



THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Colorado Springs
Mineralogical Society
Founded in 1936

Lazard Cahn
Honorary President
September 2018
PICK&PACK

Vol 58.... Number #7

CSMS General Assembly

Thursday, September 20, 7:00 PM

Speaker: Bob Hickey

Topic: Central Colorado Mountain Building

**Please note: Members whose last names begin with A-L
are responsible for refreshments in September**

****In case of inclement weather, please call****

Mt. Carmel Veteran's Service Center 719 309-4714

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Parking at the Mt. Carmel Veteran's Service Center

Please remember to park in the parking lot behind the building (North side) and use the rear entrance when attending meetings. The large parking lot in front of the building belongs to other offices and they are starting to have cars towed.

November Board Elections are approaching

From the CSMS Constitution:

Election of Board of Directors

At the September General assembly meeting, the President or presiding officer shall appoint a nominating committee to present a list of nominees at the October General Assembly meeting. At the November General Assembly meeting, additional nominations may be made from the floor. NO PERSON MAY BE NOMINATED OR APPOINTED TO OFFICE WITHOUT HIS OR HER CONSENT. Following the nominations at the November General assembly meeting, election will be made by a vote of the members present. When there is but one candidate for an office, this requirement may be waived and a unanimous vote called for by the President or presiding officer. Elected officers will take office at the JANUARY Banquet and/or General Assembly meeting.

CSMS Calendar

September & October 2018

Thu., **Sept. 6, Oct. 4** — **Board Meeting**, 7p.m., Pikes Peak United Methodist Church

Tue., **Sept. 4, Oct. 2** — **Fossil Group**, 7p.m., Methodist Church, Jerry Suchan, 303 648-3410

Thu., **Sept. 20, Oct. 18** — **Pebble Pups & Jrs**, 5:30p.m., Mt. Carmel Ctr., Steve Veatch, 719 748-5010

Thu., **Sept. 20, Oct. 18** — **General Assembly**, 7p.m., Mt. Carmel Center

Thu., **Sept. 27, Oct. 25** — **Crystal Group**, 7p.m., Mt. Carmel Center, Kevin Witte, 719 638-7919

Thu., **Sept. 27, Oct. 25** — **Faceting Group** 7p.m., Medina's home, John Massie, 719 338-4276

Note: The Micromount Group is not meeting at this time. If you are interested in meeting, please call Dave Olsen, 719 495-8720

Appointment Only—**Jewelry Group**, Bill Arnson, 719 337-8070

Appointment Only—**Lapidary Group**, Sharon Holte, 719 217-5683

For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to our website, csms1936.com

Upcoming Events of Interest to CSMS Members

Submitted by Pete Modreski

Sep. 7-15, Colorado Mineral and Fossil Fall Show, Crowne Plaza Hotel - Airport, [15500 E. 40th Ave. Denver, CO](http://15500.E.40th.Ave.Denver.CO). **Sat., Sep. 8**, 10 a.m. – 2 p.m., **Dinosaur Discovery Day** at Dinosaur Ridge, featuring “Gem and Mineral Day”. Public tour day at Dinosaur Ridge, 16831 W. Alameda Parkway, Morrison. Walk up and down the Ridge to see interpretive guides explain the various fossil and geology stations, or ride a guided shuttle up and/or back for \$4. See www.dinoridge.org

Sep. 8-16, Denver Coliseum Mineral, Fossil, and Gem Show, Denver Coliseum; see <http://www.coliseumshow.com/>

Sep. 12-15, Denver Fine Mineral Show, Denver Marriott West, 1717 Denver West Blvd.; see <http://finemineralshow.com/denver/>

Sep. 14-16, 51st annual Denver Gem and Mineral Show, Denver Mart, [451 E 58th Ave., Denver, CO](http://451.E.58th.Ave.Denver.CO). **Minerals of Mexico** is the 2018 show theme. See <http://denvershow.org>. A list of special exhibits that will be at the show, as well as a list of the featured lecture presentations, is on the website. This gem and mineral show is sponsored by the Greater Denver Area Gem and Mineral Council, a non-profit consortium of 8 Front Range area gem and mineral clubs.

Wed. Sept. 19, 7:30 p.m., Friends of Mineralogy, Colorado Chapter, bimonthly meeting, after the Denver Gem and Mineral Show (rescheduled so as not to conflict with events the week of the show) Topic TBA. Lakeview Event Center, 7864 W. Jewell Ave., Lakewood CO.

Thurs., Sep. 20, Colorado Scientific Society September meeting: Poster Session + Short Talks; a selection of invited poster + short oral presentations by CSS members and by graduate students. Arbor House, Maple Grove Park, 14600 W. 32nd Ave., Golden CO. All are invited; complimentary refreshments (including beer!). For more information see <http://coloscisoc.org>

Sat., Sept. 22, 2:30 p.m., **Scientific Spelling Stomp**, sponsored by the Friends of Dinosaur Ridge. “An all-ages team spelling bee.” American Mountaineering Center, Golden CO. Entry fee, \$40/adult, students (under 18) \$25; spectator tickets \$20. Includes hot/cold appetizers and non-alcoholic drinks.

Sat., Oct. 13, 9 a.m. – 3 p.m., **Dinosaur Discovery Day** at Dinosaur Ridge, featuring “**Girl Scout Day**”. Public tour

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day at Dinosaur Ridge, 16831 W. Alameda Parkway, Morrison. Walk up and down the Ridge to see interpretive guides explain the various fossil and geology stations, or ride a guided shuttle up and/or back for \$4. There will be special activities and earth science badges to complete for Girl Scouts, who may register in advance [\$6 for Scouts to register]. See www.dinoridge.org for more info.

Thurs., Oct. 18, 7:00 p.m., Colorado Scientific Society October meeting, **"Structural Geology of Colorado"** by Ned Sterne, plus **"Electric log cross sections of Colorado"** by Steve Cumella. Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood; all are welcome.

Sat., Oct. 20, 12 noon, Littleton Gem & Mineral Club, silent and verbal auction. Seller setups (club retains 20% commission) at 11, silent auction begins at noon, verbal auction at 1 p.m., checkout starts at 3:30 p.m.

Fri., Nov. 9, Colorado Science Conference for Professional Development (a.k.a. "Colorado Science Teachers Conference"). Held at the Denver Mart, 451 E. 58th Ave., Denver; for all science educators. An event with networking, presentations, workshops, exhibitors. For full information and registration website see <http://coloradoscienceconference.org/>

Nov. 10-11, 39th annual New Mexico Mineral Symposium, at New Mexico Institute of Mining & Technology, Socorro, NM; see <https://geoinfo.nmt.edu/museum/minsymp/home.cfm> .

Wed., Nov. 14, 7:30 p.m., Friends of Mineralogy, Colorado Chapter bimonthly meeting (rescheduled so as not to conflict with people's travel to the New Mexico Mineral Symposium the previous week). Topic TBA. Lakeview Event Center, 7864 W. Jewell Ave., Lakewood CO.

Thurs. Nov. 15, 7:00 p.m., Colorado Scientific Society November meeting, **"Geothermal Energy"**, by Jeff Winick, DOE, plus a possible 2nd speaker. Shepherd of the Hills Church, Lakewood.

Nov. 16-18, Denver Area Mineral Dealers Show, Jefferson County Fairgrounds, Golden CO. Free admission, public welcome.

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Worth noting: the Program, Abstracts, and Field Trip Guides, for the recent Aug. 4-5, 2018 symposium, **"Minerals from the Metallic Ore Deposits of the American Southwest"** are available for free download at the Friends of Mineralogy, Colorado Chapter, website, at <http://friendsofmineralogycolorado.org/mmodas/> . Video recordings of the oral presentations will also be available soon at the CSM Library website. Likewise, both the abstracts and field guides and video recordings of most presentations from last year's symposium, **"Gold and Silver Deposits in Colorado"** (July 20-24, 2017) are available for free viewing and download online via the Colorado School of Mines Library website, at <https://dspace.library.colostate.edu/handle/11124/172170>.

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For more lecture series during the year see: (most of the universities and societies do not hold seminars during the summer, but some groups (Denver Mining Club, Florissant Scientific Society) continue to meet.

Colorado Beer Talks (2nd Tuesday, 6-8 p.m.), Windy Saddle Café, 1110 Washington Avenue, Golden, "Golden's grass-roots version of TED talks, Expand your mind with a beer in your hand", <http://goldenbeertalks.org/>

Colorado Café Scientifique in Denver, monthly lectures on science topics held either at Blake Street Station or Brooklyn's, Denver; open to the public, no charge other than refreshments you may choose to purchase; see <http://cafescicolorado.org/>

Colorado Scientific Society (3rd Thursday, 7 p.m.), see <http://coloscisoc.org/> . Meets at Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood CO, except when noted.

CU Geological Science Colloquium (Wednesdays, 4 p.m.) see <http://www.colorado.edu/geologicalsciences/colloquium>.

CSU Dept. of Geoscience Seminars (Fridays, 4 p.m.), see <https://warnercnr.colostate.edu/geosciences/geosciences-seminar-series/>

Van Tuyl Lecture Series, Colorado School of Mines, (Thursdays, 4 p.m.): <https://geology.mines.edu/events-calendar/lectures/>

Denver Mining Club (Mondays, 11:30), see <http://www.denverminingclub.org/>

Denver Region Exploration Geologists Society (DREGS; 1st Monday, 7 p.m.), <http://www.dregs.org/index.html>

Florissant Scientific Society (FSS); meets monthly in various Front Range locations for a lecture or field trip; meeting

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locations vary, normally on Sundays at noon; all interested persons are welcome to attend the meetings and trips; see <http://www.fss-co.org/> for details and schedules.

Nerd Night Denver is a theater-style evening featuring usually 3 short (20-minute) TED-style talks on science or related topics; held more-or-less monthly at the Oriental Theater, 4335 W. 44th Ave., Denver; drinks are available; for ages 18+. Admission is \$6 online in advance, \$10 at the door. See <https://www.nerdnitedenver.com/>

Rocky Mountain Map Society (RMMS; Denver Public Library, Gates Room, 3rd Tuesday, 5:30 p.m.), <http://rmmaps.org/>

Western Interior Paleontology Society (WIPS; Denver Museum of Nature & Science, 2nd Monday, 7 p.m.), <http://westernpaleo.org/> . Meetings are held either in the Ricketson Auditorium or the Planetarium at the Denver Museum of Nature & Science, unless otherwise noted.

Devil's Head Field Trip July 28,2018

Saturday, July 28, 2018, Ernie Hanlon led a group of us to the legendary Devils Head area. While we did not find much other than a few Microcline and Smokey Quartz Crystals, we all enjoyed a great day in this majestic setting. Thank you Ernie for your dedicated efforts on our behalf! —By Frank Rosenberg



Photos courtesy Frank Rosenberg.

FIRE AND BRIMSTONE

Oscar L. Price

Sometimes when we think of volcanoes we only see them as fire and brimstone or 2000 degree magma destroying homes, and filling the air with dust and toxic gas. It seems there is an ugly side and a beautiful side of things when it comes to nature.

If there were no volcanic eruptions, there would be no beautiful islands to vacation on. We wouldn't have beautiful diamond rings on our fingers or jewelry made with gold from Cripple Creek. We wouldn't be texting our friends while having dinner. We wouldn't have wireless laptop computers. We couldn't watch world news on satellite TV.

Volcanoes bring over 300 minerals to us that are essential for life. Without volcanoes, Earth would be void of life like the moon. Colorado has had lots of volcanoes and is extremely rich in gem stones and minerals.

The La Garita Caldera is immediately east of the Northern Rio Grande rift and Sangre De Cristo Mountains (located in the San Juan Mountains about 100 miles from Colorado Springs). It ejected 5000 times the amount of material as Mt. St. Helens, and it spewed enough ash to cover the state of Colorado 6 inches deep. It was known as the Kohuma of volcanoes.

This killed many plants and animals and contaminated the air so much that it blocked out the sunlight enough to reduce the temperature two to three degrees. The La Garita Caldera is considered one of the Earth's largest volcanic eruptions (approx. 40 -10 million years ago).

Without the Earth's large volcanic eruptions bringing up the minerals and crystal ignimbrites and creating conditions to grow crystals in the La Garita Caldera in the San Juan mountains that include Mt. Antero, you wouldn't have pegmatites that contain those beautiful aquamarines or the other gemstones that are found there.

You may never have heard of the Kelsey Lake diamond mine here in Colorado, which consists of nine kimberlite volcanoes near the Wyoming border. A 28.3 carat diamond came from the Kelsey Lake mine and one 16.86 carat diamond cut from the rough diamond sold for \$87,500. The mine has since closed down due to royalty disputes. They have not been able to find another mining company to reopen the diamond mine.

The rarest diamond on Earth is a blue diamond from South Africa, forged deep below the Earth's surface and forged much deeper than other diamonds. The blue diamonds gain their blue color from boron impurities. A blue diamond from South Africa sold for 25 million dollars in 2016.

Diamonds crystallize at temperatures higher than other minerals and crystals. Scientists now believe that diamonds are formed in the magma near the Earth's crust where it's much cooler.

Volcanoes not only help create precious gemstones and bring up precious metals such as gold, but they open windows to the Earth's history in the form of fossils. A great example is the Florissant Fossil Beds National Monument.

I'm a fossil collector and several years ago I found small pieces of petrified wood in the volcanic ash flow at Howard, Colorado, called "The Pleasant Valley Graben". I also found a small flattened gold nugget while I was crushing up some of the material known as pozzolanic ash for an experiment.

I knew the two original claim holders of the quarry located on BLM land just north of Howard. They had mined the pozzolon to use as a fertilizer supplement when mixed with powdered cinders from the Pueblo Steel Mills. They called their fertilizer Volpoz. They had closed the quarry in the 1950s before I was acquainted with them, but they kept their claims in and around the quarry at Howard. One of the claim owners was a retired chemist. I told them about finding the little flattened gold nugget in the ash. They said, "Yes, we know there is a little yellow mixed in the ash" (yellow meaning gold). Gold was only bringing 35 dollars an ounce, making it too costly to separate from the ash back then.

I've wondered for years, hoping to learn the "Hows and Whats" pertaining to the ash flow and how and why petrified wood got mixed throughout the volcanic ash at Howard. So recently I contacted Professor Jeff Noblett, Geology Chair, Colorado College, about the ash flow at Howard.

Professor Noblett's response was without seeing the material. He said he was 99% sure that I was talking about a layer within the much larger family of volcanic eruptions from about 38-29 million years ago that erupted across central Colo-

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rado. He suggested that taking a trip to the Florissant Fossil Beds National Monument would give me a display of the life of that time and help answer my questions. The origin of the pumice and volcanic ash at the Florissant Fossil Beds has never been determined.

He also stated there was no one single volcano (despite old beliefs about Guffey), but rather dozens of smaller volcanoes. Some of these were scattered around Guffey in what used to be called the Thirty Nine Mile Field and is now part of the Central Colorado field, and "is likely the source of your flow"(Noblett, 2018).

I read the very technical professional papers on line written by Bill McIntosh and Charles E. Chapin (New Mexico Bureau of Geology and Mineral Resources Bulletin 160). Based on their charts showing data on age, the Florissant Formation eruptions occurred around 34.1 million years ago, the Howard volcanic eruption around 27.4 million years.

This would put 7.3 million years between the eruptions. My understanding based on Professor Noblett, is that the life and trees found at the Florissant Fossil Beds would be close to those found at Howard, but I'm still in the dark about the petrified wood found in the ash.

Did the trees get blown to pieces when the volcano erupted, similar to Mt. St. Helens, or was the wood already broken up into small pieces by a previous volcanic eruption? Did the big ash flow pick up the previous ash mixed with the petrified wood and small particles of gold before it crossed over pre-laid rocks, filling the valley and making the large hills of ash? I'm hoping someone will do research about the type of trees growing there before the Howard eruption.

As a fossil collector, my interest is trying to identify the small pieces of petrified or replacement wood found in the Howard ash flow. I've found no large pieces, just little small pieces. So far none has been found opalized or agatized. The ash is welded together slightly but easily broken up with a rock hammer. None of the technical professional papers that I've read so far has mentioned petrified wood or gold in the Howard material or any other volcanic ash. Blue microcrystals are found in the ash that reflect a bright blue in the sunlight and could be quartz, sanidine feldspar or possibly plagioclase. The people that owned the claim called the little crystals moonstones.

Is science wrong about how long it takes to petrify wood? It doesn't take millions of years if the conditions are right.

Wood is petrified by two basic processes, both usually involve being buried in volcanic ash. The ash decomposes in water, and enriches the groundwater with silica. The second process involves total infiltration of the porous wood by silica-rich water. The silica plugs up the pores preventing complete decay (Morris, Ph.D., 1995). It's now well known that wood can petrify rapidly as shown by several laboratory experiments mirroring natural settings.

Wood can also be petrified in field settings. In experiments, researchers dangled a block of wood down inside an alkaline spring in Yellowstone National Park to see what the effects this hot, silica rich environment would have. In just one year, substantial petrification had occurred.

I hope this article shows people that volcanoes are more than Fire and Brimstone and induces someone to do more research on the Howard volcanic ash. "The volcanic ash flow at Howard holds a lot of secrets."

References:

McIntosh, Bill and Charles E. Chapin, Geochronology of the Central Colorado Volcanic Field, New Mexico Bureau of Geology and Mineral Resources Bulletin 160, 2004.

Morris, John D., Ph.D., "How Long Does It Take for Wood to Petrify," Acts & Facts 24 (10), 1995.

Jeff, Professor and Chair of Geology, Colorado College, E-mail, July 2018.

CSMS July 10 Peridot Field Trip

An enthusiastic group of us took advantage of the fine weather in July to get out and collect Peridots. Thanks Ernie Hanlon for leading a great trip. Thanks Gina Dupre for your picture of your collected Peridots. The last picture in this group shows what fine Gems can be faceted from these Peridots. This Peridot was faceted several years ago by Dave Wilson, collected by this writer at the same location as trip. —By Frank Rosenberg



(Pictures by Frank Rosenberg and Gina Dupre)

Cripple Creek's Mule Skinners

By Steven Wade Veatch

In the late 1890s, Cripple Creek was the site of Colorado's last gold rush and soon became known as the World's Greatest Gold Camp. Ore from Cripple Creek's gold mines was hauled in large wooden wagons by four or six mules or horses to a team. Skilled drivers, known as mule skinners or simply skinners, could "skin" or outwit stubborn mules and compel them over rugged roads hauling ore, goods, and materials in and out of the gold camp.

Some mules were as mean as a surprised grizzly. Other mules were more obliging to the skinner. A good skinner could control his team and drive heavy, cargo-laden wagons along winding mountain roads raising dust at two to two-and-a-half miles per hour.



A group of scrubbed up, dressed up mule skinners relax on a boulder in a rugged mountain clearing. In the background is a large tent and several horses grazing in the meadow. These skinners worked for A.E. Carlton's Colorado Trading and Transfer Company in Cripple Creek. By the time this photo was taken (1906), the company had a thriving business transporting ore from the mines to the Midland terminal railhead. Photo © Cripple Creek District Museum.

A mule skinner's job was arduous. It took dogged determination and an understanding of a team of mules to make an efficient driving outfit. The work, sometimes dangerous and always hard, had long hours, starting at five in the morning and lasting long after the sunset. Young, ready men who could take the punishing work performed this job the best. Though no mules were ever skinned, these men would boast, "I can pop my initials on a mule's behind."

Most of the skinners were as lonely as a seagull in an Iowa cornfield, and some skinners were as mean and stubborn as their mule. The skinners, in their quest for company, headed for the dancehalls that lined Cripple Creek's notorious Meyers Avenue.

This imagined scene applies to so many of these trips:

It's Saturday night, the sun has gone down behind Mt. Pisgah and a full moon is beginning to rise at the bottom of the sky. Coyotes prowl behind Mineral Hill in howling packs while the mournful whistle of the Midland Terminal locomotive wails through the city of Cripple Creek.

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PEBBLE PUPS CORNER



CSMS Pebble Pups & Junior Group

The Junior Group & Pebble Pups meet at the Senior Center every third Thursday at 5:30 PM until 6:15 PM or so. We only meet during the academic year, and we include January. So, it is Sept through May.

Special announcements and field trips are noted on our blog:

<http://pebblepups.blogspot.com>

and through the CSMS website:

<http://www.csms1936.com>

Colorado Springs Mineralogical Society's Teen Member Receives Prestigious Award

By Steven Wade Veatch

Ben Elick, a teen member of the Colorado Springs Mineralogical Society's Pebble Pup and Earth Science Scholar program, was presented an award at the July 19th meeting of the Colorado Springs Mineralogical Society (CSMS) before his presentation on repeat photography to the members. The award, given by Pebble Pup Leader Steven Veatch, was from the Geological Society of America (GSA) for recognition of excellence for his oral presentation at the North-Central Section meeting in Ames, Iowa on April 17. The GSA is the learned society for earth scientists. Ben presented his work on repeat photography and its geological and paleontological applications at GSA meeting. Ben told the CSMS audience, "repeat photography can be a meaningful and essential project for student engagement." The CSMS provided a travel grant for Ben to attend the meeting.

An abstract of Ben's work is at this URL: <https://gsa.confex.com/gsa/2018NC/webprogram/Paper311463.html>



Ben Elick (L) receives his Geological Society of America award from Pebble CSMS Pebble Pup Leader Steven Veatch (R).

2018 CSMS Officers

Sharon Holte, President

Randy Hurley, Vice-President

Open, Secretary

Ann Proctor, Treasurer

Adelaide Bahr, Membership Secretary

Larry Jones, Editor

John Massie, Member-at-Large

Laurann Briding, Member-at-Large

Ernie Hanlon, Past President

2018 CSMS Chairpersons

Randy Hurley, Program Coordinator,

Mike Webb, Field Trip Co Coordinator

Ernie Hanlon, Field Trip Co Coordinator

TBD, Science Fair Chair

Frank & Ellie Rosenberg, Librarians

Mark Schultz Social Committee Chair

Ann Proctor, Store Keeper

Michael Kosc, Webmaster

Lisa Kinder, Facebook Keeper

Mike Nelson, Federation Representative

TBD, Federation Representative

SECRETARY'S SPOT

by Sharon Holte

General Meeting Minutes for the Colorado Springs Mineralogical Society — 07/19/2018

The meeting was called to order by our President, Sharon Holte at 7:01 p.m.; followed by the Pledge of Allegiance.

Steve Veatch introduced Ben Elick. Ben presented his presentation which he gave to the Geological Society of America in Ames, Iowa in April. His topic was "Repeat Photography." This was a truly amazing presentation. Steve also mentioned some of the Pebble Pup members and their projects. Steve and Ben presented a dozen roses to the Board in thanks for all of their support. The GSA recommended a special award to Ben in recognition of his presentation.

Sharon awarded Jenna Salvat and Ben Elick certificates for their portfolios to go along with their grants they had previously received.

Kevin Witte and Austin Cockell went to 2 sites in Silverton at 13,200 ft and collected amethyst and quartz crystals, which they presented in a case during the break.

Three new members were introduced.

Sharon called for a break.

After the break, 5 specimens were awarded. We had 46 members and guests in attendance

June minutes were approved as posted in the Pick & Pack.

President's Report: Sharon Holte: asked for approval of the minutes for June. They were moved and passed.

We received some very sad news. Several weeks ago Dick Lackmond lost his wife Pat. Three weeks later we lost Dick. He was always ready to lead a field trip or share his knowledge of our hobby. Also, James Hooker passed on several months ago. James was a long time member and enjoyed our field trips. A moment of silence was observed by those in attendance.

Sharon presented the deadlines: Old Colorado City Historical Society case will be discussed at the next Board Meeting. It has been suggested we remove the current cumbersome case and provide a new case that is smaller and more in line with the current display cases. Also, we need to start thinking about a nomination committee!! It was suggested that we do a post show meeting on September 20 at 6:00 p.m. to discuss what we did right, what we can do better, and discuss the volunteers and show in general. The Junior Rockhound of the Year was taken care of by Steve Veatch. Larry Jones, our editor, is working on the qualifications for Rockhound of the Year. This will be discussed at a later date.

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2018 Satellite Group Chairpersons

Crystal, Kevin Witte/Bob Germano

Faceting, John Massie/Doreen Schmidt

Fossil, Jerry Suchan/Joyce Price

Jewelry, Bill Arnson

Lapidary, Sharon, Holte

Pebble Pups, Steven Veatch/
Betty Marchant

2018 CSMS Liaisons

Florissant Fossil Beds
National Monument, Steven Veatch

Western Museum of
Mining & Industry, Steve Veatch

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Vice President's Report: Randy Hurley: The check was presented to the Florissant Fossil Beds National Monument in accordance of our By-Laws in support of the summer intern program. Our speaker for September is Bob Hickey; for October, Mike Nelson; for November Tracy ??; for December, no speaker for the Christmas Party; for January, Steve Veatch.

Treasurer's Report: Ann Proctor: no report.

Secretary's Report: Sharon Holte: reservation at the Golden Corral was made for August 16 at 5:00 p.m. The address is 1970 Waynoka Rd,. Please leave the gratuity on the table. Sharon has unearthed the original CSMS placard. It was suggested that Lisa Kinder would be the best person to recopy it and have it available when needed. Sharon will get it to Lisa.

Membership Secretary's Report: Adelaide Bahr will give a list of the new members that were not present to John Massie so he can send out our Welcome letter. The membership list was sent out via email and several were printed. If there are any corrections needed please let Adelaide know soon!

Members at Large: John Massie and Laurann Briding: Nothing to report.

Past President's Report: Ernie Hanlon: Nothing to report.

Website Coordinator's Report: Lisa Kinder was absent but gave Sharon the report just before the meeting. The website is converted and up and running. Yeah!

Miscellaneous:

The Crystal Group and the Faceting Group, as well as the Pebble Pups will resume in September.

The Fossil Group will be meeting as usual; Ernie Hanlon will speak on Dinosaurs.

The Lapidary Group, Sharon Holte and Jewelry Group, Bill Arnson are by appointment only, please call.

Claims Report: Frank Rosenberg: He met with the powers that be in Denver. There are more holes that need to be filled in. John Massie, Randy Hurley and Frank are going to get together and work on the claim again.

The Library Report: By the Rosenberg's. The list is on the website. Please call for reserving a book or taking a look at the library.

The Social Coordinator: Mark Schultz stated that we have plenty of supplies. Also, thanks to everyone who supplied the goodies.

The Store Keeper: Ann Proctor: nothing to report

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Unfinished Business: The question was posed, "Should the society purchase the meat for the Christmas party?" The membership voted yes. Bill Arnson offered to make Sloppy Joes for about 70. The society will pay for the meat, if necessary. The Board provided the President's Binder with all of the society's general meeting minutes, board meeting minutes, and the financial ledgers to date. It was stated very emphatically that we do not want the Board Meeting Minutes published in the Pick & Pack because once they are published they are out there forever and it opens us up to scammers. Members are in favor of a public treasurer's report with no mention of it in the minutes. There was additional discussion about a quorum for the general meeting (there must be 25 members present) and for the board meeting (there must be 5 members present) to pass an item. This topic was again tabled until the next meeting on September 20, 2018.

Respectfully submitted by Sharon Holte, acting secretary

July 19, 2018, General Assembly Events and Photos

By Frank Rosenberg

Thursday, July 19 at the general meeting, Ben Elick, a young scholar of Colorado Springs Mineralogical Society, treated our members to the same presentation he gave to The Geological Society of America on Integrating Repeat Photography with Geoscience Education, Outreach, and Engagement. Ben was also presented with an Award in Recognition of Excellence from that same prestigious Society.

During the meeting, The CSMS Board of Directors presented to our Young Scholars Certificates of Achievement: to Jenna Salvat for her First Place in Senior Division Physical Science Category at Pikes Peak Regional Science Fair 2018, and to Ben Elick for his above presentation at Iowa State University.

Our meeting was further enhanced by Kevin Witte, our Crystal Group leader, talking about the new discovery of Quartz and Amethyst that he and Austin Cockell found in Silverton Colorado at over 13,000 ft.



It all started with a son of Mars. Legend has it the city of Rome was founded by Romulus, son of the Roman god of war who was abandoned as an infant and raised by wolves alongside his brother, Remus. After killing his brother and taking control, Romulus founded the city of Rome, which is named after him. He became the first king of Rome. But wasn't Rome an empire? Well, before it was an empire – or even a republic – the city of Rome was ruled by kings for hundreds of years. Historians estimate that around 509 BCE this system of monarchy ended, and a republic was formed after a people's revolt which was staged in outraged response to the tyrannical rule of Lucius Tarquinius Suberbus and in particular the actions of his son, who behaved badly toward a noblewoman without her consent. This sparked a rebel-



lious fervor in the common people, who went on to rebel and form a republic, which literally means “property of the people”.

Once the great republic had been formed, Rome expanded from a city state to a true power. Rome conquered all of Italy and Sicily and defeated the Carthaginians of Tunisia in the Punic wars, which are famous for Hannibal's crossing of the Alps with war elephants in an effort to defeat Rome on its home turf. However, his efforts were in vain, because Carthage ultimately lost the war. The republic went on to conquer Southern Spain and defeat Macedonia, turning the once great empire of Phillip V into a Roman province. But, like in many governments throughout history and modern times, the republican system of government in Rome fell into corruption and disarray. The gap between the rich Patricians and poor Plebeians became significantly more pronounced and the wealthy oppressed the poor. Leaders who attempted to fix these problems were promptly assassinated. In 59 BCE a general known to us as Julius Caesar returned to Rome from conquering Gaul, modern day France. When he returned, his wealth and power exceeded anyone else in Rome, and that was disturbing to the current leaders, known as Consuls. They attempted to undermine Caesar's power, but their efforts were thwarted, and Caesar defeated them in a bloody civil war. He declared himself dictator, a temporary position of absolute power in the Roman governmental practices. Less than a year later, Caesar was murdered by his friends and colleagues. This event caused another power struggle, which ended with Augustus taking over as the first Roman emperor.

An example of Roman art style. Original watercolor © by Ciena Higginbotham.

The Roman Empire went on to conquer virtually all of the lands surrounding the Mediterranean and most of Europe. It stretched from Egypt to Scotland and was the biggest empire to ever exist in Europe, no other nation since has owned so much of the continent. For much of its history Rome had a solid, functioning economy and extremely formidable military. The empire was and still is renowned for its amazing art and architectural achievements. Later on, Rome adopted Christianity as its state religion in 325 CE, and shortly afterwards Rome began its decline. After hundreds of years of success, the empire became so fragmented that it split in two. While the eastern part of the empire went on to become the Byzantine Empire, the west imploded due to corruption, war, and a lack of communication. With that a great empire fell and a chapter in history closed.

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During Rome's height they were noted for their wealth and industry. This translated into a prestigious trade in jewelry and adornments of all kinds. Usually, skilled artisans were responsible for the crafting of these pieces of wearable art. Most Roman jewelry used gold as a base material which was then embellished by jewels such as pearls, emeralds, and turquoise. Because the Romans used gold as the cornerstone of their jewelry, they needed a lot of it. Since Central Italy is rather lacking in mineral resources, they sourced the bulk of their gold from provinces to the west, such as Iberia (Spain) and Gaul (France). They also received gold through trade with Africa and India. The basic techniques of jewel-crafting in Roman society, such as filigree (the practice of twisting tiny pieces of gold wire together to form patterns) and granulation (the practice of molding tiny grains of gold onto a larger smooth piece) are still in use today. The goods produced were sold in markets and community gathering places referred to as forums. However, trade was not explicitly through markets, oftentimes the ruling class would commission special pieces from the best jewelers.

Since the dawn of time man has adorned himself with materials of rocks, minerals, fossils, and gems. The Romans were no different and show remarkable craftsmanship.



Figure 1a. Roman amethyst bead circa 100 BC. Image © by S.W. Veatch.



Figure 1b. The bead shown above is made of amethyst, a variety of quartz. Amethyst was valued among the Romans, along with emerald and pearls, for bead making, and jewelry. Amethyst would be made into crude beads for necklaces, earrings, and bracelets. Image © by S.W. Veatch.

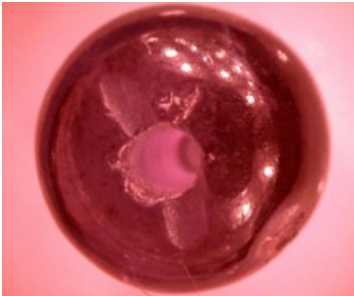


Figure 2. The garnet ornament that is pictured at left was fashioned into a bead that could be strung onto an elegant necklace worn by an ancient Roman citizen. This fiery-red pigmented garnet is most likely of the pyrope variety. The small hole in this bead could have been created using a manual drill press, a primitive instrument comprising a wooden rod tipped with mineral slab that is comparatively more durable than the material that is being bored into. The garnet was rounded into this spherical shape using a polishing stick or polishing mound, both methods involving the use of tougher mineral material to abrade the exterior of the garnet. Image © by S.W. Veatch.



Figure 3. This is a cylindrical bead made of granite circa 100 BC. These stone beads were traded throughout the Roman empire. Image © S.W. Veatch.

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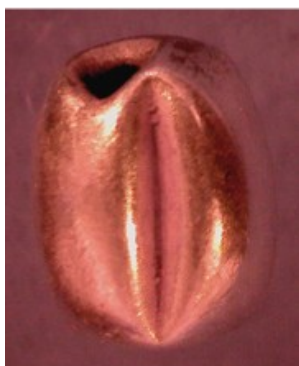


Figure 4. This bead is made of solid gold and had more intricate work done. This bead would have been part of a necklace worn by a man or woman who was wealthy. Image © by S.W. Veatch.

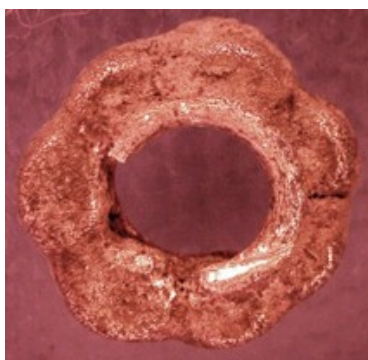


Figure 5. This piece, made of silver, was worn by a Roman over 1,200 years ago. The Romans prized their silver mines. Image © S.W. Veatch.



Figure 6. This carved piece of Lapis Lazuli reveals specs of pyrite. This gemstone was highly prized for its blue color and was mined in Afghanistan and then brought into Rome. Image © by William Wray.



Figure 7. This unusual piece of abalone shell came from a mollusk. It was ground down to a size that would fit on a necklace. Perhaps this piece of adornment was worn by a slave held by the Roman Empire. Image © by S.W. Veatch.



Figure 8. This unusual ornament was fashioned from a fossil sea urchin. This was worn as a pendant by a slave or a Roman citizen of the lower-class. Image © by Blake Reher.



Figure 9. Carnelian is a type of quartz that is reddish orange in color. The Romans cut and polished it to make jewelry but more interesting, they engraved gems for signet or seal rings. These gems were pressed into hot wax that sealed important documents or letters. Image © by Jack Shimon.

(CONTINUED FROM PAGE 8)

A chill shivers the night air as a small cadre of mule skimmers walk down Bennet Avenue on their way to Meyers Avenue to spend the evening in a dance hall—a place more alluring than the dream of buried gold. It's time for a big night. On Bennett Avenue, they walk past Kurth's music store and peek through the window at the phonographs and pianos on display. The skimmers continue to a grocery where the pungent smells of coffee, cheese, and pickles in this cornucopia of plenty spill out onto the street. One skimmer walks in to buy a plug of Brown's Mule chewing tobacco and carefully counts out the money for the grocer. Next, they go past a hardware store where the window displays new picks and shovels with white-pine handles. As the skimmers turn onto Meyers Avenue, a cat creeps along the boardwalk and then zooms into the dark alley. The skimmers are as free as the night and stand together looking at the lights that flash and flare along the rip-roaring pleasure street. The wooden stomp of horse hoofs, the rolling wheels of buggies, and the sound of music fills the night air.

The group of skimmers choose a likely dancehall to enter, a hopping hive of humanity. The young men step into the smoke-filled, raucous dancehall and eagerly part with their hard-earned cash. Girls bring whiskey and beer to miners sitting at the tables. Men jam around the bar while drinking and talking about gold mines. The piano player pounds away while other musicians play their fiddles. Most of the dances were too complicated for the skimmers, unlike the other fast-drinking, fancy-stepping clientele, so they wait for the musicians to play the Monterey, a more straightforward dance they knew.

The interior lights illuminate the dancehall girls who appear as enchanting beauties—a sight for the skimmer's wearied eyes. The skimmers, with work-roughened hands and hammering hearts, each grab a girl and step out on the wooden dance floor where they join the others, dancing to the band's rendition of Mule Skinner's Delight. They go around and around in a circle—markedly self-aware—as the caller proclaims, “honors to your partner, honors to the corner, swing your partner and all promenade.” When they finish the dance, the skimmers and their girls line up at the bar for a few drinks. The mule skimmers, full of brag, talk about their mules or horses and the perils of their jobs until a work-worn miner yells: “another Mule Skinner's Delight!” The dance was on, with skimmers spinning in a whirl as a happy reverie fills their minds and the night drifts on.

The mule skimmers in the Cripple Creek Mining District played an essential role in bringing goods to the district and hauling gold ore to mills for processing or to railroads for shipment. The skimmers did not disappear like yesterday's snow but stepped into the pages of history. They even became folk icons when, in 1930, Jimmy Rodgers and George Vaughn wrote a song called *Blue Yodel No. 8*, also known as *Mule Skinner Blues*. Bill Monroe's 1939 version of *Mule Skinner Blues* became a hit, and since then a variety of recording artists, including bluegrass and folk musicians, have performed the song. These songs immortalized the skimmers who played a vital part in Cripple Creek, the “World's Greatest Gold Camp.”

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