton	
Webmaster Mark Hohn	showchair@cascademineralogicalsociety.org

2017 CMS Dues are \$30 per year per family
Pay online, by mail, or at our meetings.
Mailing Address: Richard Russell
14431 SE 254th St.
Kent, WA 98042

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

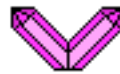
To get information to the Tumbler via the Internet send it to greenrockdraggin@yahoo.com Please put Tumbler and subject in the Subject Line. The deadline is the 20th of each month.

The Cascade Mineralogical Society Facebook page is <https://www.facebook.com/CasMinSoc/>

The Cascade Gem & Mineral Show Facebook page is <https://www.facebook.com/cascadegemandmineralshow/>



September



SUN	MON	TUE	WED	THUR	FRI	SAT
	The forecast for September is Fair (Puyallup) with a chance of getting new members.				1	2
3	4	5	6	7	8	9
10	Board Meeting 7 PM 	11	12	13	14	15
				General Meeting 7 PM 		16 <u>Little Naches Field Trip</u>
17 <u>Little Naches Field Trip</u>	18	19	20	21	22	23
		Lapidary Shop				Lapidary Shop
24	25	26	27	28	29	30

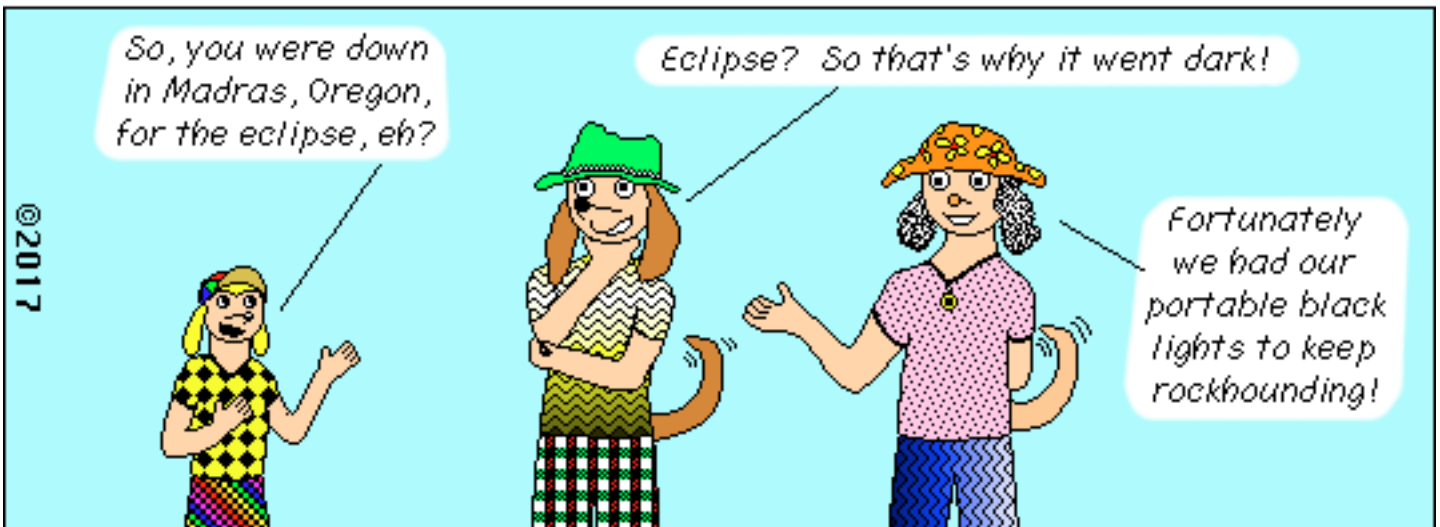
Lapidary Class Hours:.....Closed until further notice
 Lapidary Shop Hours:.....3rd Tuesday..... 4:00 pm to 8:00 pm
 Lapidary Shop Hours:.....4th Saturday..... by appointment

CMS Board Meeting:.....Monday before the General Meeting.....7:00 pm to 8:00 pm
 CMS General Meeting:.....2nd Thursday.....7:00 pm to 9:00 pm

CMS Field Trip is to Little Naches more information on page 7.

Mr. and Mrs. Rockhound

by KAM



CMS Board Meeting Minutes August 7, 2017

by Pete Williams, 2017 Secretary

*Members Attending**President Kat Koch**Treasurer Rich Russell**Secretary Pete Williams**Federation Mike Blanton**Past President Bob Pattie**Director Roger Pullen**Director Mark Hohn**Guests Jim Christianson, Glen Ripper*

Meeting called to order at 7:02

Jim and Glen from the Puyallup club came to discuss CMS participation at the Washington State Fair in Puyallup in September. Jim passed out a sheet with guidelines and discussed in detail. This sheet will be provided to volunteers along with free tickets to the fair. As CMS is only supporting the Puyallup club at the fair we will be able to have a desktop sign, but not a large sign similar to the Puyallup Clubs. The Puyallup Club indicated they would be willing to request their members support our show next year.

The auction at the picnic raised \$830.25. The board discussed that the auction at the picnic lasted too long. Pete will bring a proposal to next month's meeting to establish some guidelines to make the auction go quicker. Rich is preparing for a sale of club material. They will be offered first to club members. The club has an extensive investment casting setup that will need to be explored to determine the value.

There was an error in the Federation newsletter. The mid-year meeting is Oct. 21-22 in conjunction with the show in Lewiston, Idaho. The next field trip is this weekend at Greenwater.

Discussions have started on the contract with Green River Community College for next year's show. Mark checked into the cost of all the electrical needs and if fully provided by a vendor it would be \$3000. Other options are being explored. Mark has a list of vendors and is working on a vendor letter. Keith is working on a show logo.

Rich will look into getting someone from a faceting club for the October program. The September program will be the Geology of Cascadia presented by the City of Renton geologist.

The next meeting will be September 14 at Panera Bread in Kent.

Meeting adjourned at 8:35.

Field Trip: September 16 & 17, 2017

We will be going to the Little Naches. It's about 1.5 hours past Enumclaw on Highway 410. We will be looking for Thunder Eggs, Lily Pad Jasper & Fossils.

Tools needed are gloves, sturdy shoes, water proof shoes or boots, drinking water, dig and light hand tools plus a backpack or bucket to haul your treasures in. You need sturdy shoes for walking/hiking and water proof shoes for exploring the river bank. If you are planning on spending the entire weekend camping you will need all your camping gear and food.

Tony Johnson is our Field Guide and you can call him if you have any questions. 253-863-9238

Meet both Saturday and Sunday at the Enumclaw Ranger Station parking lot. 450 Roosevelt Ave E, Enumclaw 98022. The group leaves promptly at 9 am. So don't be late!

The "Pink Star" Diamond Sets a Record - for the Second Time! by Jim Brace-Thompson

The world's largest "fancy vivid pink" diamond - dubbed the "Pink Star" and clocking in at 59.60 carats - went on auction at Sotheby's in Hong Kong on April 4. How big is 59.60 carats? Picture a human eyeball. Pretty big! By comparison, the fabled blue Hope Diamond is a mere 45.52 carats. The Gemological Institute of America says it's the largest internally flawless pink diamond they've ever graded. Mined by DeBeers in South Africa in 1999, the rough stone clocked in at 132.5 carats, and it took nearly two years to cut and facet. Prior to the auction, speculation was that it would fetch no less than \$60 million, which would make it the most expensive diamond ever auctioned. How did it actually do? Henry Cheng Kar-Shun, chairman of the Hong Kong jewelry firm Chow Tai Fook, phoned in the winning bid of \$71.2 million. It's now called the "CTF Pink Star" in honor of the company's founder.

Side note: this diamond now holds the distinction of the most expensive diamond ever auctioned - twice! It was actually auctioned off once before, in 2013, for \$83 million. There was just one problem: the buyer defaulted on the deal. Is this how legends of cursed diamonds begin?

from Rockhound Rambling, 4/17

New analysis of the dagger buried with King Tut confirms that the weapon was made from an iron meteorite. They used X-ray fluorescence spectrometry to study the dagger, found on Tut's mummified body by Howard Carter in 1925. Daniela Comelli of Milan Polytechnic's department of physics and her colleagues have even identified the most likely meteorite used to forge the dagger.

"We took into consideration all meteorites found within an area of 2,000 km in radius centered in the Red Sea, and we ended up with 20 iron meteorites," Comelli told Space.com. "Only one, named Kharga, turned out to have nickel and cobalt contents which are possibly consistent with the composition of the blade."

via The Golden Frog, 9/16; from Space.com

CMS Club Picnic August 6, 2017



by Pete Williams, 2017 Secretary

The annual picnic was held on a beautiful Sunday afternoon at the Lake Washington Arboretum. Over 30 members and their families attended. Rich was again auctioneer for another successful club auction. About 70 lots were sold at prices way less than retail.



Pictures by ye editor.

A Note From The President's Desk...



by Kat Koch, 2017 CMS President

I want to thank everyone that attended our Annual Picnic and Auction at Lake Wilderness. It was a huge success in all aspects. We had our regular beautiful spot under the trees. We all enjoyed visiting with our new and old members plus guests. Thanks to Bob Wahlberg we are able to have use of this spot each year. Thank you Bob!

It's a busy time for our Club.

We have the Puyallup State Fair booth to cover for the month of September. If anyone wants to help out we are still looking for volunteers. Just let me know if you want to sign up. It's a fun event to do.

We have election of officer's staring us in the face. Almost the entire Board is up for reelection. These are 2 year terms. Please seriously think about running for office. Next month the election committee will start gathering names for the various positions. If you would like to place your name on the ballot for a seat please let someone on the Board know.

Then we have Cascade Gem & Mineral Show in full swing now. Our Club has been talking about resuming our annual show ever since I joined CMS. It had really hinged on finding an affordable venue that met all our needs and enough members to help produce the show. Thanks to Mark Hohn we found the perfect and affordable venue. Please make note though that we had to change the show dates because of classes resuming and we need a full day to setup. Setup September 21st and show 22nd and 23rd, 2018.

Our venue, the Green River College Student Union, is a fantastic venue. State-of-the-art technically in visual arts and communication, spacious, beautiful, modern, great lighting and more than ample parking. Mark Hohn is our Show Chair so if anyone wants to help out please contact him. I am very excited as I know we are going to have a great show!!!

The Northwest Federation is having a mid-year meeting in conjunction with the Lewiston Idaho Rock & Mineral Show. If anyone is interested in attending the dates are October 21 & 22, 2017.

Young Richard's Almanac by Dick Morgan



A rockhound's quest, to find a gem, which he then transforms into a lady's treasure to be displayed upon her person.

Is it Vug, Nodule, Geode or Egg? by Kat Koch

A vug is a small to medium-sized cavity inside rock. It may be formed through a variety of processes. Most commonly, cracks and fissures opened by tectonic activity (folding and faulting) are partially filled by quartz, calcite, and other secondary minerals. Open spaces within ancient collapse breccias are another important source of vugs. Vugs may also form when mineral crystals or fossils inside a rock matrix are later removed through erosion or dissolution processes, leaving behind irregular voids. The inner surfaces of such vugs are often coated with a crystal druse.

Fine crystals are often found in vugs where the open space allows the free development of external crystal forms. The term vug is not applied to veins and fissures that have become completely filled, but may be applied to any small cavities within such veins. Geodes are a common vug-formed rock, although that term is usually reserved for more rounded crystal-lined cavities in sedimentary rocks and ancient lava.



Nodules are a mass of mineral matter that has formed around the nodule nucleus. A nodule is small, irregularly rounded knot, mass, or lump of a mineral or mineral aggregate that typically has a contrasting composition, such as a pyrite nodule in coal, a chert nodule in limestone, or a phosphorite nodule in marine shale, from the enclosing sediment or sedimentary rock. Normally, a nodule has a warty or knobby surface and exists as a discrete mass within the host strata. In general, they lack any internal structure except for the preserved remnants of original bedding or fossils. Nodules are closely related to concretions (includes clay babies or mud babies) and sometimes these terms are used interchangeably. Minerals that typically form nodules include calcite, chert, apatite (phosphorite), anhydrite and pyrite. The only difference between a geode and a nodule is that a geode has a hollow cavity, and a nodule is solid.



Geodes are gifts of the geology world because under the hard exterior lies a surprise center. Geodes are secondary structures which occur in certain sedimentary, limestone and volcanic rocks. Geodes are hollow, round to oval masses of mineral matter commonly have a chalcedony shell lined internally by various minerals, often as crystals, such as calcite, kaolinite, sphalerite, millerite, barite, celestite, dolomite, limonite, smithsonite, opal, chalcedony, and quartz. Quartz and calcite are by far the most common minerals found in geodes.

Thundereggs or Thunder Eggs are a globular concretion of quartz, opal, agate or chalcedony. It's a nodule-like rock, a filled geode, that is formed within rhyolitic volcanic ash layers. Thundereggs are rough spheres, most about the size of a baseball - though they can range from less than an inch to over a meter across. They have a drab brown to gray knobby outer surface and are round to oval in shape.

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.

Information from the Washington State Mineral Council webpage (<http://www.mineralcouncil.org>).

September 9 & 10

All Rockhounds Pow Wow Red Top - Teanaway - Meet at Teanaway at the Middle Fork Camp by 8:00 am - Geodes, agate, jasper & jade - Bring digging & hard rock tools
Larry Vess vessel3755@gmail.com or (253)473-3908

September 16 & 17

Cascade Mineralogical Society - Little Naches Enumclaw - Meet at the Ranger Station leave at 9:00 am - Thundereggs, lily pad jasper & fossils - Bring digging & light hard rock tools
Tony Johnson (253) 863-9238

2018 Cascade Gem and Mineral Show

We are having a show!

I am sure you have heard that we are in the planning stages for our Gem and Mineral Show. This space will be for updates and information for our membership to keep informed and aware of our progress and needs. Kat, Mike and I toured the venue again this past week and we are really excited about the venue and the show.

Details:

Date of show: September 22-23, 2018

Setup will be on Friday Sept 21, 2018.

Venue: Green River College Student Union Building.

The facility is a new building with huge windows, plenty of light, spacious and a great visual arts & audio system. Green River is working up a contract for our review, signature and deposit.

Current needs:

We are gathering a list for volunteers. You can sign up on the website at: <https://www.cascademineralsociety.org/cascade-gem-mineral-show/>

This page also has the show layout floor plan.

I would like to find someone to help with the social media and show promotion. If you have any experience in this area please let me know.

Vendor Recruitment: Kat has volunteered to assist with the vendor invitations and recruitment. If you know of a vendor that might be interested please let Kat or I know so we include them in our invitation mailing.

Demonstrations: We are reserving space for demonstration during the show. If you or someone you know might be interested in doing a demonstration session please let me know. I am also looking for someone to coordinate the demonstrations for the show.

Kids Area: We need someone to help define and setup the events that we will have during the show for children. If you have ideas or suggestions please let me know.

How to keep up to date on our progress.

Facebook Cascade Gem and Mineral Show page: <https://www.facebook.com/cascadegemandmineralshow/>

CMS Facebook Page: <https://www.facebook.com/CasMinSoc/>

Our Website: <https://www.cascademineralsociety.org/cascade-gem-mineral-show/>

Thanks for reading this far and hope you are as excited as we are for this show. It will be a great way to connect to our community and add new members.

Mark Hohn CMS Show Chair

253-332-3736

showchair@cascademineralsociety.org

Kat Koch CMS Co-Chair

President@cascademineralsociety.org

A "Lost Continent" Lost No More! by Jim Brace-Thompson

Seeking a "lost continent" but oh-so-bored with that fable of Atlantis? Then seek no more! Per the February 2 issue of USA Today, geoscientists now believe they've discovered the remains of a lost continent - dubbed "Mauritia" - beneath the Indian Ocean around the island nation of Mauritius. Mauritius is an island composed largely of volcanic rocks that are only a few million years old; yet scientists have recently discovered zircon crystals there that they've dated all the way back to 3 billion years! They now believe the submerged area around Mauritius was once part of Madagascar and India that sank beneath the ocean some 84 million years ago as a supercontinent broke up and present-day Madagascar and India began a slow but steady migration away from east Africa.

from Rockhound Rambling, 3/17



Shows

September 9 & 10: Saturday 9 am - 6 pm; Sunday 10 am - 4 pm

Clallam County Gem and Mineral Association, Annual Show

Vern Burton Community Center

308 East 4th Street

Port Angeles WA

September 9 & 10: Saturday & Sunday 10 am - 5 pm

Marcus Whitman Gem and Mineral Society, Annual Gem and Mineral Show

Walla Walla County Fairgrounds

Community Center Building

363 Orchard St.,

Walla Walla WA

September 16 & 17: Saturday 10 am - 5 pm; Sunday 10 am - 4 pm

Southern Washington Mineralogical Society, 52nd Annual Show

Castle Rock Fairgrounds

120 Fair Lane

Castle Rock, WA



Opal Cracks and Crazing by Paul Downing

Opal, they say, is a delicate stone. They are wrong! There are two things that may happen to an opal. It may crack or it may craze. An opal may crack when subjected to severe pressure applied by a sharp instrument, but so can diamonds, and many diamonds do chip. An opal may craze if it dries out and/or changes its internal structure. But the vast majority of all opals do not crack or craze.

Crazing is readily identifiable in an opal. It starts with small intertwined cracks at the surface of the stone which may spread over time. The pattern they form looks like a spider web or a dried mud puddle. Scientists do not know why some opals craze. One common explanation is that the opal loses part of the water trapped between silica spheres. It then shrinks, and the surface tension causes the crazing. Another explanation is that the chemical structure of the silica spheres changes as a result of being exposed to the light. The energy of the light activates the chemical reaction.

Cracking is easily distinguished from crazing. Cracks are long and go into the stone. When examined with transmitted light, a crack will reflect an orange light from one or more directions. Usually there is only one crack. Cracks are caused by external pressure. The miners break up large pieces of opal by squeezing them between the sharp jaws of a file nipper. Prongs in jewelry designed for faceted stones do the same thing to an opal. Most cracked opals are the result of inappropriate setting. On rare occasions, an opal will crack for no apparent reason. People have told me of opals that cracked in their rings when they went outside in very cold weather.

The problem of cracking and crazing made me curious, so I started an experiment about a year ago. I took several opals and put them in a paper bowl in the freezer. After several days they were frozen solid. I then ran them under scalding tap water. After repeating this exercise six times, none of the opals cracked or crazed. Next I placed these opals in a west window and let them bake in the hot Florida sun. After almost a year, not a one has cracked or crazed. The experiment included opals of several types. Base colors ranged from white to gray. Some opals had full fire, some only lines of color, and some had no fire at all. They were from Coober Pedy, Mintabie, Andamooka, and Lightning Ridge. Some had inclusions in them. Others had cracks. Neither the inclusions nor the cracks spread.

I conclude from my observations that we really do not know why an opal crazes. We do know that almost all (well over 99%) of the opal from any Australian mining area does not craze. We know that almost all cracking results from pressure caused by improper setting of the opal or extraordinarily rough wear. Opal has an undeserved reputation. Cracking and crazing are very rare. Is opal delicate? Not really.

via Breccia, 5/07; via Opal Express, 12/05; via the Stone Chipper, 10/04; from Serendipity Gems, 1/92