

The CMS Tumbler

September
2021

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

Next Meeting:
September 9, 2021
7:00 p.m.

American Legion Hall
25406 97th Pl S
Kent, WA

The Program is Traveling
with Roger and Alex

The Show & Tell
Theme is something you
found on vacation.

Table of Contents

Calendar.....	3
Cartoon.....	3
Board Minutes.....	5
General Minutes.....	5
From the Top of the Rock Pile.....	5
Club Tidbits.....	5 – 7
Colors Around the World 4.....	8
Reed Flute Cave.....	10
Washington State Jade.....	10
Young Richard's Almanac.....	12
Young Tumblers.....	13
August Field Trip Report.....	14
Field Trips.....	15
Shows.....	16

Connect with us!

Website: <https://www.cascademineralogicalsociety.org>
Club Facebook: <https://www.facebook.com/CasMinSoc/>
Show Facebook: <https://www.facebook.com/cascadegemandmineralshow>
Instagram: <https://www.instagram.com/cascadegemandmineralshow/>

This month remember
to wish a
Happy Birthday to

Angie Bayer on September 4

Robert Merriman on September 5

Tia Lee on September 6

Mahari Barraza-Tucker on September 8

Daniel Dillon on September 8

Ted Harrison on September 9

Ashley September Martin on September 12

Cheryl Ehrenheim on September 13

Melissa Biggs on September 15

Philip Trepanier on September 23

Betty Swift on September 25

Deckard Herndon on September 27

Stephanie Bariault on September 30

and also remember
to wish a

Happy Anniversary to

Tyra Hart & István Fülöp on September 1 (6 years)

John & Shirley Wright on September 3

Michael & Jennifer Watson on September 5 (29 years)

Sharim & Anna Johnson on September 15

Ted Harrison & Connie O'Neill on September 16 (3 years)

Zachary & Ashley September Martin on September 19 (1 year)

Paul & Megan Wasley on September 27



Except where otherwise noted, material from The Tumbler may be reprinted for non-commercial purposes, provided that the author(s) and source are acknowledged.

For commercial use, the author(s) must be contacted for permission; if no contact information is given, contact them via the editor.

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.

CMS Club Address
25838 W LK Wilderness Dr. SE.
Maple Valley, WA. 98038

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

2021 Elected Officers

<i>Title</i>	<i>Name</i>	<i>Phone</i>	<i>E-mail</i>
President	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Vice President	Merriann Fu	253-236-5593	merriannf@gmail.com
Treasurer	Charles Benedict	425-306-0465	charlesbenedict@comcast.net
Secretary	Pete Williams	425-228-5063	petewill02@gmail.com
Director	Roger Pullen	206-387-3214	None
Director	Roger Danneman	425-228-8781	roger.danneman@q.com
Director	Richard Russell	253-736-3693	richru1@yahoo.com
Past President	Bob Pattie	425-226-3154	bobpattie@comcast.net
Show Chairman	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Federation Representative	Michael Blanton	425-271-8757	mblanton41@hotmail.com
Federation Representative	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Mineral Council	Diana Horsfall	206-818-9507	dianahorsfall@comcast.net
Mineral Council			

2021 Show Committee Chairs

Cascade Show	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Cascade Show	Co-Chair		
Cascade Show	Treasurer Pete Williams	425-228-5063	petewill02@gmail.com
Cascade Show	Silent Auction Michael Blanton	425-271-8757	mblanton41@hotmail.com
Cascade Show	Raffle Donations Michael Blanton	425-271-8757	mblanton41@hotmail.com
Cascade Show	Demonstrators Richard Russell	253-736-3693	richru1@yahoo.com

2021 Committee Chairs

Club Historian			
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	Bob Pattie	425-226-3154	bobpattie@comcast.net
Meeting Programs	Miriann Fu	253-236-5593	merriannf@gmail.com
Membership	Mark Hohn	253-332-3736	showchair@cascademineralogicalsociety.org
Newsletter - Tumbler Editor	Keith Alan Morgan	253-439-9471	greenrockdraggin@yahoo.com
Open Shop	Instructors Bob Pattie	425-226-3154	bobpattie@comcast.net
Public Relations	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Refreshment	Angie Bayer	253-631-3840	angiemc61@msn.net
Raffle/Display	Roger Pullen	206-387-3214	None
Shop Operations	Bob Pattie	425-226-3154	bobpattie@comcast.net
Show & Tell	Michael Blanton	425-271-8757	mblanton41@hotmail.com
Social Media	Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Webmaster	Mark Hohn	253-332-3736	showchair@cascademineralogicalsociety.org

2021 CMS Dues are \$15 per year per family

Pay online, by mail, or at our meetings.

Mailing Address: Charles Benedict, 25838 W Lk Wilderness Dr SE, Maple Valley WA 98038

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

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.

September

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
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

CMS Board Meeting:.....Monday, September 6.....7:00 pm to 8:00 pm

CMS General Meeting:.....2nd Thursday, September 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

Son of Mr. & Mrs. Rockhound

by KAM



The Tumbler has received One-Time Rights to publish this cartoon

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 purpose of the association 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 a database of local rock and gems shows and field trips. It's a great resource if you want to plan on 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 details for 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

An excellent cleaner for silver and gold findings is a can of 7-UP. Dip findings, rinse well, rub with a soft cloth. Use separate solutions for gold and for silver.

via Breccia, 2/21; from The Polished Slab

CMS Board Meeting Minutes August 2, 2021

by Pete Williams, 2021 Secretary

Attendance:

President Kat Koch*Vice President* Merriann Fu*Treasurer* Charles Benedict*Secretary* Pete Williams*Past President* Bob Pattie*Director* Rich Russell*Director* Roger Danneman*Federation* Mike Blanton

Meeting called to order 7:05

The club treasury is in good shape with 7 new members last month. There are now 79 family memberships with close to 200 members.

The Board approved the purchase of Quick Books (\$31.20 for 1st year) to help with financial reports and reconciliations. Merriann suggested looking at Waveapps.com as an alternative financial software.

Volunteers are still needed to work the club booth at Maple Valley Days on October 9-10 and the Gem Faire in Puyallup on November 6-7. We will have the spinning wheel and 2 display cases at each. There will be a sign-up sheet at the club picnic on Sunday. We will need a tent and request members to donate polished rocks.

We are still looking for ideas for general meeting programs. One possibility is to invite the owner of the You Tube channel, Vug Meister, to give a presentation.

Meeting adjourned at 7:37

CMS General Meeting & Club Picnic Minutes August 8, 2021

by Pete Williams, 2021 Secretary

The annual club picnic and auction was held at the Lake Washington Arboretum in Maple Valley on Sunday August 8. Earlier in the week there was a concern about having a rainy day. We ended up with a perfectly dry, partly cloudy day. The auction turned out to be spirited as usual with 64 lots and 14 winning bidders.

From the Top of the Rock Pile by Kat Koch, 2021 President

The weather lookout was iffy when we went to bed the Saturday night before our club picnic. There was no evidence that it had recently rained when we arrived on Sunday to set up the tables. The grass was dry and the sky was partly cloudy. Around twenty members were at the picnic and we had a very nice day talking "rocks" and visiting with one another. It's so good seeing everyone once again. We raised \$761 from the auction! Thank you to everyone for making our auction a success. Everyone went home with great bargains. The monies from the club auctions help us fund our meetings and various other club events throughout the year.

I would like to personally thank Rich for the custom faceted amethyst set in a sterling silver necklace. Rich cut the gem just for our event. The necklace is stunning! Scott Miles went home the lucky winner of this gorgeous necklace for his wife.

Sometime during the picnic, our credit card processor was mislaid. If you saw it and picked it up, I would appreciate you bringing it to the next meeting. We need this chip to accept credit card payments. If it is truly lost, the processor is a generic chip and no one can access the club account with it. I am very thankful for that.

We have a club booth at the Maple Valley Days, Lake Wilderness Park. October 9th and 10th. I need volunteers for the following time slots. Sunday hours are 9:45 am to 1:30 pm (1 volunteer) and 1:15 pm to 5:30 pm (2 volunteers).

We also have a club booth at the Gem Faire, Puyallup Fairgrounds. November 12th through 14th. I need volunteers to cover this event. Friday hours are noon to 6:15 pm, Saturday hours are 9:45 am to 6:15 pm, Sunday 9:45 am and 4:30 pm.

I will have a sign-up sheet at the meeting or you can email me if you would like to volunteer for either event. Talkingkat2@yahoo.com

At both events, the club will have our spinning wheel and two display cases. The kids get to spin the wheel for free and receive a polished rock. These are fun events as the kids are always so happy with big smiles when they receive a free polished rock to keep. Talk to people that stop by the booth about our great club: its activities, answer questions and hand out membership information.

I want to welcome each of you to our great rock club. I apologize if I have missed introducing myself to you. Please feel free to come up and say hello.



Welcome
New Members

General Meeting – Thursday – September 9, 2021, at 7 pm

Traveling with Roger and Alex.

Hey, this could good be a good title for a TV show. I am so clever, an absolute genius. LOL!

Our Field Trip Guide, Roger Danneman, will be talking about his trip to Iceland with his son Alex. Right after Roger got home, two days later, he and Alex headed out on a road trip to Minnesota.

I know we are all interested in his trip to Iceland and the volcano. Pictures and more pictures! Then not many of us get to go rockhounding on the way to Minnesota. Again pictures and rock samples. It should be a very interesting evening.

Show 'n Tell: Something you found on vacation, a road, a trip to the beach, on a hike, along a river bed, or in your backyard.

The Young Tumblers get \$2 Rock Bucks for coming to the meeting. If they partake in the Show 'n Tell they receive a total of \$5 Rock Bucks. Our Young Tumblers can spend their Rock Bucks at all club auctions and on raffle tickets at our meetings.

Hope to see everyone at the meeting.

Time is Running Out – LAST CHANCE FOR THIS YEAR!

The Board has approved a temporary reduction in our dues for the 2021 calendar year only to \$15 per family or individual. This special rate ends on Sept 30, 2021.

As of October, our dues will go back up to \$25 per family or individual. Our membership is on a calendar basis. If new members join anytime from October 1st thru December 31st, your membership will be good through December 31, 2022.

All new members and renewals are at \$25 per family for the 2022 calendar year.

Our club now has in-person general meetings. Our regular membership meeting is on the 2nd Thursday of each month at 7 pm. The only exceptions are the months of August Picnic and December Holiday Dinner & Elections.

You can find the meeting address on our website.

www.cascademineralsociety.org

From our website, you can use a credit card to renew your membership.

You can also mail a check to CMS, c/o Charles Benedict, 25838 W. Lake Wilderness Dr. SE, Maple Valley WA 98038.



New for Members Only – New Texting Service

You can now sign up for club text reminders for our upcoming meetings and events.

We are all busy and often forget CMS has an upcoming meeting or event.

To register for this reminder service send a text to the number (888) 731-1000. In the body of the text put the word rocks. Or scan the QR code with your smartphone, select "Send SMS," it will auto-insert the word rocks. Now hit send.

No matter how you register, you should receive a confirmation back that you are registered. If you do not receive a confirmation, try to register again.

So be sure to take advantage of this service. The only stipulation is that you must be a club member.

There will be a random drawing for a nice prize after 30 members have registered for the text messaging reminders. We need only 4 more members to register to meet this 30 goal. Our next goal will be 50 members with another prize drawing. The drawing is for just the text service registrants. So hop to it and enroll in this reminder service. Register now and get in the drawing!



Our Club Needs Your Help

Our rock club is your rock club. The success of our club is built on our volunteers as we are a 100% volunteer organization.

A few volunteers can't do all the work as our club is steadily growing. Our club is fast becoming a large club. If you can't commit to one of the positions below, please consider volunteering whenever there is a call for help to cover a specific event.

Presently we need help in the following areas:

Upcoming Special Events

We have a club booth at the Maple Valley Days, Lake Wilderness Park. October 9th and 10th. I need volunteers to cover this event. A few time slots are covered, but I need several more people. We will have the spinning wheel for the kids

to win free polished rocks. Also, tell people about our club and answer questions about our hobby. There will be literature to hand out and two display cases for viewing.

Saturday hours are 9:45 am to 6:15 pm. Sunday hours are 9:45 am and 5:30 pm.

We also have a club booth at the Gem Faire, Puyallup Fairgrounds. A few time slots are covered, but I still need a lot more people for this event. We will have the spinning wheel for the kids to win free polished rocks. Also, tell people about our club and answer questions about our hobby. There will be literature to hand out and two display cases for viewing.

November 12th through 14th. I need volunteers to cover this event. Friday hours are noon to 6:15 pm, Saturday hours are 9:45 am to 6:15 pm, Sunday 9:45 am and 4:30 pm.

Call me at 425-765-5408 or email me at talkingkat2 at yahoo dot com. I will let you know the times I need to cover.



We need a gem Show Chairman!

The Board wants to hold our Gem and Mineral Show in 2022. Depending on where we can find a venue, we would like to have the show in August, September, or the first half of October 2022.

The club has all the notes from the previous three years. They show all the detail to put together a show. We also have all the supplies from the prior years. Several members have already committed to being committee heads.

All we need is a Show Chairman. You do not need any experience in producing an event like this. All you need is good supervisory skills to oversee and to make sure all the bases are covered. Please seriously think of volunteering to lead our way to our 2022 Gem and Mineral Show.



Volunteer to be on our Board of Directors

Our entire Board, except for one position, is up for reelection this December. The term is for 2-years, 2022 and 2023. Nominations will be held in November 2021 and the election at our Holiday dinner in December 2021.

You can choose to nominate yourself for any Board position. We must fill the vacant positions as we have around 160 members with a wide variety of interests. We are seeking volunteers with new ideas on how to meet the needs of our members.

President

Vice President – Right-hand to President. You will help cover all the bases and conduct the meetings if the President is unable to. (vacant)

Treasurer – Keeps track of our income and expenses. Pays club bills and makes meeting venue reservations. Knowledge of simple bookkeeping. (vacant)

Secretary – Records our Board and general meetings. Submits a report each month to the Tumbler editor.

Gem and Mineral Show Chairman - (presently vacant) - Oversee the production of the show. (vacant)

Director 1 – Field Trip Guide

Director 2 – Helps where needed (vacant)

Director 4 (New Director 1 year fill-in position) – Program Director (vacant)

Volunteer positions that are voting members:

Federation Representatives - Reports on NFMS news and attends NFMS regional shows to votes on behalf of our club at the NFMS meetings.

WA Mineral Council Representative - Attends WA Council meetings and reports back to the club.

Please seriously consider volunteering for a board position. There are a few vacant positions this election. The Board is always looking for new ideas and input for our club. The Board meets once a month via Zoom on the Monday before the club meeting at 7 pm. In the future, the Board may resume in-person meetings at Wendy's in Kent.

If you are interested in a Board position, please let Pete or Kat know.



Colors From Around The World Series: Part 4 by Kat Koch



Havasus Falls, Grand Canyon, Arizona

These beautiful falls are located within Havasupai's tribal lands of the Grand Canyon. As the Havasu Creek, a tributary to the Grand Canyon plummets 100 feet over a vertical cliff and creates the beautiful Havasu Falls. The falls cascade into a pool rich in calcium carbonate, which gives it that vivid blue-green color. The waterfall creates large plunge pools that are clear, deep, and inviting. The mineral content of the creek is so high, that the configuration of the waterfalls is always changing as the clifftop builds up and breaks off.

The translation of Havasupai's name means "People of the Blue-Green Water." The Havasupai have occupied their village, Supai, located just outside the jurisdiction of the Grand Canyon Park.

The Havasu waterfalls all stand within the thick plugs of travertine that formed about 70 million years ago. The portion of Havasu Canyon surrounding Supai is flat and boasts fertile soil that the Havasupai people have tilled for over 800 years. The reason for both the topography and the rich soil is that a travertine plug downstream once dammed the creek, backing up a lake behind it. Silt eventually filled the lake, smoothing the canyon floor and enriching its soils with nutrients.

The travertine dam that formed the lake was eventually breached, likely during a flash flood, and the lake drained away. (Flash floods are commonplace on Havasu Creek and have claimed the lives of several hikers.) Travertine dams are malleable and ephemeral features; flash floods routinely modify them and, consequently, the shape of the waterfalls. The last flood occurred during Thanksgiving break, 2019. The most severe flood known on Havasu Creek, which wiped out the village of Supai, occurred on New Year's Day 1910.

Bumblebee Jasper, Mount Papandayan, West Java, Indonesia

Bumblebee Jasper is the trade name for a radially grown colorful fibrous calcite found on the island of Bali near the hot vents of Mount Papandayan, West Java, Indonesia, an active volcano. Bumblebee Jasper was discovered in the 1990s and has a Mohs hardness of 5 or less. The material has a distinctive yellow, orange, and black banding resembling bumblebees. It has not been discovered anywhere else on earth. It is stabilized with resin and takes a very good polish.

The formation of this gemstone takes place in cracks, known as fumaroles, through which steam and gas can escape. Some cracks persist for decades or even centuries, while some disappear within weeks. As these cracks collect rainwater they become natural hot springs. In some breaks, nearby sediments liquefy and begin to boil. Some of these cracks get filled in banded layers of sulfur (yellow), calcium & Aragonite (white), Orpiment & Realgar (orange), and Pyrite (black). Gradually, these mud pools cool down, and the gemstone formation takes place. Miners use small hand tools and heavy machinery to extract Bumble Bee Jasper from the solidified mud pools.

The orange, yellow colors, white, grey, and black colors are mainly caused by finely dispersed realgar and the black stain is caused by pyrite. Bumblebee "Jasper" is a misnomer, as this material contains no quartz at all. Actual jasper is a variety of chalcedony, which itself is more or less a "microcrystalline quartz".



Binalong Bay, Bay of Fires, Tasmania

The Bay's iconic name comes from Captain Tobias Furneaux as he sailed past in 1773, spotting Aboriginal fires lighting up the coastline. Evidence of these first Tasmanian inhabitants in the form of shell and bone piles (middens) are found in and among the grass. The name could also apply to the brilliant orange lichen that grows on the granite boulders lining the bay.

The various types of granite boulders are from the later Paleozoic era.

Located north of St Helens, this picturesque part of Tasmania makes up the Bay of Fires Conservation Area – a protected coastal stretch from the seaside village of Binalong Bay in the south to Eddystone Point in the north (a distance of 31 miles). With the white-sand beaches and clear turquoise water, this small bay is set apart from thousands of other beaches in the world by its incredible bright orange rocks; their coloration is due to a very persistent species of lichen.

*Mendenhall Glacier and Ice Caves, Juneau, Alaska*

The Mendenhall Glacier used to be called Sitaantaagu, which means "glacier behind the town," and Aak'wtaaksit, which means "glacier behind the little lake."

Behind the city of Juneau, situated in Southeast Alaska, lies a series of glaciers. The 1,500 square mile range contains 38 individual glaciers of various sizes. The 13.6 mile-long Mendenhall Glacier is the largest and runs down the ridge. From the outside looks just like any of its fellow glaciers. Beneath its white and rocky gray facade, it holds one of nature's most spectacular secrets, the Mendenhall Ice Cave.

The Mendenhall Ice Caves may be one of the few places in nature where you can see the water cycle in action. Visitors can watch the ice melt and turn to water, before refreezing and turning back into the glaciers. The caves, while filled with and made up of ice and flowing water, are a result of centuries of flowing water. Ice caves – though in this case "glacier cave" might be a more appropriate term – form when water flows through a glacier and melts a passageway through the ice. The water initially flows in from the top or side surfaces of the glacier, through a hole known as a moulin, as it seeks reentry back into Mendenhall Lake. The flowing water twists and turns through the glacier and creates a maze of hollowed-out passages.

Due to the nature of water and the malleability of the glaciers, the ice caves can vary hugely in length and size. They also are subject to change. As meltwater continues to move through the passageways (even long after the initial flow of water has ebbed) the passages can widen, lengthen, and even sprout new directions. Occasionally, if meltwater stops flowing, it can also disappear.

Whereas the Juneau Ice Field, from which the Mendenhall Glacier and the Mendenhall Ice Caves emerge, appears as a vast white wasteland, the inside of the ice caves is a spectacular, brilliant blue. Known as "glacier blue," this bright color happens when the air is squeezed from the ice and snow as it freezes. The ice, over time, absorbs all colors except blue. The blue also reflects down onto the terrain, giving the entire cave an otherworldly experience.

The Juneau Icefield Research Program has monitored the outlet glaciers of the Juneau Icefield since 1942, including Mendenhall Glacier. In 1929 the Mendenhall Lake was created because of the glaciers melting and retreated over 2.5 miles since 1950. The end of the glacier currently has a negative glacier mass balance and will continue to retreat in the foreseeable future.

The remains of an ancient forest under the ice have been revealed as the Mendenhall Glacier is shrinking and retreating. The preserved stumps and trunks are now exposed for the first time in over 2000 years. Some trees that popped up still have intact roots in the ground, even bearing a bit of bark. And the trees being in a growth position, it's possible to determine how old they are. Based on the diameter of the trunks and the trees growing in the region today, a team of researchers has identified the trees as either spruce or hemlock.



Yes, the retreating and melting of glaciers are a cause for alarm. At the same time, these ancient trees allow us to learn about the climate of the past.

Bibliography: Wikipedia, Utah.com, Earth Magazine, USA Today, Mindat, GEMIC, Tasmania, Discover Tasmania, GoLiveIt Blog, Earthly Mission

Reed Flute Cave, Guilin, China by Kat Koch

This foot-accessible limestone cave is named for the lush green reeds growing outside that are hollow and can be made into flutes. The cave is also known as the Palace of Natural Arts.

It is estimated that the beginning of the cave's limestone formation started about 180 million years ago. Reed Flute Cave as we see it now is probably closer to 1 million years old, as most of its life it was an underwater cavern. The medieval ink inscriptions tell us that Reed Flute Cave was an attraction in the Guilin Area for more than 1,200 years - possibly even earlier. The walls inside the cave have 70 calligraphy inscriptions (written in ink) that are all most all poems and travelogues, from visitors dating back to Tang Dynasty.



As the Chinese Dynasties rose and fell, the cave slowly became abandoned and forgotten until the Sino-Japanese (1894-1895) war. During the war, refugees rediscovered the cave as they fled the Japanese. In 1962, the cave was officially opened by the modern Chinese government as a tourist site. Ambient lighting was installed years later to spotlight the caves' "natural sculptures." The lights enhance the many stalactites, stalagmites, rock formations, and lakes. Today, the rock formations, particularly the stalactites and stalagmites are still "growing" and changing. The caves' dimensions are height 59 feet, width 305 feet, 787 feet long, a constant 66-68°F.

Bibliography: China Travel, The Culture Trip, Sublime China, The Weather Channel

Washington State Jade by Kat Koch

Until recently, Washington Jade's uniquely beautiful varieties were largely unknown and dramatically under-appreciated. A relatively new addition to an ancient gemstone family, Washington Jade hails from the western foothills of the Cascade Mountains in Washington State, USA. The true emperor of Chinese jewelry, Jade was also prized in Aztec, Maori, Mayan, Native American, Olmec, and Toltec cultures. Incredibly beautiful, very collectible, and undeniably rare, fine Washington Jade is a treasured addition to any jewelry collection.

Washington Jade is one of the world's most beautiful and rarest Jades and comes in three main varieties. Unique among Nephrites, Washington Blue Dream Jade®'s midnight hue is an incredibly beautiful dark blue to black, highlighted by light blue vermiculation. A new Nephrite species, it is characterized by its unusual gemological association with Calcite and Titanite, rather than the more typical Diopside and Chlorite, and its these two minerals that give Washington Blue Dream Jade® its one-of-a-kind color.

Washington Evergreen Jade™ is a deep, forest fern-green, and Washington Cat's Eye Evergreen Jade™ is a similar color, but with an unusual, soft, wide luminescent cat's eye that beautifully illuminates the gem. It results in a very different appearance to most other cat's eye gems, such as Cat's Eye Chrysoberyl. Chatoyancy, also known as the cat's eye effect, appears as a single bright reflective line of light, similar to a cat's eye. Chatoyancy is created by the reflection of light from long needle-shaped inclusions occurring in a parallel arrangement. This is similar to star gems, the cat's eye effect is dependent on a gem being cut "en cabochon" (cut in convex form and highly polished, but not faceted) and is most visible in a direct, single beam of light.

Increasingly coveted globally for its high quality, Washington Jade's medium to fine-grain easily affords a very high, mirror-polish. This key quality consideration facilitates an even color and deft finish, also allowing the gem to glow with a sometimes-icy appearance, even in mundane light conditions. Optimally cut "en cabochon", Washington Jade is carefully finished into attractive smooth domes with a desirable proportion, shape, symmetry, and a superior polish that displays an excellent luster.

These Washington Jade's mines were first permitted in June 1973 at the western foothills of the Cascade





Washington State Jade



WA Picture Window Jade



Washington River Jade

Mountains, about 7 miles west of Darrington, a small logging community in Washington State. Few know of the quality of Washington Jade as the treacherous mountains and heavy rainforests have conspired to keep the sources largely hidden. Only a handful of experienced and gifted collectors have learned the secrets to finding gem-grade Washington Jade, and today it is harvested from two main deposits. The Finney Block primarily produces Blue Dream Jade®, and the Darrington Block yields Evergreen Jade™, as well as small quantities of Blue Dream Jade®.

'Jade' originates from the Spanish conquest of the Americas, being derived from 'piedra de hijada' (colic stone) around 1565. The gem's other Spanish name 'piedra de los rinones' (kidney stone), translates into the Latin, Lapis Nephriticus, giving the name, Nephrite. These names came from connections between the shape of Jade pebbles and kidneys. In 1863 Alexis Damour established that Chinese Jade (Nephrite, the 'traditional' Jade) and Burmese Jade (which he named 'Jadeite') are different minerals with similar properties. Nephrite comes in blacks, blues, browns, greens, greys, yellows, and whites.

While Burma and China remain famous, historically acclaimed, important Jade origins, other sources include Australia, Guatemala, Japan, Kazakhstan, New Zealand, Russia, Taiwan, and the USA. Cat's Eye Jade is far rarer; the only significant sources for this incredibly scarce gemstone are Siberia, Taiwan, and now Washington State in the United States. Often considered the rarest of the rare Jades, Washington is also one of the few locations where Botryoidal (a globular external form resembling a bunch of grapes) Jade 'Dragon Bubbles' are found.

Washington Jade is also totally natural and unenhanced, which is a critical attribute for top qualities.

Washington State nephrite jades may contain as much as 3% to 8% serpentinites- these will influence the hardness of the jade. Washington Jade (Mohs' Hardness: 6.5 – 7) is an excellent choice for everyday jewelry. Washington Jade should always be stored carefully to avoid scuffs and scratches. Clean with gentle soap and lukewarm water, scrubbing behind the gem with a very soft toothbrush as necessary. After cleaning, pat dry with a soft towel or chamois cloth.

Bibliography: Etsy, Pinterest, Gem Adventurer, Washington Jade, eBay



Washington River Jade

Friday Polka-Dot Agate

While at the Madras PowWow, we had the pleasure to visit Dale Huett at his Polka-Dot Agate Bed. As noted on the West Coast Mining's website, the polkadot agate is:

A highly mineralized chalcedony whose popularity goes back to ancient times. Native Americans of all times have used this material not only for decoration and pleasure, but also for survival. The whitish and bluish chalcedony is riddled with hematite dots. These dots, accompanied by multicolored patterns, resemble moons or other lunar bodies. This material is a pleasure for those who nurture imagination.

Like much of central Oregon, the landscape surrounding the mine was rugged, beautiful and amazingly quiet, save for the occasional hawk screeching overhead. Adjacent to the seam is a natural cave, where Native Americans built fires to bake the agate material for knapping.

Dale gave us a geologic overview of the area, and his operation over the many years to access the agate material. At first glance, it seems like a casual operation with only traces activity, as he pointed out the larger material piled around for picking, and smaller pieces contained in barrels and open flats. Dale showed us the path down into the actual agate bed, with more barrels and piles, and then smiled and waved us to carry on while he retreated into the serenity of the shade...

Ah yes, but he is a smart man. After we oohed and ahed over the agate bed and cave, and chipped a bit at the wall, it did not take long to find that this was hard rock mining at the extreme! And because it was the middle of summer, it was pretty darn hot, too (so take lots of water, and even then you will wilt pretty quick!) Dennis commented that polka-dot was some of the hardest chalcedony one will ever find, and recalled when Jim told the club earlier that this was excellent knapping material. But Tracy had his eye on monster specimen that was begging to be freed from the wall, and it about kicked him in by the time he could claim it. James and Beth came away with some excellent blue specimens, and Tanya and Bev had a load of dotted pieces and chips for tumbling!

For more info, see — <http://www.wcmining.com/>

via West Seattle Petroglyphs, 5/21; from Maplewood News, 7/09

Scientists Study the Not-so-Sweet (But Interesting!) Sixteen by Valerie J. Meyers

Mt. Etna erupted recently with showers of rock and clouds of gas that briefly closed the airport in Catania, Italy. Etna is one of the Decade Volcanoes – also known as the Decade Sixteen – that are closely studied by scientists. They were identified in 1990 by the International Association of Volcanology and Chemistry of the Earth's Interior as part of the United Nations' International Decade for Natural Disaster Reduction, because these are volcanoes that are active, have a history of destructive eruptions, and are located close to populous areas.

According to Wikipedia, each of those 16 volcanoes met other criteria besides recent activity and nearness to populated areas. Each was also chosen if it “exhibits more than one volcanic hazard (people living near the Decade Volcanoes may experience tephra fall, pyroclastic flows, lava flows, lahars, volcanic edifice instability and lava dome collapse);... is politically and physically accessible for study; and there is local support for the work.” Two of the Decade Volcanoes are in the U.S.! (. . . Yay?) The 16 are:

1. Avachinsky-Koryatsky on the Kamchatka Peninsula in Russia. It's near Petropavlovsk, the largest city on the peninsula.
2. Colima, the largest and most active of a range of volcanoes called the Colima Volcanic Complex, straddles the border of Jalisco and Colima states in Mexico. It threatens cities in both states; in 2016, an eruption forced the evacuations of four towns.
3. Galeras Nariño in Colombia. About 8,000 people live in several towns near the volcano. Galeras Nariño is notorious among volcanologists because it erupted without warning in 1993. Six scientists who'd been attending a volcanology conference and three tourists were caught in the crater and killed.
4. Mauna Loa in the USA. It's near Hilo, the largest city on the Big Island of Hawaii.
5. Mount Etna in Italy, near the city of Catania and several small towns.
6. Mount Merapi in Central Java, Indonesia. The island of Java is densely populated; an eruption less than a month ago forced the evacuation of 2,000 residents near the volcano.
7. Mount Nyiragonga in the Democratic Republic of the Congo. It's near the towns of Goma in DRC and Gisenyi in Rwanda.
8. Mount Rainier in Washington State, USA. Small towns cluster around Mount Rainier National Park, and all of Pierce County could be affected by an eruption.
9. Mount Vesuvius in the state of Campania, Italy. It's less than 14 miles from Naples.
10. Mount Unzen in Japan. It's near Shimabara, a town of 45,000 in the Nagasaki Prefecture.
11. Sakurajima in Japan. It is actually within the city limits of Kagoshima, a city of 595,000.
12. Santa Maria in Guatemala. It's near Quetzaltenango, a city of 180,000, and several smaller towns.
13. Santorini in Greece. The island has a population of 15,000, and is a popular tourist destination.
14. Taal Volcano in the Philippines. There are several towns on the island, although the Filipino government has declared it a permanent danger zone and strongly discourages people from living there. An eruption in January 2020 buried the area in ash, forcing evacuations and complete lockdowns of four towns. This past February, the Philippine Institute of Volcanology and Seismology reported 98 tremors in 24 hours, prompting evacuations again. On April 10-11, the Institute recorded 200-plus tremors and quakes as Taal spewed more than 2,000 tons of gas emission.
15. Teide in the Canary Islands, Spain. It is near several large towns, and the Canary Islands are popular with tourists.
16. Ulawun in Papua New Guinea. About 4,000 residents of several small towns were evacuated when Ulawun erupted in 2000.

Sources: Wikipedia, “Decade Volcanoes”; Worldatlas.com; Volcanodiscovery.com; Manila-times.net

via AFMS Newsletter, 6/21; from the Crinoid Courier, 3/21 via MWF Newsletter, 4/21

Young Richard's Almanac by Dick Morgan

Many people pass in and out of your life, some staying and others leaving. Some bring love, or friendship, or wisdom. Some are lasting, some are brief. Some to help or teach, others to cause you grief. Other times to help you make the next stop along the way. In some way those encounters affect who you are.

To Get A High Polish On Opals

Raul Hidalgo owns an opal mine in Mexico and has worked extensively with opal. Mr. Hidalgo emphasizes three very important things. Your first enemy is heat, and the second is not enough water. The third point, he says he can not stress enough, — the use of a 600 grit sanding belt that is completely worn down! A magnifying glass should be used frequently. Use Cerium Oxide and polish on a canvas wheel with a soft pad behind. The feature he uses which eliminates any possibility of over-heating is a "Paste Stick" which will bend if you are starting to heat the rock, as advance warning. Use #100, #200, and #300 sandpaper, then go to #600, well worn-down so it won't scratch. Use rubber behind the sandpaper disc and keep water dripping on it always. Keep the opal moving on the wheel — Never hold in one spot! Use the magnifying glass after each step to be sure all scratches are eliminated! Now 90% of the work is done. The last 10% is to finish with the polish, using a small disc.

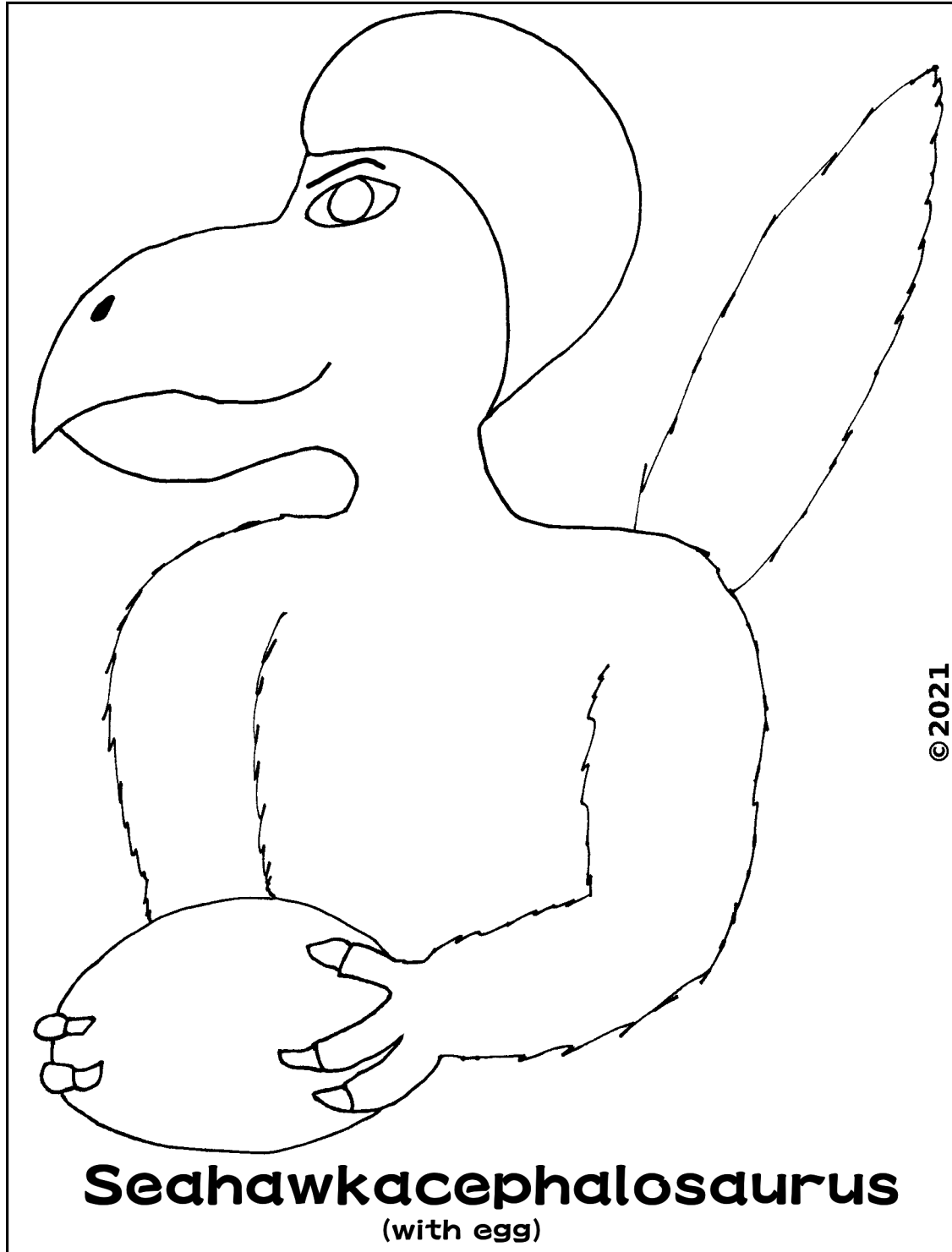
via Breccia, 2/21; via Bell Notes; from Rocks and Gems

Young Tumblers News

Color The Cartoon 2 by Keith Alan Morgan

Hey, kids, color the cartoon, bring it to the next meeting and get 1 rock buck. Have fun

Undiscovered Dinosaurs by KAM



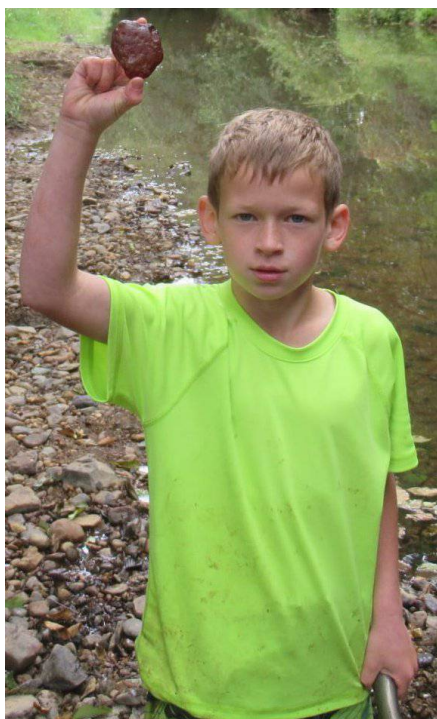
In the early days of dinosaur hunting, a new genus would be named, sometimes based on as little as one bone. This led to some dinosaurs having multiple names since a new genus would be named based on different parts of a dinosaur's skeleton. Well, not the skeleton of one particular dinosaur, multiple skeletons of different members of that genus. Now more parts of the dinosaur are needed before a genus can be named.



The CMS August Field Trip Report by Roger Danneman

We had a great trip on Aug. 21st looking for carnelian agates and jaspers at Salmon Creek. I was impressed with what the group was finding. There's just something very calming about looking for agates in a stream. We had 16 people and 8 vehicles on this outing, comfortable temperatures and overall very good conditions. Lots of excitement and smiles along the way, as treasures were found. I'll let the pictures speak for themselves.

The next outing on our schedule is Sept. 11th to Red Top Mountain near Cle Elum, for blueish-grey agate, jaspers, and crystal geode fragments. WA DNR managed lands are closed right now due to high fire danger, but Red Top is a National Forest managed property. What I don't know is the status of the roads leading around the mountain, which is where we typically go. Notification e-mail will go out on Sept. 4th, at which time I should have an idea if our trip is on or not.





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.

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

September 11

Cascade Mineralogical Society - Red Top – Agate, Jasper, & Geodes
Roger Danneman roger.danneman@gmail.com; 425-228-8781 hm or 425-757-3506 cell.

September 12-13

All Rockhounds Pow Wow - Red Top/Teaaway – Meet at Teaaway at the Middle Fork Campground before 8 am - Geodes, Agate, Jasper & Jade - Bring digging & hard rock tools
Larry Vess vessel3755@gmail.com or (253) 473-3908

September 19

Northwest Opal Association - Little Naches – Meet at Hwy 410 & FR 19 before 10 am - Thunderggs, WA Lily pad & Fossils – Bring digging & light hard rock tools
Tony Johnson (253) 863-9238

Five Shows & A Sale

September 4: Saturday 10 am – sold out
Everett Rock and Gem Club, *Parking Lot Sale*
Everett United Church of Christ
2624 Rockefeller Ave (parking lot)
Downtown Everett WA

September 11 & 12: Saturday 9 am - 5 pm; Sunday 10 am – 4 pm
Ciallam County Gem And Mineral Association, *Annual Show*
Vern Burton Community Center
308 East 4th Street
Port Angeles WA

September 11 & 12: Saturday & Sunday 10 am – 5 pm
Marcus Whitman Gem and Mineral Society, *51st Annual Gem and Mineral Show*
Walla Walla County Fairgrounds
Community Center Building
831 Orchard St.
Walla Walla WA

September 11 & 12: Saturday 10 am - 6 pm; Sunday 10 am – 5 pm
Mt. Baker Rock & Gem Club, *Annual Rock and Gem Show*
Pioneer Pavillion
2007 Cherry Street
Ferndale, WA

September 25 & 26: Saturday 10 am – 5 pm; Sunday 10 am – 4 pm
Lakeside Gem & Mineral Club, *Annual Rock & Mineral Show*
Benton Franklin County Fairgrounds
1500 S. Oak
Kennewick, WA

September 25 & 26: Saturday 9 am – 5 pm; Sunday 10 am – 3 pm
Springfield Thunderegg Rock Club, *63rd Annual Rock and Mineral Show*
Willamalane Adult Activity Center
215 W C Street,
Springfield Oregon

The Treasure Hunt

by Kristie Kringle

Spring has sprung; the grass has riz
I wonder where the flowers is?

I say that now as my eyes gaze
Upon a scene of snowy haze

Instead of buds and flowers bright
My world, my yard glows sparkling white

But I won't let that get me down
Instead, I'll dream of muddy brown

For I am one who hunts the things,
The beauties death of winter brings

A spongy field the frost has left
Does not leave me at all bereft

Instead, rejoicing at the sight
Of ancient tool or agate bright

I keep my gaze upon the ground

Where the earth's gems can oft be found

And I don't mean a diamond rare
But still, a treasure's hidden there

In gravel pit or furrowed field,
Each Spring great riches are revealed

Which are sought by common folk
Who've heard each and every joke

"Did you lose something?" drivers cry
As they laugh while passing by

But much too busy to take offense,
The rockhound squeals when a prize presents

All pain forgotten - no more aching back -
The fossil hunter unzips his pack,

Unearths his prize, grins from ear to ear
And says, "I'm sure glad that Spring is here!"

from Rough 'n Tumbled Times, 4/20