



# *the CMS Tumbler*

February  
2019

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

*Next Meeting:*  
*February 14, 2019*  
*7:00 p.m.*

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

The Program is Rock Displays.  
(*More information about this  
can be found on page 4.*)

The Show & Tell Theme is A  
rock, mineral, fossil or lapidary  
project you like to display in your  
home.



*This month remember  
to wish a  
Happy Birthday to  
Peter Williams on February 18,  
Yingchu Chuang on February 20,  
and also remember  
to wish a  
Happy Anniversary to  
Angie & Brian Bayer on  
February 8 (7 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.

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2019 CMS Dues are \$25 per year per family

Pay online, by mail, or at our meetings.

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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 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/>

# February

SUN	MON	TUE	WED	THUR	FRI	SAT
						
3	4	5	6	7	8	9
10	Board Meeting 7 PM 	12	13	General Meeting 7 PM 	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

CMS Board Meeting:.....Monday, February 11.....7:00 pm to 8:00 pm  
 CMS General Meeting:.....2nd Thursday, February 14.....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 11  
 More Show info can be found on Page 12

## Mr. and Mrs. Rockhound

by KAM



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

**CMS Board Meeting Minutes January 7, 2019**



by Pete Williams, 2019 Secretary

*Members Attending*

*President Kat Koch*

*Treasurer Charles Benedict*

*Federation Mike Blanton*

*Past President Bob Pattie*

*Director Rich Russell*

*Vice President Merriann Fu*

*Secretary Pete Williams*

*Mineral Council Jackie Pattie*

*Show Chair Mark Hohn*

*Director Roger Pullen*

Meeting called to order at 7:03

The handoff of Treasurer information from Rich to Charlie is complete. The Northwest Federation maintains a book of members names and addresses. One book is given to each club. A motion was made and approved to offer our club members the option to opt out of having their information listed in the book.

Due to the health of the Mineral Council field trip chair the 2019 schedule has not been established. No CMS field trip has been planned in January. Kat is looking at scheduling a placer gold mining field trip near Leavenworth the first weekend in August. Possible programs for 2019 include gold panning, displaying rocks, and making crystals.

The recent windstorm damaged the tarps on the storage shed and shop at Bob's house. A motion was made and approved to replace the tarp on the shop. A work party will be needed to install the tarp.

The Federation is having a non-voting meeting in June in Lewiston, Id. Kat and Mike will not be able to attend. Contact them if any member is interested in attending for CMS.

Meeting adjourned at 8:04

**February Program**

February's meeting program is on rock displays.

We know all of us are rock hounds and have rocks everywhere. This is your chance to show off your hobby.

Merriann has requested that you send her photos of your display of rocks, minerals or fossils. It can be either indoor or outdoor rock displays, large or small. It can also be any lapidary project: a bowl, bolo-tie, lamp, clock, rock display, outdoor wall, rock pile, etc.

Please send Merriann the photos as soon as possible so she can create the February presentation on rock displays.

Please, if possible, include the name and type of rocks displayed or used.

You should have received an email on January 13th giving you her email address and text address. You can use either method to send her your pics.

If you didn't receive the email go to our website and click on the "Contact Us" page. Send an email that you need Merriann's info.

**Young Richard's Almanac** by Dick Morgan

Mineralogical clubs keep interest high in using natural items as jewelry.

Rock clubs help children learn about the earth and how rocks and the crust changes due to the rock cycle.



Sulfur is used as a phosphor in low-energy lighting.

from <https://minerals.usgs.gov/west/morefun.htm>, 12/15/17

**A Quiz — A Rockhound I.Q.**

1. What mineral would one be speaking of if he mentioned Schorl?
2. What is "Scotch Topaz"?
3. What is an "Arizona Ruby"?
4. What is "Rhinestone"?
5. What is a reconstructed stone?
6. If one speaks of a corundum gem, what well know gem stone might he be referring to?
7. What is White Gold?
8. What is Uintahite?
9. What is an opaque stone?
10. When one speaks of different cuts in faceting and refers to "tin cut", of what is he speaking?

Answers on page 8

**CMS General Meeting Minutes January 10, 2019**

by Pete Williams, 2019 Secretary

Meeting called to order at 7:13.

Minutes were approved as written.

**Treasurer's Report:** 2018 was a good year financially for the club. The YE report was made available at the meeting.

**President's Report:** A survey was sent to the parents of the Young Tumblers to determine what time would work best for a meeting. Still awaiting some responses. The NW Federation publishes a book with names, addresses, and phone numbers of all club members. One book is sent to each club and is available for purchase at the Federation annual show. Members can opt out upon request.

When logging in to the CMS website, members can also control the type of personal information that is displayed.

**Webmaster/Membership Report:** There were 800 views last month. Dues for 2019 are due.

**Shop Reports:** The windstorm tore some tarps at Bob's house. A work party will be needed to install a new one.

**Field Trip Report:** None scheduled for 2019 yet. Planning a gold panning trip near Leavenworth the first weekend in August.

**Federation Report:** The mid-year meeting non-voting is June 1 in Idaho. Mike and Kat will not be able to attend. Let them know if you are interested in attending for them.

**Mineral Council:** The board meeting is next week. The field trip schedule is delayed due to the health of the field trip chair.

**Show Committee:** Green River College erroneously rented out our show facility the first day of our show. We could use the weekend after Labor Day. Mark will go to Green River and discuss possibilities.

**Old Business:** An amendment to the by-laws was presented to change the maintenance of the membership list from the Treasurer to the Membership chairperson. We have been operating this way for over a year.

**New Business:** The February meeting's program will be displaying rocks. Send pictures of how you display rocks inside or outside of your house to Merriann Fu.

**Program:** Rich Russell gave a demonstration on faceting.

Meeting adjourned at 8:16 followed by show-and-tell and the raffle.

**Don't Throw Your Opal Chips Away (Thar Be Speckles Yet In The Booty!) by Terry Vasseur**

Opal is hard to get unless the cost of money doesn't matter. I had a couple bottles of leftover chips in water that were given to me many years ago. It was either time to do something with them now or they will end up in some other person when I'm done. I chose to use them.

One of the bottles was Australian white opal; mostly blue, green, and red in pin speckles. The other bottle was blue opal, green, and orange. Those were very thin but useable.

Chips are leftover saw cuts that someone cut out the good stuff. Some left have a bit of fire and the rest are colors or have a few speckles. With some patience, you may be able to cut some pieces a size of a pea or to tiny pomegranate seeds. To make something out from them, you have trim the slag areas (no fire or pin diffractions) and polish the rest. It's a chore but hey, it's your hobby!

Due to the size of the chips, you will need to put some wood dop sticks dipped in melted green wax to hold the chips. For this use, you are going to need fresh wax. Old and used wax won't stick very well on the small opals.

Now this time of the year the air can get a little cool so you want to keep your opals-on-dop-sticks warm. When you have to use diamond wheels to work the opals you might want to have warm water in the pan.

The cutting opal rule is GO SLOW with a grinder, true. You can use it to trim your chip. But here, there is little grinding on the top and what you want is to lightly sand over the cap of the fire for the 3,000 to 100,000 diamonds to polish it.

Then comes the fun. Make a silver frame for the polished opal chips. In this piece I don't think I will be able to tightly set each opal like a concrete wall. These opals are so small and irregular in their sides. In this one, I will have a thin flat basalt in the bottom of the silver frame. The black will appear like a black grout.

Good ol' Epoxy 330 will hold the chips on the basalt which will be bonded into the silver. Fun!

from The Agatizer, 12/18

There are about 10 million passenger cars made each year in the United States. Natural resources are used to make each of the 15,000 parts in each of those cars.

In the average 3,000-pound car there are 240 pounds of aluminum, 42 pounds of copper, 22 pounds of zinc, 250 pounds of plastics and 140 pounds of rubber.

The automobile industry uses 17% of the over 90 million tons of steel produced in the U.S. each year.

Catalytic converters for cars used 660,000 troy ounces of platinum in 1986. Platinum is also used in the synthesis of MTBE, a gasoline additive to replace lead and reduce automobile carbon monoxide emissions.

Roads and highways are made from gravel, asphalt, and cement; all produced from minerals.

Sources: U.S. Geological Survey, Minerals Information Institute

from <https://minerals.usgs.gov/west/morefun.htm>, 12/15/17

## A Note From The President's Desk...

By Kat Koch, 2019 CMS President

Mark and I are happy to announce that our Cascade Rock and Gem Show will be held on September 20 to 22, 2019. The same 3rd weekend of September as last year.

Mark, Charlie, Pete and I met at Green River College and viewed the only facility they have large enough for us and is available on "our" weekend. Our show will be held this year in the gym. It is 10,000 sq. ft. of wide open space that can accommodate up to 60 booths. The gym does come with increased costs though. As a comparison, last year we had 42 booths. Mark, Charlie and I are working out the floor plan. Mark has a large vendor waiting list so we are hoping to get a larger variety of vendors, not a lot of vendors selling the same stuff.

There has even been some discussion of having an additional much smaller Spring 2020 Show in the Student Union, in addition to our regular larger September 2020 show. This is all in the discussion stage - we will keep you posted as this idea moves along.

The Board paid a deposit for the September 2020 show so there is no possibility that we will lose that date again. We have informed the college we are considering a spring 2020 show but we have not chosen a date or paid a deposit.

Our two new Board members are busy learning their jobs. It's so good to have some fresh new ideas for our club. Welcome a board Charlie and Merriann! I also want to say "Thank You" to all the other Board members that have volunteered for another year.

## Asteroid Impact Craters - Part 1 by Kat Koch

What is the chance of Earth being hit by a comet or asteroid?

According to Stardate.com: "Not much in our lifetimes — perhaps 1 in 10,000 — but over thousands or millions of years, major impacts become pretty likely. Ancient craters on Earth's surface prove that large objects have hit Earth in the past, and there's no reason to think this won't continue in the future.

The chance of an impact depends on the size of the object: the bigger the comet or asteroid, the smaller the chance, since there are many more small objects out there than large ones. Tons of debris — much of it in pieces smaller than grains of sand — strike Earth's atmosphere and burn up every day. These are the "shooting stars" commonly seen at night. Some larger rocks survive their fiery descent to the surface; you can see some of these "meteorites" displayed in museums. The truly dangerous objects, those large enough to cause regional or global catastrophe when they hit, may appear once every few hundred thousand years. Therefore, the chance that such an object will hit us in any given year is roughly 1 in 300,000 - - - nothing to lose sleep over."

Is our Earth cover with craters similar to the moon?

JPL, NASA website states: "There are now over 100 ring-like structures on Earth recognized as definite impact craters. Most of them are not obviously craters, their identity masked by heavy erosion over the centuries, but the minerals and shocked rocks present make it clear that impact was their cause."

### *Largest and Oldest Impact Craters on Earth*

Vredefort Crater, Free State Province, South Africa is the largest verified impact crater on Earth, more than 300 kilometers (190 miles) across when it was formed. The town of Vredefort is located near the center of what remains of the impact crater.

Although the crater itself has long since eroded away, the remaining geological structures at its center are known as the Vredefort Dome or Vredefort impact structure. The crater is estimated to be 2.023 billion years old (+ or - 4 million years), with impact being in the Paleoproterozoic Era. It is the second-oldest known crater on Earth.

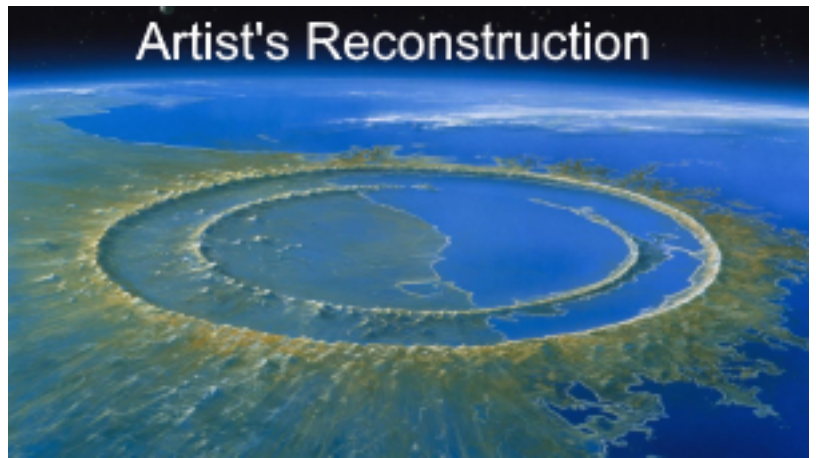
The Vredefort asteroid is estimated to have been one of the largest ever to strike Earth (at least since the Hadean Eon some four billion years ago), thought to have been approximately 10-15 km (6.2-9.3 miles) in diameter. The original crater was estimated to have a diameter of roughly 300 km (190 miles), although it has been eroded away.

NOTE: Hadean Eon is a geologic eon of the Earth pre-dating the Archean. It began with the formation of the Earth about 4.6 billion years ago and ended, as defined by the ICS, 4 billion years ago.



Chicxulub Crater, Yucatan Peninsula (straddles land and sea) just east of the Gulf of Mexico. An asteroid, comet or celestial body struck earth approximately 66 million years ago forming this impact crater. The theory is the impact caused the extinction of the dinosaurs and changed the course of evolution. The estimated size of the object is 11 to 81 km (7 to 50 miles) in diameter end of the Cretaceous near the Cretaceous-Paleogene boundary. The crater is estimated to be 150 km (93 miles) in diameter and 20 km (12 miles) in depth, well into the continental crust of the region of about 10-30 km (6.2-18.6 miles) depth. It is the second largest confirmed impact structure on Earth and the only one whose peak ring is intact and directly accessible for scientific research.

In 2016, a scientific drilling project drilled deep into the peak ring of the impact crater, hundreds of meters below the current sea floor, to obtain rock core samples from the impact itself. The discoveries were widely seen as confirming current theories related to both the crater impact and its effects.



The Sudbury Basin, also known as Sudbury Structure, Ontario, Canada is the third largest known impact crater on Earth as well as one of the oldest. The Sudbury basin formed as a result of an impact into the Nuna super-continent from a large meteor which explodes in the atmosphere (a bolide) approximately 10-15 km (6.2-9.3 miles) in diameter that occurred 1,849 million years ago in the Paleoproterozoic Era.

Debris from the impact was scattered over an area of 1,600,000 km<sup>2</sup> (620,000 sq miles) thrown more than 800 km (500 miles); rock fragments ejected by the impact have been found as far as Minnesota.

Models suggest that for such a large impact, debris was most likely scattered globally, but has since been eroded away. Its present size is believed to be a smaller portion of a 130 km (81 miles) round crater that the bolide originally created. Subsequent geological processes have deformed the crater into the current smaller oval shape.

The large impact crater filled with magma containing nickel, copper, platinum, palladium, gold and other metals. As a result of these metal deposits, the Sudbury area is one of the world's major mining communities. The region is one of the world's largest suppliers of nickel and copper ores. Most of these mineral deposits are found on the outer rim of the basin.




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## The Stuff Earth Is Made of... by Jim Brace-Thompson

An article in the journal "Proceedings of the National Academy of Sciences" reports on the discovery of interstellar dust that may have formed Earth and our solar system. Scientists collected the dust from our upper atmosphere, where it was likely left by the tails of comets, and they believe it to be the "surviving interstellar dust that formed the very building blocks of planets and stars" billions of years ago.

## Mysterious Previously Unknown Mineral Discovered by Kat Koch

Scientists in Siberia, Russia have carried out comprehensive testing on material found by gold hunters in 2017. They have now published their findings and dubbed the mineral “Uakitite” and that it came from outer space. The mineral has been found to be about as hard a diamond. It is the first vanadium nitride to be found in the nature. Also the first natural oxygen-free V-N compound.

The Institute of Astronomy of the Russian Academy of Science said: “This is a fairly common phenomenon due to the fact that a number of minerals or substances that can be formed and are formed under cosmic conditions are not found on Earth.

Scientists in a special lab are now working to collate more data about the mysterious new mineral. This is proving difficult because their samples are so small. But they have said it is yellow and transparent in its appearance with a metallic glint.



## Thoughts on Being a Role Model by Carrie Meyers

How can you be a positive rockhound role model?

How we interact with others is paramount in being a positive rockhound role model. You don't have to have a 'Smithsonian' rock collection to be a fantastic rock hound role model. We influence others every day by being POSITIVE! Every message we send as rock hounds is critical so let's set the bar high! Everyone appreciates if you help set up or clean up after club meetings. I sure take notice! Be a true hot shot at the next field trip and show others what it means to be a good steward of the land by collecting only what you can reasonably use. Or maybe share a great find!

Role models are not afraid to be unique! Be proud of your extreme knowledge of a mineral specialty or your insight into rare gemstones. Positive role models don't pretend to be someone they are not! Be proud of your strength and accomplishments! Be proud to be a rockhound!!

Always respect others, show gratitude and give others a helping hand. Remember, we can do more together than alone. Most importantly finish what you start. No one is perfect. The best way to be a positive role model is accepting responsibility when a mistake is made.

Be a rock hound teacher as well as a learner. Get out of your comfort zone and surround yourself with others. Treat fellow rock hounds the way you want to be treated. Bring surplus materials to the club to share with others. Older rock hounds will appreciate your generosity, especially if they can no longer enjoy attending field trips. Youth will absorb your optimism, integrity and passion for rock hounding. Junior members are always watching and listening, admiring all of you!

Look in the mirror. Are you a positive rockhound role model? “I am thankful for small mercies. I compared notes with one of my friends who expects everything of the universe, and is disappointed when anything is less than the best, and I found that I begin at the other extreme, expecting nothing, and am always full of thanks for moderate goods.” Ralph Waldo Emerson

via T-Town Rockhound, 9/18; from the Rockbuster News, 8/18

## Answers to the page 4 quiz

1. Schorl is black tourmaline.
2. Misnomer for quartz, either citrine or smoky quartz.
3. Misnomer for gem quality pyrope garnets.
4. “Rhinestone” is the name for the colorless “paste” or glass which in the main are transparent but show some flashes of color.
5. One formed by fusing small pieces to make a larger stone. Coloring oxide is usually added to improve the color.
6. Corundum gems are ruby and sapphire.
7. Gold alloyed with silver, nickel, platinum, or palladium.
8. A variety of asphalt better known as Gilsonite.
9. A stone so dense that no light can pass through it.
10. A term applied to a “paste” or molded glass imitation stone whose facets have been polished on a lap.

Score: 4-5 Good, 6-7 Very Good, 8-10 Excellent

via Rocky Trails, 12/15; via The Rockhouser; from MOROKS, 1/15



## The Mystery of Genevieve: The Golden Dinosaur from the Depths of the London Mine by Steven Wade Veatch and Teresa L. Stoiber

The legend of “Genevieve,” a fossilized dinosaur not only made of stone - but also of gold - began on July 3, 1932. That was the day W. K. Jewett, owner of the London Mine near Alma, Colorado, stopped at the Antlers Hotel in Colorado Springs and made the official announcement of its unearthing. The story was picked up by the news services, and word of the fantastic find spread through the scientific world like a prairie fire.

The golden dinosaur was discovered by William White, 700 feet (213 m) underground - deep in the London Mine (W. K. Jewett, 1932). Curiously, the miners had been using the creature’s nose as a lamp holder, not realizing there was a “dinosaur” (if that is what it was) there. White, a hard rock miner, believed at first he was looking at two stumps. In reality, it was a dinosaur lying on its back with its limbs at an angle of 75 degrees. Eager to retrieve it from its rocky tomb, miners blasted it out of rock at the 700-foot level of the London Mine with dynamite. The explosion shattered the specimen. Bits and pieces of the dinosaur were hoisted to the surface, where curious crowds gathered to see the prehistoric monster.

As the story goes, a geology professor at Colorado College, Robert Landon, traveled to Alma so he could examine Genevieve - an extraordinary record of a former world. The measurements he made revealed that the animal was 18 feet (5.4 m) long and 6.5 feet (2 m) high (W. K. Jewett, 1932). The creature had a long neck that supported a small head. It also had a long tail.

Jewett, who gave to the city of Colorado Springs the Patty Jewett golf course, presented the dinosaur to the Colorado College museum (Skeleton of Dinosaur, 1932). The 16-ton (14.5 metric ton) dinosaur reached Colorado College by truck, where a crew of men carefully carried it to the basement of Cutler Hall. College technicians spent countless hours in the basement, where they enthusiastically cemented together what the newspapers hailed as the rarest find ever made in paleontology (Genevieve, Colleges Latest Acquisition Now Ready to Receive Callers, 1932). After the repair of the fossil dinosaur, it was moved to Colorado College’s museum and put on display (Will Bring Dinosaur Here Late this Week, 1932).

There is a real mystery that surrounds this dinosaur. In the 1960s, the museum closed and Genevieve’s display was removed. No one seems to know what happened to this specimen. Was Genevieve smelted down, put in the basement archives and forgotten, or taken to a professor’s house for a private collection? The mystery of her disappearance still stands to this day.

Three critical questions must now be answered: Was Genevieve a dinosaur, where did she go, and was she really made of gold? The past would not easily give up these secrets, including unfortunately, the origin of its lovely name.

An article, from Greely, Colorado’s Tribune-Republican, dated July 2, 1932, stated the dinosaur remains were made known to Mr. Jesse Figgins, Director of the Colorado Museum of Natural History (noted for work on the famous Folsom archaeological site in New Mexico), who said this unusual dinosaur fossil must be the remains of a marine reptile. Nowhere in the article does it report that Genevieve was made of gold - but it does state that she was shattered when dynamited out of the mine, and that restoration wasn’t expected to take long.

When asked about Genevieve, Colorado College archivist Jessy Randall said she had been questioned about her before. The last time was in 2004, when Professor Emeritus Bill Fischer, the former chair of the geology department, was still alive. Fischer gave this response:

*“The one man who would have had the answers, Professor Bob Landon, died in 1995, and all of the people associated with the college museum are also deceased. . . I never heard of the specimen during my 50-year association with the school, and I suspect that it really was never installed in the museum and that the college newspaper account that ‘it was resting on a pedestal in the museum’ is totally false. From the photograph, one can see that with 16 tons of matrix and bone it would have taken months if not years to prepare the specimen for display. Now for a few thoughts as to the fossil itself. First of all, it is not a dinosaur and probably not a rhynchocephalian reptile. The photograph is of very poor quality, but my best guess is that it may have been a Phytosaur - but regardless of the correct identification it was a very valuable find, and I am sorry if it ended up in a smelter. . . Good luck in your search and sorry I couldn’t be of more assistance”. Signed: Bill Fischer.*

Sadly, it looks like Genevieve’s case has gone cold. The museum has long been closed, and those associated with the museum are deceased. It is doubtful that she was made of gold - but she was found in a gold mine, the source of a good rumor and the basis for a great story surrounding her mysterious existence and disappearance.

Although Genevieve remains a mystery, this article has dug up and weaves together most of what is known and speculated about her. Although her real story has been buried with the museum workers and gold miners who have passed away, there are still a few miners who, while relaxing at a local saloon, fondly ponder the puzzle of Genevieve. They raise their shot glasses and make this toast to the miners who found Genevieve, the golden dinosaur: “May you always stand on ore and your labors be in vein.”

### Acknowledgments

The authors thank Danny Alfrey for bringing Genevieve to our attention back in 2011.

### References

*Find Skeleton of Dinosaur in Ore of London Mine. (1932, July 2). Colorado Springs Gazette, p. 2.*

*Genevieve, Colleges Latest Acquisition Now Ready to Receive Callers. Made Presentable by Profs. (1932, August 12).*

### Colorado College Tigers

*W. K. Jewett Gives Skeleton of Prehistoric Animal to Colo. College Museum. (1932, July 3). Colorado Springs Gazette, p. 2.*

*Will Bring Dinosaur Here Late this Week. (1932, July 6.). Colorado Springs Gazette, p. 5*

# Young Tumblers News

The Club is in the planning stage of having a regular activity/learning meeting each month. More information will be coming soon.

## Rocks & Minerals Word Search by Keith Alan Morgan

This puzzle is worth 2 rock bucks for our Young Tumblers who complete it and bring it to the meeting.

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

- |          |             |                |             |
|----------|-------------|----------------|-------------|
| Agate    | Gold        | Minerals       | Rocks       |
| Copper   | Granite     | Onyx           | Sapphire    |
| Crystals | Howlite     | Opal           | Silica      |
| Feldspar | Jasper      | Petrified Wood | Thundereggs |
| Fossils  | Metals      | Platinum       | Vugs        |
| Gems     | Micromounts | Quartz         | Zeolites    |

**Resources for Kids of All Ages** by Jim Brace-Thompson, Juniors Program Chair

I was recently contacted by a Juniors Coordinator for a local club who noted that she works with a group of especially young kids, primarily 5- and 6-years-olds. She noted that a lot of activities in our AFMS/FRA Badge Program seemed geared to a more mature set of kids and asked if I might suggest extra educational resources. I happily provided her with the following suggestions:

Diamond Dan Publications: [www.diamonddanpublications.net](http://www.diamonddanpublications.net) (Darryl Powell has always produced terrific materials!)

Women in Mining: [www.womeninmining.org](http://www.womeninmining.org) (they have a tab on their opening web page you can click for a number of free resources and lesson plans)

Minerals Education Coalition: <https://mineralseducationcoalition.com> (this used to be the Mineral Information Institute, or MII, and is the group that produces the classic illustration of a baby surrounded by all the earth resources he/she will need in a lifetime)

To this Juniors Coordinator and to everyone else considering the AFMS/FRA Badge Program, I also want to take this opportunity to issue a general reminder of what I say within the Introduction to the Badge Manual, namely: "Local youth leaders are encouraged to adjust the level of each activity to match the age range of the kids involved. Take, for instance, the mineral identification project (Activity 1.2). Very young children might be taught only the basics of color and hardness, and the youth leader could guide them through a hands-on session with just a few very common minerals that are easily identified, such as quartz, calcite, sulfur, malachite, galena, mica, pyrite, and hematite. Older kids might be given more of a challenge, using a wider range of characteristics to identify a wider range of minerals on their own or in teams after a basic overview. Don't take the activities at face value; adjust as necessary!"

As another example, if you work primarily with younger kids, you don't need to expect them to memorize all ten minerals in the Mohs Scale of Hardness. It's the concept that matters. Thus, work with just two or three minerals (say, talc, calcite, and/or quartz) for a hands-on exercise that underscores how some minerals are harder than others and how this quality is helpful in mineral identification. I've tried to design the badge program to be useful for kids of all ages since that's what we see within our local clubs - kids ranging from 3 to 17. You don't need to follow each activity exactly as laid out. Modify, where necessary simplify, but above all utilize the program! Feel completely free to make any activity as accessible as possible for the kids with whom you're working. If you see a different spin on a particular activity that'll work better with your group of kids, by all means, take that spin, then reward the kids with badges as they learn and have fun!

Clubs can find out more about the AFMS Juniors program at [www.amfed.org](http://www.amfed.org) and scrolling down to FRA Future Rockhounds of America. Items found in this section include the FRA Badge Manual, FRA Future Rockhounds of America Badge Program and among other items, "A Menu of Ideas for Kids' Show Activities".

from AFMS Newsletter, 11/18

Peanut wood is a silicified (petrified) wood, generally of a black color with numerous borings, which were made by a marine wood-boring bivalve, or clam, called *Teredo*.

This petrified wood was named peanut wood by the first people who found it, because they obviously thought that the light colored areas resembled peanuts. These light coloured areas are what used to be boreholes in the original wood. Before the wood was petrified, it was washed into the ocean as driftwood. It was then attacked by the *Teredos* (another name for these little clams is shipworm). They bore a small tunnel into the wood and eventually the entire piece can be riddled with boreholes.

When the wood became waterlogged, it then sank to the bottom of the ocean and settled into the mud. The boreholes then filled with the light coloured radiolarian sediment. Some time later, petrification began.

The wood is of several varieties, the main ones being "Araucaria"... a conifer and podocarp. It is found along the edges of the Kennedy Ranges about 100 miles inland from the coastal town of Carnarvon, Western Australia.

The geological formation that it occurs in is called "Windalia Radiolarite". The age is Cretaceous.....which makes it around 120 million years old.

from Rocky Trails, 12/18

**Chinese Meaning of "Yu"**

The Chinese character "yu" is always translated into English as "jade". However, this translation masks an important difference between Chinese and Western culture, since in Chinese or Korean art the meaning of jade is considerably wider than the Western meaning. A more correct translation of "yu" might be "hard ornamental stone", since Chinese craftsmen usually employ the term "yu" to cover several related jadelike stones, including bowenite (a form of serpentine), as well as jadeite and nephrite.

from Rocky Trails, 1/19

Urolites are traces fossils left behind after a dinosaur urinates.

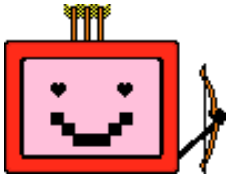


# Shows

**February 9 & 10:** Saturday 9 am - 5 pm; Sunday 9 am - 4 pm  
**Whidbey Island Gem Club, 54th Annual Sweetheart of Gems Show**  
 Oak Harbor Senior Center  
 51 SE. Jerome Street  
 Oak Harbor, WA

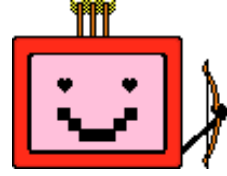
**February 22 - 24:** Friday - Sunday 9:30 am - 5:30 pm  
**Oregon Agate and Mineral Society, OAMS Gem and Mineral Show**  
 OMSI  
 1945 SE Water Avenue  
 Portland Oregon

**March 2 & 3:** Saturday 10 am - 6 pm; Sunday 10 am - 5 pm  
**East KingCo Club, Annual Rock and Gem Show**  
 Pickering Barn  
 1730 10th Ave NW  
 Issaquah, WA



## Internet Addresses

USGS Education hub  
<https://education.usgs.gov>



### Editor's Note: The Lack of Internet Addresses by Keith Alan Morgan

Once upon a time I used to use the extra space that was only available on the email version of the Tumbler (eTumbler, for short) as a place to put links to interesting websites related to rockhounding.

The early 2000's were great for finding these things, what with all the sites that let people just create a website for free. I would just type in a few words into a search engine, "amber", "dinosaur footprints", "trilobites", etc., and there would be a number of sites I could look at to decide if I should list it for members to check out.

These days free websites are rare and webpages have to make money, so information related to rockhounding is now attached to an internet store. An information page created because someone was just enthusiastic about the topic is practically non-existent.

I'm not against linking to a store's information page, but a lot of the information seems repetitive. Store A's info page has a lot of the same information as Stores B, C & D because a lot of it is the most common stuff. The days of discovering pages devoted to dinosaur egg families, or fossilized footprints, or other unusual, but interesting pages has become a thing of the past.

I still like putting links on the eTumbler page, but it's just harder to find interesting places to link to. If you know of some, let me know.

### Why Study Language?

"Ex libro lapidum historia mundi". Latin, translates to something like "from the book of rocks the history of the world"

"Stones have begun to speak, because an ear is there to hear them. Layers become history and, released from the enchanted sleep of eternity, life's motley, never-ending dance rises out of the black depths of the past into the light of the present." Hans Cloos From Conversation with the Earth (1954)

Because it is music set to words. K LW January (2019)