



## Colorado Springs Mineralogical Society

Founded in 1936

— Lazard Cahn —  
Honorary President

"Pick & Pack"  
Vol 61 Number 9  
Nov 2021

## CSMS General Assembly

Thursday, November 18, 2021 7:00 PM  
Mt. Carmel Veterans Center

### GUEST SPEAKER:

Marjory "Marge" Regel

"My Story: 39 Years of Rockhounding"

**\*\* Members with last name M-Z bring refreshments \*\***

In case of inclement weather please call Mt. Carmel Veteran's  
Service Center 719-309-4714



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## Marjory Regel, "My Story: 39 Years of Rockhounding"



**Above:** Marjory atop Mt. Antero. Photo: M. Regel.



Marjory exploring atop Mt. Shavano. Mt. Antero (A) and Mt. Princeton (P) await in the background. Photo: M. Regel.



**Above:** Marjory on her claim atop Mt. Antero. Photo: M. Regel.



1st pocket 1984 (10"x 14"x 6") small but an OMG find.  
Photo: M. Regel.

Meet Marjory Regel. She had no interest in rocks 39 years ago, until she got bit by the bug, and now she has a box full of them to share with us - and the stories that go with them. Marjory has been in CSMS for 39 years and it shaped her life in many ways, come hear her story at general assembly 18 Nov.



**Left:** Lower center is the 1st rock Marjory ever found. When

she presented it at Dick's Rock Shop, they convinced her to join CSMS. Photo: M. Regel.

COLORADO SPRINGS MINERALOGICAL SOCIETY PO BOX 2 COLORADO SPRINGS, COLORADO 80901-0002

## CSMS Group Calendar

**Nov '21    Dec '21**

2 Nov	7 Dec	Fossil Group	1st Tues	7:00 PM	TBD	Jerry Suchan	303-648-3410
4 Nov	2 Dec	Board Meeting	1st Thur	6:00 PM	Zoom	John Massie	719-338-4276
18 Nov	16 Dec	Pebble Pups	3rd Thur	5:30 PM	Mt. Carmel Center	David St. John	719-424-9852
18 Nov	16 Dec	General Assy Meeting	3rd Thur	7:00 PM	Mt. Carmel Center	John Massie	719-338-4276
CANX	TBD	Crystal Group	4th Thur	7:00 PM	Mt. Carmel Center	Kevin Witte	719-638-7919
By appt	By appt	Faceting Group	By appt	By appt	Berta's House	John Massie	719-338-4276
By appt	By appt	Lapidary Group	By appt	By appt	Sharon's House	Sharon Holte	719-217-5683

## CSMS Club Events

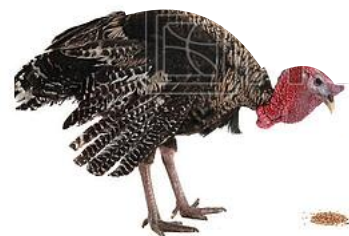
**Dec 16:** CSMS Christmas party (also general assembly). Details TBA.

## Community Events (P. Modreski)

**Dec 10-12:** Flatirons Gem & Mineral Show, Boulder County Fairgrounds, Longmont CO. Sponsored by the Flatirons Mineral Club, Boulder, CO; see [www.flatironsmineralclub.org](http://www.flatironsmineralclub.org).

**Feb 25-27, 2022:** Denver Gem and Mineral Guild Show, (returning to its old location), Jefferson County Fairgrounds, Exhibit Building. The club had earlier announced that it would be necessary for this show to move to the Wheat Ridge United Methodist Church gymnasium; but this will NOT be necessary, the show will take place at the Jeffco Fairgrounds after all, as in past pre-covid years

**Mar 25-27, 2022:** Fort Collins Rockhounds Show, Larimer County Fairgrounds, Longmont, CO.



## Secretary's Spot

### 2021 CSMS Officers

**John Massie**, President

**Rick Jackson**, Vice-President

**Vacant**, Secretary

**Ann Proctor**, Treasurer

**Adelaide Bahr**, Membership Secretary

**John Emery**, Editor

**Chris Burris**, Member-at-Large

**Renee Swanson**, Member-at-Large

**Sharon Holte**, Past President

### 2021 CSMS Chairpersons

**Rick Jackson**, Program Coordinator

**John Massie**, Show Vol Coordinator

**Vacant**, Field Trip Coordinator

**Vacant**, Science Fair Chair

**Frank and Ellie Rosenberg**, Librarians

**Mark Schultz**, Social Committee Chair

**Ann Proctor**, Store Keeper

**Lisa Cooper**, Show Chairman

**Lisa Cooper**, Webmaster

**Lisa Cooper**, Facebook Keeper

**Mike Nelson**, Federation Representative

**Vacant**, Federation Representative

## Meeting Minutes

Colorado Springs Mineralogical Society

### CSMS General Assembly Minutes

October 21, 2021

**Location:** Mount Carmel Veterans Center, 530 Communications Circle, Colorado Springs, CO

**Time:** The meeting was called to order by CSMS President John Massie at 7 PM.

New members were introduced.

Frank and Ellie Rosenberg gave an excellent presentation on prospecting in Australia.

There were 36 members present, 6 mineral samples were given out.

Frank Rosenberg presented the nominations for 2022 Board of directors:

- President John Massie
- Vice President Rick Jackson
- Treasurer Ann Proctor
- Secretary John McGrath
- Member-at-Large Chris Burris
- Member-at-Large Bill Myers
- Sharon Holte as Past President
- John Emery as Pick and Pack editor
- Kyle Atkinson as Field Trip coordinator
- Lisa Cooper as: web master, Facebook keeper, and Pikes Peak Gem and Mineral Show Coordinator
- Mike Nelson as Federation Representative
- Mark Schultz as Social Committee Coordinator
- Ellie and Frank Rosenberg as librarians

Frank Rosenberg announced he is leading a field trip to our Rocky Mountain High Claims 1 and 2 on October 30, 2021.

Roger Pittman announced that he had received a lot of specimens to give away.

Tom Towles announced that he is downsizing, he has a lot of equipment he wants to sell.

John Massie  
CSMS President



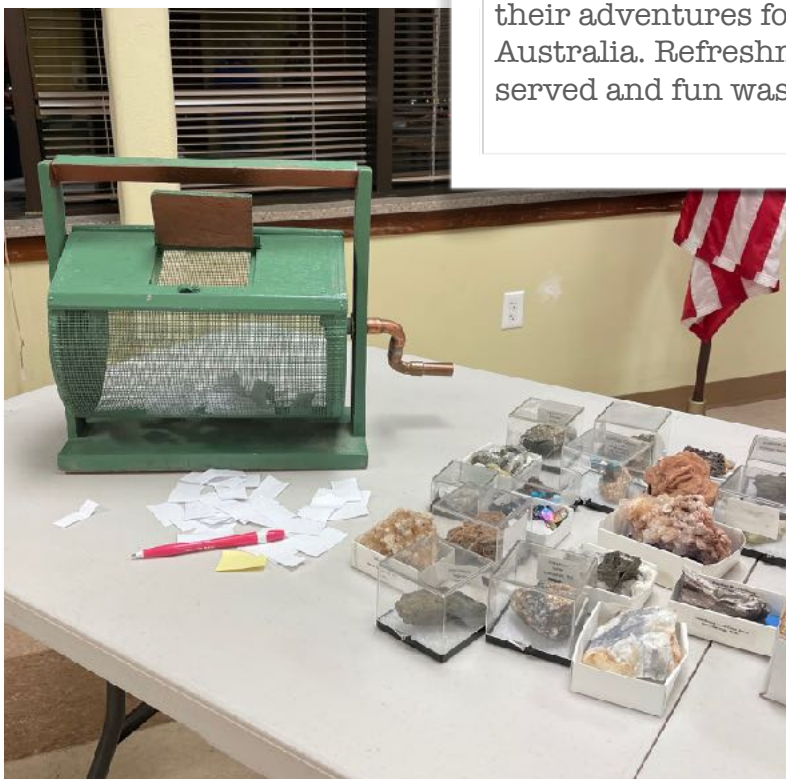




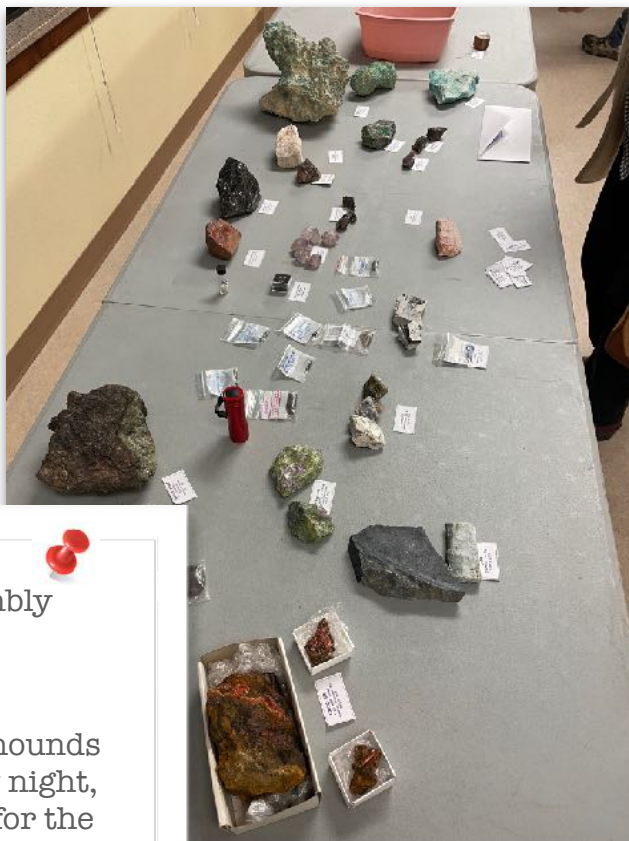
Frank and Ellie Rosenberg share their stories of fossicking in Australia



Watching out for wayward rockhounds at the door.



Ye olde raffle randomization machine, for picking lucky winners



A sampling of some of Frank and Ellie's Australian finds on display at CSMS general assembly, they came from all over the continent

**REPORT**  
General Assembly  
21 Oct 21

A large pack of rockhounds gathered on a starry night, Thursday 21 Oct 21 for the CSMS General Assembly. Six members won drawings for free mineral samples. Frank and Ellie Rosenberg shared their adventures fossicking in Australia. Refreshments were served and fun was had.



Samples of malachite from Frank and Ellie's talk

## President's Corner

John Massie  
CSMS President



### 2021 Satellite Group Chairs

**Kevin Witte/ Bob Germano**, Crystals  
**John Massie/ Bertha Medina**, Faceting  
**Jerry Suchan/ Joy Price**, Fossils  
**Vacant**, Jewelry  
**Sharon Holte**, Lapidary  
**Vacant**, Micro-mount  
**Vacant**, Photography  
**David St. John / Hair/ Elick** Pebble Pups

### 2021 Liaisons

**Florissant Fossil Beds National Monument:**  
Steven Veatch  
**Western Museum of Mining and History:**  
Steven Veatch



## Presidential Matters



### A message from CSMS President John Massie:

I want to thank Lisa Cooper for the wonderful Pikes Peak Gem & Mineral Show - she worked many hours to ensure a successful show. I also want to thank the many volunteers who donated their time to make it an enjoyable time for the vendors and the guests. The silent auction set a new sales record!

We have the holidays fast approaching, I wish every one a happy holiday season.

Do not forget we have a very important General Assembly meeting November 18, 2021. This meeting is when we elect new officers for the board of directors for the 2022 year.

We will also have our Christmas party on December 16, 2021. Details will be coming.

John Massie  
CSMS President







# Federation News Post

American Federation of Mineralogical Societies  
Rocky Mountain Federation of Mineralogical Societies



## American Federation Convention and Show

- 2022, Jan 29 - 30 - Tyler TX

## Rockhound Information

- [William Holland School of Lapidary Arts \(Young Harris, GA\)](#)
- [Wild Acres Retreat \(Little Switzerland, NC\)](#)
- [Bureau of Land Management](#)
- [Crystallography](#)
- [U.S. Geologic Survey Topographic Maps](#)
- [TopoZone](#) - Topographic maps of the United States on-line.



## Future RMFMS Convention Locations

- 2022, May 7-8 - Las Vegas, NV

## Local Club Shows

- To let other clubs in our federation know about your upcoming show, [send an email to the Newsletter Editor](#).
- For Member Club Show general information go to the ["RMFMS Club Lists"](#) page and check the club or city you are interested in.
- Want to see the shows in your state? Visit the Rock and Gem Magazine's Show page and select the state you are interested in: [Rock and Gem Magazine's Show Page](#)

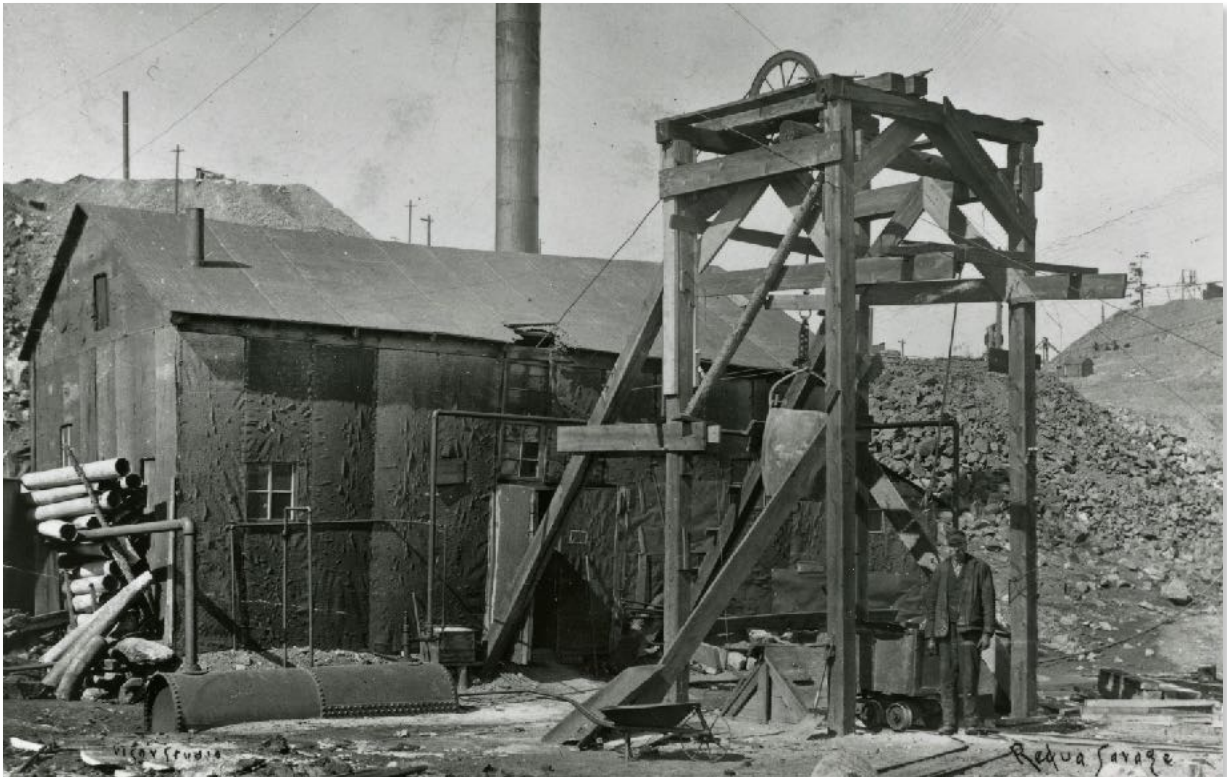
**About the AFMS** - A non-profit educational federation of seven similar regional organizations of gem, mineral and lapidary societies. The purpose of AFMS is to promote popular interest and education in the various Earth Sciences, and in particular the subjects of Geology, Mineralogy, Paleontology, Lapidary and other related subjects, and to sponsor and provide means of coordinating the work and efforts of all persons and groups interested therein; to sponsor and encourage the formation and international development of Societies and Regional Federations and by and through such means to strive toward greater international good will and fellowship. Founded in 1947.

**About the RMFMS** - A non-profit educational organization. The purpose of the Rocky Mountain Federation is to have a close association of all clubs in the Society to promote the study of earth sciences, including the lapidary arts, the study of fossils and paleontology, and related crafts. The RMFMS was organized in 1941, and held its first annual convention at the Argonaut Hotel in Denver, Colorado. There were 16 organizations in attendance. The RMFMS became one of the original four founders of the American Federation of Mineralogical Societies when it was organized in 1947.

## A Cripple Creek Profile: Frank Finegan and His Requa Savage Mine

Steven W. Veatch

Francis “Frank” Finegan (1835-1914) was an adventurer who fought in the Civil War. He was among the first group to arrive at the goldfields of the Cripple Creek mining district, where he located and patented several mines. Stockholders elected him president, treasurer, and general manager of the Requa Savage when he incorporated the mine on April 26, 1894 (Colorado State Mining Directory, 1898).



**Figure 1.** The Requa Savage mine. A miner, named “Big Swede,” stands by an ore cart under the headframe of the mine. Photographer and date unknown. Courtesy of the Cripple Creek District Museum. CCDM A 8315.

Finegan left enough of a record to trace his interesting journeys and see the stormy corners of his life. He was born in 1835 in Loughrea, County Galway, Ireland. In 1854, he sailed out of Liverpool to New York City (Portrait and Biographical Record of the State of Colorado, 1899). He then left New York City and lived for a time in Hartford, Connecticut, where he worked as a stonecutter and mason. He moved to California in 1857 and mined on the American River, the site of the original 1848 gold discovery in California. One year later, he sailed to Australia and farmed near Ballarat. With three partners, he located a gold mine near there. The partners worked it until 1859, when they sold their interests, each pocketing \$35,000—a whopping \$1,091,375 in 2020 dollars (Portrait and Biographical Record of the State of Colorado, 1899).

Continued ...

Finegan left Australia and returned to California for a few months in 1860. He then moved to New York City. On April 12, 1861, at 4:30 AM, while Finegan was fast asleep, Confederate General Beauregard ordered his gunners to open fire on Fort Sumter, South Carolina. Cannons roared like a crack of thunder. Explosions lit up the darkness and smoke settled over the fort. Thirty-four hours later, the besieged Union garrison raised a white flag and surrendered. The Confederates committed an act of war that forced President Abraham Lincoln to act. Two days later, Lincoln called for volunteers to fight in a war to preserve the Union.

Finegan answered Lincoln's call. He joined the 69th New York Regiment that month and was mustered into service for three months. The 69th Regiment was part of the Irish Brigade, which at the beginning included the 63rd, 69th, and the 88th New York Regiments and the 28th Massachusetts Regiment. The 116th Pennsylvania Regiment, made up of Irishmen from Philadelphia, was added during the Fall of 1862 (R. Sauers, personal communication). The Irish Brigade quickly built a reputation for fierce fighting on the battlefield, and Finegan found a passage into hell when he fought in many of its engagements.

The 69th New York Regiment fought in the First Battle of Bull Run under the command of General William T. Sherman. During that battle, Confederate forces took Finegan prisoner. The Confederates released him on parole (Both sides had no means to take care of prisoners; Grant later stopped the practice of releasing prisoners). Once released, Finegan reenlisted for three years and returned to the battlefield.

Finegan saw combat at the Battle of Fair Oaks (Henrico County, Virginia) on May 31 and June 1, 1862. It was there that he saw the use of Union balloons, some reaching altitudes of over 1,000 feet, to report enemy positions and direct artillery fire.

Later, at the Cornfield Battle of Antietam (September 17, 1862), Finegan went down hard with a savage head wound while carrying the flag (Portrait and Biographical Record of the State of Colorado, 1899). Almost 8,000 Union and Confederate soldiers were killed or wounded in the Cornfield Battle.

Finegan fought in the Battle of Gettysburg (July 1 - 3, 1863), where he witnessed horrific sights. He surely would have heard flags flap in the wind and bullets whizz by. The air was heavy with the scent of blood. There were fields of slaughtered and decaying bodies everywhere. While marching down a road jammed with troops and shining bayonets, he doubtless heard the cries of the wounded and the amputees, and then noticed a heap of amputated legs, feet, arms, and hands under a tree. During the Civil War, doctors performed a lot of amputations to prevent wounds from becoming infected. Antibiotics used to kill germs had not been invented yet. Gettysburg was the bloodiest clash of the Civil War and came with a high casualty list for both sides: 7,058 died; 33,264 wounded, and 10,790 went missing (LeBoutillier, 2017). As the war continued to intrude into his life, Finegan was becoming a hardened fighter who learned his skill on the battlefield.

Finegan, who was likely detached from the 69th Regiment, took part in the siege of Vicksburg (May 18 – July 4, 1863) as Grant directed artillery fire at the city. The air burst into flames as the shelling continued, and then Grant's army relentlessly attacked the city for over 40 days.



Eventually, the food and supplies ran out, forcing the soldiers and citizens of Vicksburg to eat mules and rats (Stanchak, 2011). The Confederate forces at Vicksburg surrendered on July 4, 1863. Amid the broken bricks and fires, a few homebound citizens must have watched through shattered windows as the Union forces marched by.

Finally, Finegan survived two later battles: the Battle of the Wilderness (May 5 - 7, 1864), in Spotsylvania County, Virginia, and the Spotsylvania Court House Battle (May 8 - 21, 1864).

Finnegan was among many who witnessed the great suffering, horror, madness, and destruction of the Civil War that resulted in a horrific cost of life in the nation's bloodiest war—at least 750,000 soldiers died, hundreds of thousands of others were wounded in battle, and an unknown number of civilians perished (McPherson, 2015). An estimated two percent of the population was killed (Ward, 1990). The Civil War set four million slaves free, brought the downfall of the Southern planter aristocracy, and preserved the Union as one nation, indivisible.



**Figure 2.** Battle of Gettysburg. Painting by Thure de Thulstrup. Original scan: Library of Congress. Public Domain.

Having miraculously survived these bloodbaths, Finegan returned to New York City, where he mustered out in June, 1865. After he left the Army, Finegan returned to Australia once again. He settled in Victoria, where he worked in contracting and building. Then, in 1874, he moved to San Francisco where he worked as a stonecutter and mason. In 1880, he moved once again, this time to Colorado Springs, Colorado. He started a building business and lived at 225 S. Cascade. In 1881, he was elected alderman and served six years on the city council of Colorado Springs (Portrait and Biographical Record of the State of Colorado, 1899).

Continued ...



In the shadow of Pikes Peak, peripatetic Finegan was becoming restless; excitement was absent in his life. This was about to change in 1891, when gold fever from the Cripple Creek mining district infected Finegan. The only cure for him was to come to the district and step into mining. About the time Finegan arrived in the district, a prospector, with the swing of his pick, revealed a streak of bright gold ore at a spot on the side of Beacon Hill. This discovery set in motion the establishment of the Requa Savage mine, in which Finegan was the driving force. Finegan incorporated the Requa Savage so optimists could invest in the mine. Now there were funds to hire engineers and miners and to buy machinery to develop it.



**Figure 3.** Map of the Cripple Creek Mining District, 1896. A red arrow points out the Gold Dollar mine. The Requa Savage mine is just north of the Gold Dollar. The town of Arequa is underlined in red. Map source: Hoyer-Millar (1896).

Some maintain that Finegan named the mine after “Uncle” Benjamin Requa, an early settler, or for the nearby Requa Gulch. The gold mine was near Arequa, one of the oldest towns in the district. By 1896, the town of Arequa, named after Ben Requa, included the “A” as the first letter of its name, as seen in the map in figure 3 (Mackell-Collins, 2014). The Requa Savage was on the north side of the Gold Dollar mine (see map figure 3).

As time passed, the Requa Savage became known as a modest producer. According to the *Mining and Engineering Journal* (1910), the Requa Savage mine, in 1910, shipped two carloads of ore assaying at one ounce per ton. Other carloads yielded less gold, but the mine produced \$100,000 that same year.

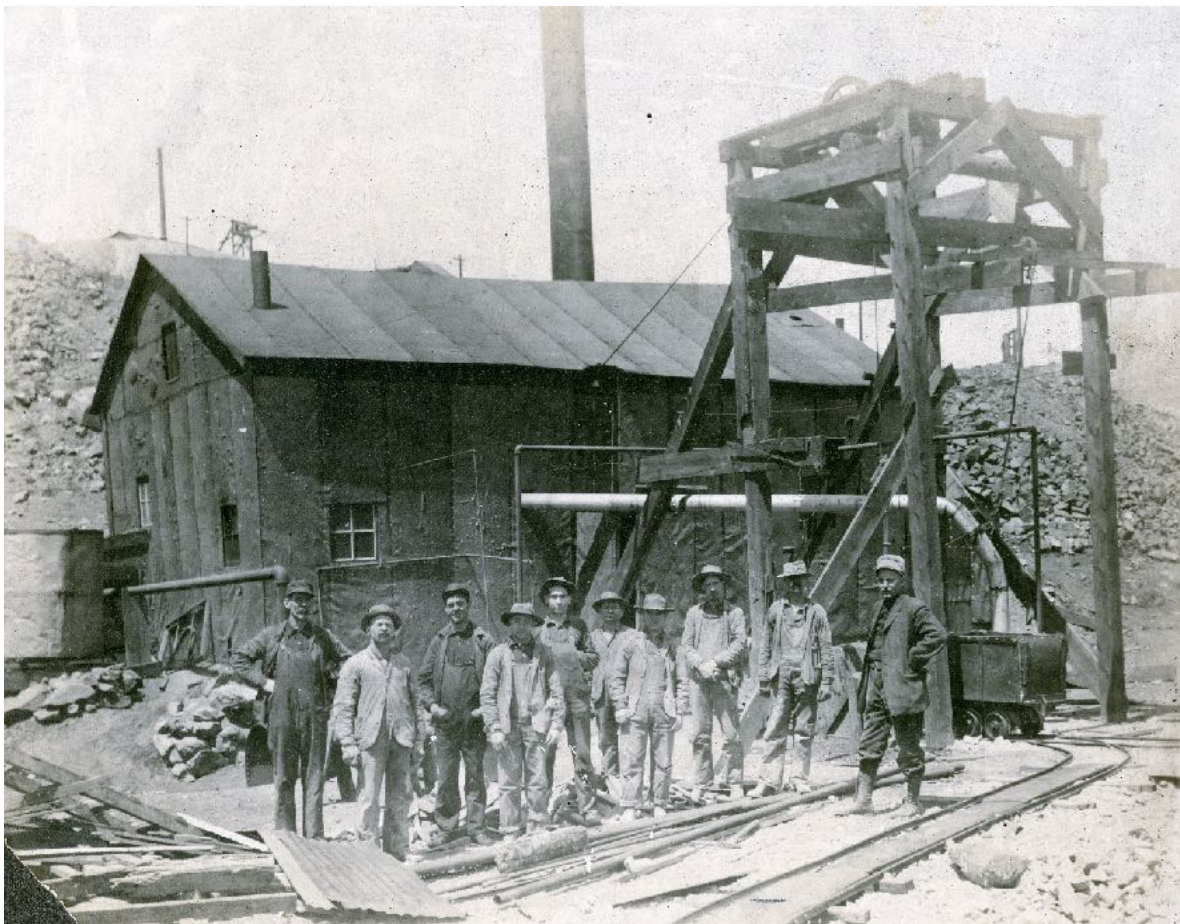
The passage of time would not be kind to Frank Finegan. He fought cancer but lost that battle and died on October 22, 1914, in Colorado Springs, at 79. His family buried him in the Evergreen Cemetery.

Cont ...





**Figure 4.** View of Beacon Hill. A red arrow shows the location of Arequa. *Photographer unknown, date mid-1890s. From Olla Burris collection, Cripple Creek District Museum.*



**Figure 5.** View of the Requa Savage mine. Ten miners pose in front of the mine. *Photographer and date unknown. Courtesy of the Cripple Creek District Museum.*



History records that, over time, Finegan was one of several prominent men associated with the Requa Savage mine. Records show that by 1912, the One Hundred and One Mining Company owned the mine (Mining Science, 1912). In 1913 *The Mining Investor* reported that Democratic Colorado State Senator Louis A. Van Tilborg (1870-1937) worked the Requa Savage mine for a short time. Van Tilborg, a druggist and an assayer, was the mayor of Cripple Creek from 1907 until 1911. He served in the Colorado legislature from 1911 to 1914. The presence of gas forced Van Tilborg to suspend work at the mine. Once the mine resolved the gas issues, production resumed under the lease of Kermit MacDermid, of the C.K. and N. Mining Company (The Mining Investor, 1913). By this time, the Requa Savage's surface plant included a shaft house equipped with a steam hoist and electric compressor.

Although the Requa savage mine claimed a small area of land, it boasted five shafts. By 1914, the main shaft reached 700 feet deep (Consolidated Extension Mines Company, 1914). A crew of miners disappeared down the main shaft at the start of each shift and then drilled, blasted, and mucked in the shadows of the mine as they followed the occasional blossom of gold ore in barren rock. By 1914, the Requa Savage was owned by Rainbow Gold Mines Company. Rainbow Gold then leased it to another operator who, based on reports of good gold ore, planned to expand the development of the mine (Consolidated Extension Mines Company, 1914).

A new group of investors reincorporated the Requa Savage Gold Mining Company in November, 1915, as the Requa-Savage Mines Company with offices at 112 N. Tejon Street in Colorado Springs (Weed, 1918). A report showed the mine was producing ore in 1929 (Kiessling, 1929).

According to *The Mining Journal* (1935), Commonwealth Gold leased the Requa Savage mine. Mr. Wellington Symes, who was the president and general manager of the property, subleased it to a group in Denver; and Andy Vidgen, the mine superintendent, purchased new machinery to increase ore production (The Mining Journal, 1935).

As the years passed by, the ore decreased until the mine became unprofitable. The owners then closed the mine. Today, as you drive on Highway 67 between Cripple Creek and Victor, you will pass where the town of Arequa and the Requa Savage mine were once located. Both places now exist only in the pages of history and we are reminded of Frank Finegan and how he emerged from obscurity and left his mark on time through his Civil War exploits and his ownership of a Cripple Creek mine.

## **Acknowledgments**

I thank the Colorado Springs Oyster Club critique group for reviewing the manuscript, and Dr. Bob Carnein for his valuable comments and help in improving this paper.

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## Pebble Pups

David St. John



## CSMS Pebble Pups and Earth Science Scholars

Pebble Pups and Earth Science Scholars K-12 meet the third Thursday of each month (except August). We meet at Mt Carmel Veterans Center 530 Communication Circle from 5:30 - 6:15 PM (45 minutes) with free samples to take home. Check us out at <http://www.csms1936.com> and also on Facebook: Pikes Peak Pebble Pups and Scholars. The CSMS Pebble Pup and Earth Science Scholars group guides youth in the pursuit of studies and activities related to Earth science, geology, mineralogy, paleontology, rockhounding and related subjects.

**Contact:** David St. John, [fossilfun14@gmail.com](mailto:fossilfun14@gmail.com), 719-424-9852

### Our Gem and Mineral Show October 1-3 was Awesome!

Betty Merchant's last time volunteering for the club was during our show. She will be missed by all! Betty donated our fossil dig and materials to enhance further learning for our youth programs. We gave away free samples to children of all ages and had an amazing time sharing crafts, handouts, and samples to so many eager learners. Blake Reher also used his Earth Science skills with so many visitors at the booth. Please come to the June 2022 show.



### Our Pebble Pups and Earth Science Scholars October 21st Meeting

We had a special guest - CSMS president John Massie shared his private collection of Native American Artifacts that he collected with his dad when he was a youth. Our former Earth Science Scholar Blake Reher also shared some artifacts made of rock found on a hike. We shared rocks and minerals used by Native Americans like flint, chert (jasper), agate, fossils, and obsidian used in making tools for clothing and hunting. We learned that Colorado has had many different tribes like Apache, Cheyenne, Arapahoe, and mainly Ute. Free arrowhead, minerals, and more were passed out after the meeting to take home.

### Fossil Day at Garden of the Gods Visitors Center 10/16/21

We had a lot of fun for the fossil week celebration in October. We met families from all over the world and they dug in our fossil dig area and were allowed to keep six real fossils donated by the club. The booth had craft areas, touch and feel real fossil like Dino poop (yuk), bones, and trilobites. A special shout to Adelaide from the Fossil Group for volunteering all day and making a great event for the club.

### Next Meeting 11/18/21 at 5:30 PM

The topic for November is "Digging Dino's and Fossils" as inspired by a new member Gwenavere who loves all kinds of dinosaurs and fossils. Her favorite dinosaur is the spinosaurus, a very fierce predator. We will have a fossil dig, brief talk with Q & A, free samples and handouts. Hope to see you there and bring a figure or fossil to share with us.

### Please Remember the Poetry Contest and Submit a poem on an Earth Science Topic

Example of a poem:

Bones  
Of  
Non-living plants and animals  
Enhance learning





## Agates in the Black Hills and at the CSMS Show

Mike Nelson  
csrockguy@yahoo.com

Road trips for rockhounds or naturalists are almost always enjoyable. There are so many rocks to see, birds to identify, streams to fish, trails to hike, and memories of more youthful days to recount.

*On the road again -  
Just can't wait to get on the road again.  
The life I love is [hounding]  
with my friends  
And I can't wait to get on the road again.*

*On the road again -  
Goin' places that I've never been.  
Seein' things that I may never see again  
And I can't wait to get on the road again.*

*On the road again -*

- Willie Nelson

A couple of weeks ago I returned from one of my favorite road trips—a journey to the Black Hills and Fairburn Agate beds of South Dakota! Unfortunately, I missed a fall 2020 trip due to a Covid scare. This year I was rarin' to go since I had three vaxs in my body. The first two were pretty easy while the booster gave me some minor “flu” symptoms. However, I viewed that bump as a small price to pay for some excellent protection from a very nasty virus. In addition, we certainly were avid mask wearers when heading into town (Custer). But we rarely entered any establishment where people congregated---I like to think that my momma didn't raise no fools. We were camped at Custer State Park (Legion Lake) and I had plenty to do visiting with friends and relatives stopping by, driving the country roads

looking at outcrops, having black coffee (prefer a French Press) while perched in my lawn chair enjoying the early morning sun, and savoring a frosty IPA in the early evening coolness that was a harbinger of Fall. In addition, the Harvest Full Moon made a beautiful appearance around the same time as the Fall Equinox. To top it off, Venus was in full bright bloom. For an ole outdoor guy life was good.

### LIFE IS GOOD SINCE I DECIDED TO MAKE IT THAT WAY

I have noted in other past articles that Fairburn Agates from South Dakota are valued for their colorful fortification patterns with an abundance of reds (iron oxide), oranges (iron oxide) and blacks (manganese oxides). The derivation of their name comes from the small community of Fairburn, located south along SD 79, ~25 miles south of Rapid City. The “Fairburn beds” are also perhaps the easiest for collectors to locate. Agate hunters should travel east from Fairburn along French Creek Road (good gravel road) for about 12 miles to a sign locating the original collecting area managed by the Buffalo Gap National Grasslands. Although known to collectors for decades, these Fairburn beds still yield an occasional agate, and as many colorful specimens of jasper, quartz, and chalcedony as can be carried out in your collecting bag. The beds were quite busy the day I visited, and the small primitive campground had seven sites filled. A couple of the camp sites appeared to have been occupied for several days/weeks by hardcore agate hunters.

My knees simply do not allow for much hill climbing on the pebble and cobble size accumulation of quartz/microcrystalline quartz.



**Above:** The agate beds seem to go on forever at the Fairburn site.  
*Photo: M. Nelson.*



**Above:** One could haul sacks of semi polished quartz and microcrystalline quartz pebbles and cobbles from the beds.  
*Photo: M. Nelson.*



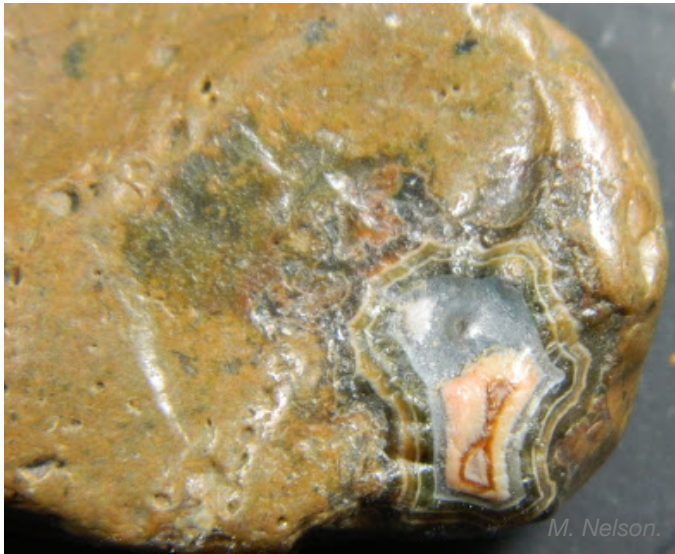
**Above:** The red or reddish orange unit is the Interior Zone (zones of ancient soils) that developed on late Cretaceous to late Paleocene rock units although an upper red zone may be part of the Chamberlain Pass Formation, the lower stratigraphic unit of the Eocene White River Group. Above the Chamberlain Pass Formation is the Chadron Formation that forms the "gray mound" topography. The White River Group is the major unit forming the "Big Badlands." The agate beds seem related to the Chadron and Chamberlain Pass Formations.  
*Photo: M. Nelson.*



**Above:** This gentleman was tired of walking so pulled a chair and a book from his vehicle and was having a little read.  
*Photo: M. Nelson.*



Once a person starts skidding downhill there is little stopping! At any rate, I sort of hobbled around and was able to collect a small agate right on the road. I sort of laughed when I wondered how many hunters had walked and driven over this specimen. Yep, life is good.



**Above:** The small Fairburn Agate on a piece of polished jasper. Maximum width of the agate section ~1 cm.  
*Photo: M. Nelson.*

Since I was on my agate kick that day, it was time to grab my crack hammer and visit the source beds for the waterworn Fairburns found out on the plains surrounding the Black Hills. Teepee Canyon is located approximately 18 miles west of Custer, South Dakota, about 2 miles west of Jewel Cave National Monument off US 16. As soon as travelers leave the monument they should look to the north, up slope, to spot piles of broken rocks. Sawmill Spring Road, FS 456, leads off to the north and about a mile further West Teepee Canyon Road takes off. My best advice is to follow one of these roads/tracks and look for quarries where past prospectors have tried their luck. The land is managed by the U.S. Forest Service and there are mining claims---I think. It is best if rockhounds stop in the USFS

office in Custer and discuss their plans with one of the friendly employees.

Although hardcore agate hunters like to use pry bars and other large utensils to excavate layers of limestone and crack them open, older gentlemen like me prefer to crack on the large “hunks” (basketball size or so) left behind by the previous diggers. There are literally thousands and thousands of “hunks” in major piles that are scattered over a large amount of real estate. My suggestions: wear heavy boots, long pants, a long sleeve shirt, leather gloves, and eye protection. The limestone is quite dense and the microcrystalline quartz very hard and chips fly when meeting a crack hammer. Also, don’t try to trim out an agate in the field—take it home to work on the nodule.

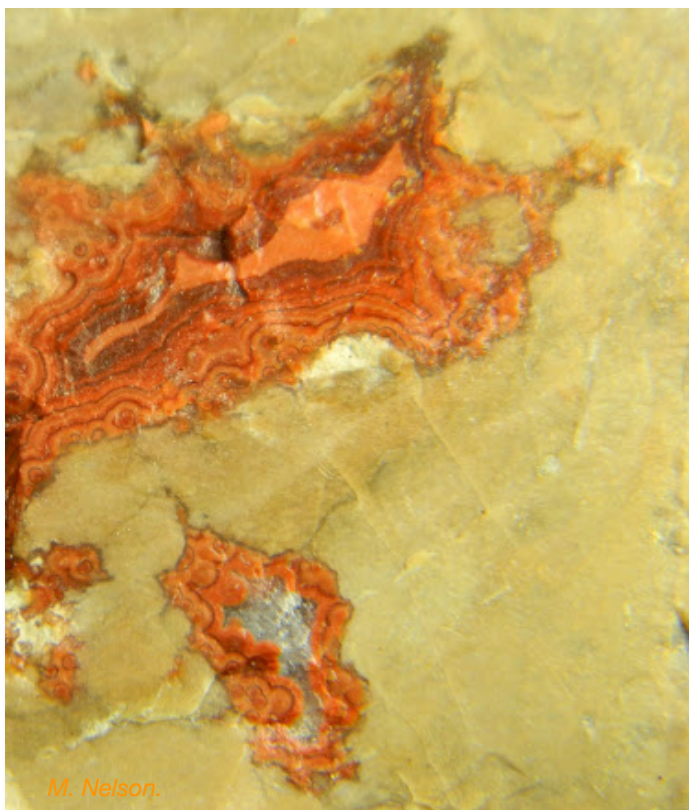


**Above:** No need to dig at Teepee Canyon. Just grab a hunk and crack!. *Photo: M. Nelson.*

The agates are encased in siliceous nodules housed within the lower Minnelusa Formation (Paleozoic: Pennsylvanian). I suppose these nodules are the result of silica-rich meteoric waters circulating through the unit with resulting diagenesis producing the silica. Why some nodules are agatized—I don’t have the



slightest idea. Just as I am uncertain how/why agates really form! What is clear, at least to me, is that the similarity of the Teepee Canyon agates (also known as Fairhills Agates or Black Hills Agates) encased in microcrystalline quartz seem identical to the water transported Fairburns found on the plains.



**Above:** Section of siliceous nodule from Teepee Canyon with nice display of agate. Width of FOV ~3.1 cm. *Photo: M. Nelson.*



**Above and upper right:** Small, interesting agate from Teepee Canyon (reverse of limestone matrix). Width FOV of photomicrograph in next column ~1.5 cm. *Photo: M. Nelson.*

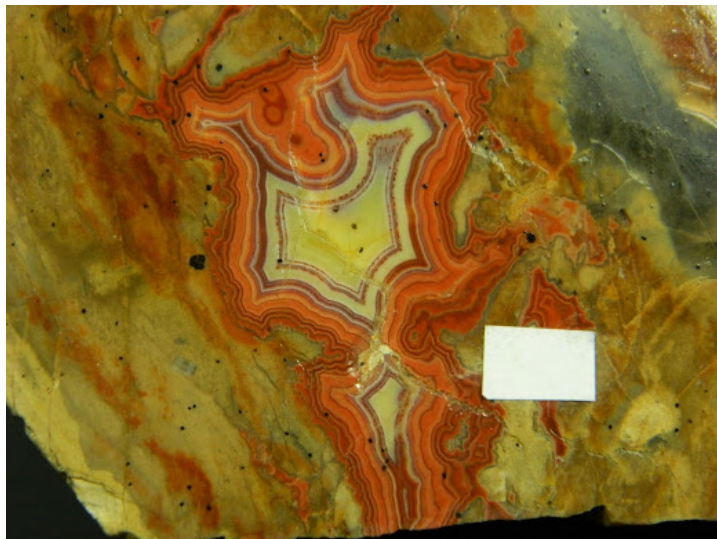


**Below:** Small, interesting agate from Teepee Canyon (obverse of limestone matrix). Width FOV of lower photomicrograph ~1.5 cm. *Photo: M. Nelson.*





However, my best Teepee Canyon agate collected this year came not from banging on a nodule but by paying \$5 at the recent CSMS rock and mineral show. Someone had evidently donated a sawed nodule with a gorgeous agate exposed and the club had it for sale on the silent auction table. I put in a bid and kept a close watch to see if other bidders were interested. None were and I scooped up a real bargain without a single blow of the hammer. I suspect that not many people realized the source and significance of the slab.



**Above:** The Teepee Canyon agate purchased from the Silent Auction table at the 2021 CSMS Show in October 2021. The width (longest) of the paper is ~1 cm. Photo: M. Nelson.

So, the agate hunting was “OK” this year, not spectacular but anytime you find an agate, big or small, is a good and successful day.

*My mission in life is not merely to survive, but to thrive; and, to do so with some passion, some compassion, some humor, and some style.*

- Maya Angelou

## HAPPY NATIONAL FOSSIL DAY OCTOBER 13, 2021 I hope you celebrated.



**Above:** Having fun with fossils (Giant Short-Faced Bear femur, *Arctodus* compared with femur of modern Black Bear, *Ursus*). Collected in shoreline gravels of Pleistocene Lake Bonneville, Utah. ca. 1985.

Photo: Nelson, M.E., and J.H. Madsen, Jr., *A giant short-faced bear (Arctodus simus) from the Pleistocene of northern Utah*: Transactions Kansas Academy Sciences, v. 86, no.1.



Mike is a former University professor and administrator who enjoys outdoor activities, and writing articles for the Pick & Pack, other rock and mineral clubs, and the Newsletter of the Rocky Mountain Federation of Mineralogical Societies ([www.rmfmms.org](http://www.rmfmms.org)). He also writes, and occasionally speaks,

about members of the Colorado Cavalry/Infantry who participated in the march to Glorieta Pass (1862), helped settle central Kansas (1865), and later fought at Beecher Island (1868). In CSMS he heads up the Undergraduate Research Committee as introducing students to geology research is a long-time passion. But mostly he just tries to enjoy life with frosty IPAs, travel, and collecting mundane facts and pretty rocks/minerals.



**John Emery**  
Editor

Thanks to our contributors. We encourage everyone to submit articles, photos, illustrations or observations.

Share your experiences, your new finds, or simply your enjoyment of our last field trip.

Handwrite it, type it, or email it. Format does not matter. All submissions are welcome. The DEADLINE for items to be included in the next Pick & Pack is the **last day of the month**.

To submit an item:

For hardcopy photos or articles, mail to the address below or bring them to the General Meeting. All hardcopy photos remain the property of the submitter and will be returned. Electronic photos can be submitted at resolutions above 200 dpi in ANY format.

Articles can be in MS Word or Mac Pages, preferably NOT pdf.

e-mail to the editor:  
csmseditor@hotmail.com

Mail to:  
Pick & Pack Editor  
PO Box 2  
Colorado Springs, CO 80901

The PICK & PACK is published ten (10) times per year (no issues in January or August). Unless otherwise marked, materials from this publication may be reprinted. Please give credit to the author and CSMS PICK & PACK.

## Classifieds & Announcements

### Club Officer Vacancies

We have two chairperson positions vacant. Please consider volunteering for these fun and rewarding club positions.

**(Additional) Federation Representative** (Club Chairperson)

- Liaison to the American Federation of Mineralogical Society (AFMS) and the Rocky Mountain Federation of Mineralogical Society (RMFMS)

**Science Fair Chair** (Club Chairperson)

- Help junior members participate in Science Fairs

Contact CSMS President John Massie, [jmassie1075@gmail.com](mailto:jmassie1075@gmail.com) if interested in any of these positions.

### Rocks and Equipment for Sale

CSMS members Ayumi and Tom Towles are selling the following:

- Chunks and slabs of rock
- 2 ea Highland Park Lortones; one with 6 wheels; one with 3 wheels
- 1 ea Sears and Roebuck Flat Lap

**Contact:** Tom and Ayumi Towles 719-322-4364; 3575 La Mar Pl, Colorado Springs, CO

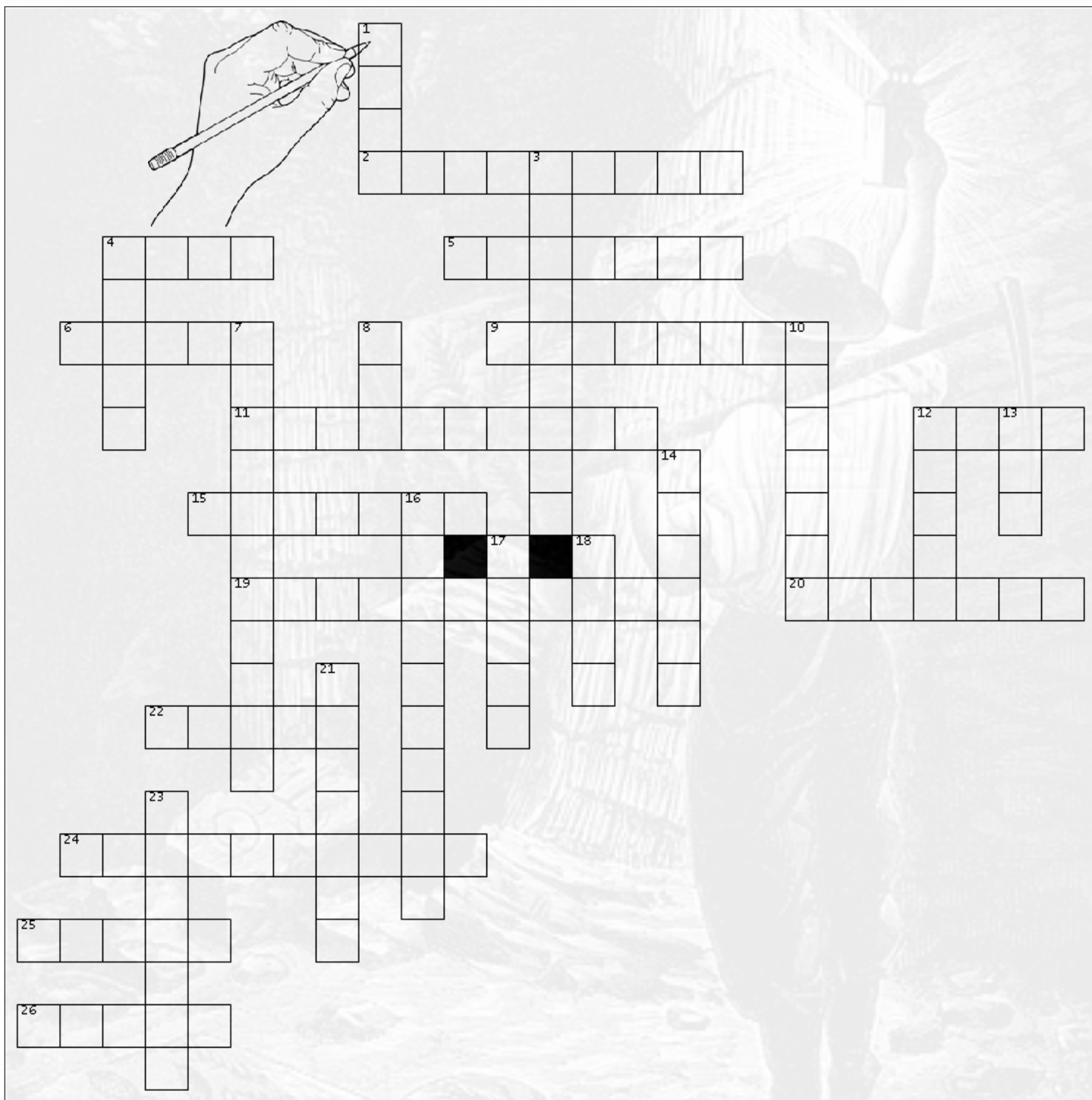
*Your announcement here ...*

- *Seeking gems, tools, equipment*
- *Selling gems, tools, equipment*
- *Special event/date/etc.*
- *etc*





# Crossword Puzzle - "Geology Quiz" (Easy)



**“Geology:** The study of Earth, the materials of which it's made, the structure of those materials, and the processes acting upon them.”

## Crossword Puzzle Clues

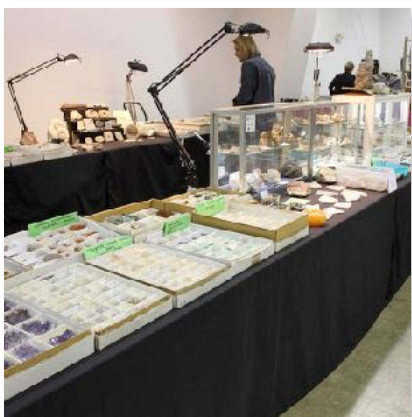


### **ACROSS**

2. The vertical distance between mean sea level and a point or object on, above or below Earth's surface.
4. Colored flashes of light emitted from a gemstone from incident light being separated into its component colors as it passes through the stone.
5. The most popular gemstone and hardest natural material; set in most engagement rings sold in the United States.
6. A conspicuous hill with steep sides and a flat top.
9. A pure chemical substance made up of at least two different elements.
11. A blue variety of the mineral beryl; receives its name from its seawater color.
12. Brown or black sedimentary rock that forms from accumulated plant debris; combustible rock that contains carbon compounds.
15. Term used for a sedimentary particle larger than 256 mm; largest particles that occur in streams; can reach the size of a small house.
19. Small earthquakes that follow the largest shock of an earthquake sequence.
20. The study of Earth, the materials of which it's made, the structure of those materials, and the processes acting upon them.
22. A rock structure that has an internal cavity lined with mineral materials.
24. Small earthquakes that precede the largest earthquake of an earthquake sequence.
25. A major subdivision of Earth's structure; outermost portion of the Earth.
26. An overflow of water onto lands that are normally above local water levels.

### **DOWN**

1. A mound or ridge of wind-blown sand.
3. A trade name given to a light green to bright green variety of microcline feldspar.
4. A fracture or fracture zone in rock along which movement has occurred; the vibrations that are produced are known as an earthquake.
7. The process of liquid water becoming water vapor. Includes vaporization from water surfaces, land surfaces and snow/ice surfaces.
8. A subdivision of geologic time that is longer than a period but shorter than an eon.
10. The practice of locating groundwater by walking with a forked stick that responds when one moves above a location with water underground.
12. A colonial organism that lives in warm, shallow marine waters and often develops reefs; hard calcium carbonate material.
13. Rock, mineral, and volcanic glass fragments smaller than 2 millimeters in size that are blown from the vent of an erupting volcano.
14. Remains, imprints or traces of an ancient organism that have been preserved in the rock record; bones, shells, casts, tracks etc.
16. A trembling of the earth caused by a sudden release of energy stored in subsurface rock units.
17. A soft variety of limestone with a fine texture that is usually white or light gray.
18. A unit of land measure that is 208.71 feet long and 208.71 feet wide.
21. Solid rock present beneath any soil, subsoil, sediment, or other surface cover; may be found exposed at Earth's surface.
23. The wearing away and movement of earth materials by gravity, wind, water and ice.



**Pikes Peak Gem, Mineral and  
Jewelry Show**  
Oct 1-3 2021

Colorado Springs Mineralogical Society (CSMS) held it's annual Pikes Peak Gem, Mineral and Jewelry show Oct 1-3, 2021 at the Norris Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs, CO. These are some of the sights seen around the show that weekend. Visit our website for more, at:

[csms1936.com](http://csms1936.com)







Pick & Pack  
P.O. Box 2  
Colorado Springs, CO 80901-0002



**CSMS is an incorporated nonprofit organization with the following goals:**

- To promote and disseminate knowledge of the earth sciences, especially as they relate to mineralogy, lapidary, and fossils.
- To encourage study, collection, and fashioning of minerals.
- To accomplish the same through social meetings, lectures, programs, displays, shows, and field trips.
- The Pick & Pack newsletter is published 10 times each year to assist and promote the above.

**Joining the Colorado Springs Mineralogical Society (CSMS):**

- Meetings are held the third (3rd) Thursday of each month, except January & August.
- 7:00 PM at Mt. Carmel Veterans Service Center; 530 Communication Circle, Colorado Springs, CO 80905
- Visitors are always welcome.
- Individuals—\$30, Family—\$40, Juniors—\$15, Corporate—\$100.
- Find the application at the web site: [www.csms1936.com](http://www.csms1936.com). If you are interested in joining CSMS or would like more information, we encourage you to attend our next General Meeting or visit our web site.

**Meetings:**

CSMS also offers Satellite Group meetings that allow more focused attention in specific areas of our members' interests. Our current Satellite Groups consist of the following: Crystal Study Group, Faceting Group, Fossil Group, Lapidary Group, and Pebble Pups/Juniors. For details on Satellite Group meetings, check out the calendars on page 2 and the web site.

**Membership Benefits:**

Yearly dues include 10 issues of the *PICK & PACK*, all field trips (additional fees may be required on some field trips, and members are responsible for all transportation to and from), participation in all Satellite Groups (some groups may request additional fees to help cover resource costs), free admission to the *Western Museum of Mining & Industry* (carry your card), a year of learning and enjoyment, plus a lifetime of memories.

**Colorado Springs Mineralogical Society is a Member of the following organizations:**

- American Federation of Mineralogical Societies (AFMS) [www.amfed.org](http://www.amfed.org)
- Rocky Mountain Federation of Mineralogical Societies (RMFMS) [www.rmfmms.org](http://www.rmfmms.org)