



## Colorado Springs Mineralogical Society

Founded 1936  
~ Lazard Cahn ~  
Honorary President  
"Pick & Pack"  
Volume 63 No. 1  
February 2023

## CSMS General Assembly

Thursday, February 16, 2023 7:00 PM  
Mt. Carmel Veterans Center

~ **Eric Billmeyer** ~

"Lost in Transition" - The Glen Eyrie Member of the  
Fountain Formation

Club members are encouraged to bring specimens to  
general assembly to share and/ or help with identification

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

Visit our website: <http://www.csms1936.com/>

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## "Lost in Transition" - The Glen Eyrie Member of the Fountain Formation



In this talk, Eric will discuss one of the most unique rock outcrops in our area, in which marine to terrestrial fossils tell the story of the rise of the Ancestral Rockies.

Eric Billmeyer is a Senior Instructor in the Geography and Environmental Studies Dept at UCCS. He has taught at UCCS for over 17 years and is the current Director of the Geology Minor. Eric teaches classes in Physical Geology, Environmental, Geology, Geology of Colorado, and Field Studies in Geology. He owns Trail Gems Geology Tours, which he does primarily in the summertime to educate visitors and locals about the Garden of the Gods and other local geologic sites.

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

## CSMS Group Calendar

Feb '23	Mar '23						
8 Feb	8 Mar	Fossil Group	2nd Wed	6:00 PM	East Library Annex	Jerry Suchan	303-648-3410
2 Feb	2 Mar	Board Meeting	1st Thur	6:00 PM	Zoom	John Massie	719-338-4276
16 Feb	16 Mar	Pebble Pups	3rd Thur	5:30 PM	Mt. Carmel Center	David St. John	719-424-9852
16 Feb	16 Mar	General Assy	3rd Thur	7:00 PM	Mt. Carmel Center	John Massie	719-338-4276
23 Feb	23 Mar	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		John Massie	719-338-4276
By appt	By appt	Lapidary Group	By appt	By appt	Sharon's House	Sharon Holte	719-217-5683

## Community Events

**Feb 7:** 2:00-3:00 PM, Denver Museum of Nature & Science, Earth Science Colloquium, "Under the feet of dinosaurs: A new view of Late Cretaceous landscapes along the margin of the Western Interior Seaway," by Henry Fricke, Colorado College. In the VIP Room.

**Feb 9-12:** Tucson Gem and Mineral Show, in the Tucson Convention Center, sponsored by the Tucson Gem and Mineral Society. Other gem & mineral shows in Tucson begin throughout January and the first week of February.

**Feb 17:** 2:00-3:00 PM, Denver Museum of Nature & Science, Earth Science Colloquium, "Living large in the Neoproterozoic: Diving into snowball oceans with the funky fossil Bavlinella," by Boz Wing, CU-Boulder. In the VIP Room.

**Feb 24-26:** Gem and Mineral Show at Jefferson County Fairgrounds, sponsored by Denver Gem & Mineral Guild. Free admission!

**Feb 28:** 2:00-3:00 PM, Denver Museum of Nature & Science, Earth Science Colloquium, "Emerging insights into multituberculate paleobiology contradict the placental-centric paradigm in mammalian evolution," by Luke Weaver, U. Of Michigan. In the VIP Room.

**Mar 24-26:** Fort Collins Gem & Mineral Show, (Friday, 4-8 PM; Saturday, 9 AM - 6 PM; Sunday, 10 AM - 5 PM) at The Ranch/Larimer County Fairgrounds in the Thomas M. McKee Building, Loveland, Colorado. The Ranch, 5280 Arena Circle, Loveland, CO. Free parking, paid admission to show. See <http://www.fortcollinsrockhounds.org/index.shtml>. Please check website to confirm the exact dates.

**Mar 25-26:** WIPS [Western Interior Paleontological Society] Founders Symposium, "Mammals! From Mini to Megafauna," Colorado School of Mines Green Center, 924 16th St, Golden. Details forthcoming; see <https://www.westernpaleo.org%20.%0dhttps://www.westernpaleo.org>

**Apr 7-9:** Colorado Mineral and Fossil Spring Show, Crowne Plaza DIA, 15500 E. 40th Ave. See <https://www.coloradomineralandfossilshows.com>. No admission charge.

**Apr 27:** 2:00-3:00 PM, Denver Museum of Nature & Science, Earth Science Colloquium, "Paleontology in the east: New discoveries from the Upper Triassic of Virginia," by Adam Pritchard, Virginia Museum of Natural History. In the VIP Room.

**May 6:** Colorado Mineral Society Silent Auction, see <http://www.coloradomineralsociety.org/> for upcoming details. All are welcome.

**May 20:** 12 Noon – 3 PM, Friends of Mineralogy Silent Auction, Wheat Ridge United Methodist Church, All are welcome to attend, bid, and to bring specimens to sell.

**June 9-11:** Pikes Peak Gem, Mineral and Jewelry Show, Colorado Springs. World's best gem show. Set up on the 8th.

## President's Corner

John Massie  
CSMS President



### 2022 Satellite Group Chairs

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

### 2022 Liaisons

**Florissant Fossil Beds National Monument:**  
S.W. Veatch  
**Western Museum of Mining and History:**  
S.W. Veatch



## Presidential Matters



### A message from CSMS President John Massie:

I would like to thank all members for great year in 2022, I am looking forward to another great year in 2023. Please set aside June 8, 9, 10, and 11 for the Pikes Peak Gem, Mineral, and Jewelry Show. We will set up on the 8th of June. The Show will be on the 9, 10, 11. We will need volunteers on all 3 days.

Kyle Atkinson has a tentative field trip schedule. We need volunteers to lead them.

My thanks the members who helped with the family day at WMMI.

John Massie  
CSMS President

## *In Memoriam*

*We honor two rockhounding spirits that have passed on:*

*Ernie Hanlon December 2, 2022*

*Ernie was a past CSMS President (1988-1989, 2017) who gave many talks to the club.*

*Jerry Suchan December 26, 2022*

*Jerry presided over the Fossil Group and gave many talks to the club.*

*Rest in Peace*

## Secretary's Spot

John McGrath

### 2022 CSMS Officers

**John Massie**, President  
**Shane Riddle**, Vice-President  
**John McGrath**, Secretary  
**Ann Proctor**, Treasurer  
**Adelaide Bahr**, Membership Secretary  
**John Emery**, Editor  
**Chris Burris**, Member-at-Large  
**William Meyers**, Member-at-Large  
**Sharon Holte**, Past President

### 2022 CSMS Chairpersons

**Rick Jackson**, Program Coordinator  
**John Massie**, Show Vol Coordinator  
**Kyle Atkinson**, 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 Rep  
**Vacant**, Federation Rep

## CSMS General Assembly Minutes

7 PM, Thursday 19 Jan 23, Mt Carmel Vet Center, Co Springs

**Address:** 530 Communications Circle, Colorado Springs CO 80905

**Board Attendance:** President: John Massie, Past President: Sharon Holte, Treasurer: Ann Proctor, Member-at-large: Chris Burris, Secretary: John McGrath, Membership Secretary: Adelaide Bahr, Editor: John Emery.

#### Agenda:

- I. Meeting was called to order by our President John Massie at 7:03 PM
- II. The Pledge of Allegiance was led by President John Massie
- III. Introduction of Guests: None
- IV. Introduction of New Members: Tina Cox
- V. Program Speaker. Jennifer Farnes, Jewelry and Gem Shopping, owner of Revolution Jewelry. She spoke on "What to look for when buying jewelry while traveling."
  - A. She is a longtime rockhound, Master Faceter, GIA Diamond Appraiser, IGS certified Gemologist and has been in the industry for 18+ years.
  - B. Most frequent areas of concern
    1. Synthetics and Simulants
    2. Over-grading and misidentifying
    3. Falsified/Misleading stamping
    4. Hollow and Filled metals
  - C. Research the area you are traveling to and buy gems that are native to that area.
- VI. Meeting - There were 33 members in attendance and 6 minerals were given out.
- VII. Officer Reports
  - A. President - John Massie covered his point during New and Old Business.
  - B. Vice - President - Rick Jackson. Present. He will transition the VP responsibilities to our new VP, Shane Riddle in February.
  - C. Treasurer Ann Proctor- Present, No Report
  - D. Secretary John McGrath - Present.
    1. Geocache - 5 visits. Last one from Outdoor Blonde on 14Jan23. Took a piece of amazonite and left a citrine crystal.
    2. Inventory. He requested that all members holding Club equipment, books or specimens send a listing and pictures to him to establish a Club Inventory.

E. Membership Secretary - Adelaide Bahr, Present, No Report

F. Editor - John Emery. Present, No Report

G. Members at Large

1. Bill Myers - absent

2. Chris Burris - Present, no report.

H. Past President - Sharon Holte. Present. Reports that she sold the 25" saw which was broken. The \$200 proceeds will be deposited by Ann Proctor into the workshop account.

I. Website and Show Coordinator - Lisa Cooper, absent.

#### VIII. Satellite Groups

A. Crystal Group - Kevin Witte, Present. He reported that he will be traveling but the January meeting would take place next week and that Bob Germano would be speaking on Fluorite.

B. Faceting Group - John Massie, no report.

C. Pebble Group - David St John, absent.

D. Fossil Group - Richard Villares stated that they had a good meeting with 12 participants. Meetings are held the 2nd Wednesday of the month from 6-7:30 at the East Library Annex..

E. Jewelry Group - still in need of a Chairperson

F. Lapidary Group - Sharon Holte reminded members that she was available for phone calls to schedule use of the club's rock saws on Sunday night after 6:30 PM. You can send her an email at any time.

#### IX. Liaisons

A. Claims - Frank Rosenberg. Present. No Report.

B. Field Trip Coordinator - Kyle Atkinson, Present. No report

C. Social Coordinator - Mark Schutz, Absent.

D. Store Keeper - Ann Proctor. Absent.

#### X. Unfinished Business - None discussed.

#### XI. New Business -

A. The Western Mining Museum Family Day will take place on 21Jan23 from 1000-1500.

B. Board Members received their appointed certificates.

C. The Club received a card from the Florissant Fossil Beds thanking the Group for our donation.

#### XII. Meeting adjourned by President John Massie at 8:44 pm

#### Respectfully Submitted

John M. McGrath MD COL (RET) USA



# Federation News Post

American Federation of Mineralogical Societies  
Rocky Mountain Federation of Mineralogical Societies



The American Federation of Mineralogical Societies is composed of the following seven similar regional organizations of gem, mineral, and lapidary societies.

CFMS - California Federation of Mineralogical Societies

EFMLS - Eastern Federation of Mineralogical and Lapidary Societies

MWF - Midwest Federation of Mineralogical and Geological Societies

NFMS - Northwest Federation of Mineralogical Societies

RMFMS - Rocky Mountain Federation of Mineralogical Societies

SCFMS - South Central Federation of Mineral Societies

SFMS - Southeast Federation of Mineralogical Societies

Visit the new AFMS Juniors website: <http://www.juniors.amfed.org/>



The Rocky Mountain Federation of Mineralogical Societies covers local clubs in the following states:

Arizona (21), Arkansas (1), Colorado (18), Kansas (5), Nebraska (western portion of state) (1), New Mexico (6), Nevada (1), North Dakota (western portion of state) (1), Oklahoma (6), South Dakota (western portion of state) (1), Texas (1), Utah (7) and Wyoming (8).

[RMFMS Home Page](#)

[RMFMS Rock and Gem Show Page](#)

[RMFMS Club Spotlight: SNVGMS](#)

**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 Path to Discovery

By Steven Wade Veatch



I once lived below Rattlesnake Bluff in Colorado Springs, a place that forever changed my life. Today, the University of Colorado at Colorado Springs sprawls out over this landscape. Nothing looks the same. Human nature has traded places with mother nature, replacing the peaceful silence of an open field with the noise of busy development. When I was in elementary school, this place seemed like it was on the edge of a frontier, and the path to the top of the bluff led to discovery.

Back then, when I was 10, I ran all over the place. I bicycled my way to the adventure of open fields, construction sites, and ponds full of frogs. I

bounced back and forth between exploring, building forts, catching horned toads, chasing turtles, and flying kites. Wanderings like these allowed me to follow the infinite possibilities of boyhood. Now that I was 10, I was old enough to climb to the top of Rattlesnake Bluff. This sandstone outcrop produced a perfect place to collect rocks and minerals. I had learned something about these from my teacher in third grade.

The day I first climbed Rattlesnake Bluff lives in bits and pieces of my memory. It began as a sun-drenched, windless day. I started bushwhacking up the slopes, slowly walking through gulches, gullies, and arroyos that carved the face of the bluff. Moving among outcrops of ancient sandstone, I hiked along a path through several broken boulders where crows, picking at a dead rabbit on the ground, scolded me. Time, weathering, and gravity left blood-red jaspers, cream-colored chert, milky quartz, and purple sandstone spread out on the ground near my path. I bent down and scooped up some of those specimens and studied them carefully. Next I found a smooth sandstone slab with a pattern of small bowl-shaped depressions ground into its surface. Years later, I learned Indians used this artifact, like an artist's palette, to mix ceremonial paints.

As I continued up the path to the top of the bluff, the wind picked up. I heard faint rustlings in the bushes and tall grass—a blue-belly lizard crawled onto a rock, cocked his head to glance at me, and then blinked in the bright sun. Then a coyote darted into the open field below and melted into the brush.

Imposing sandstone outcrops bordered the footpath and ranged in color from tan to brown, with large, almost white sections. From the relentless pull of gravity, a dozen boulders had cleaved off the upper brown sections of the bluffs and rolled down the slope. Over decades, a bright green swath of lichen had spread over those boulders. I didn't have a sense of deep time as a boy, but now I see the bluff, rich with geologic history.

Nature worked overtime on areas along the trail to the top. I stopped occasionally to take in the lay of the land. A tide of sunflowers turned their yellow faces toward the sun in a late summer communion with their environment of air, sand, soil, and rain. Birds picked at their seeds. I looked around and inhaled the fresh air. Ponderosa pines clung in clefts in the sandstone on the face of the bluff. A group of jumbled boulders in a ravine concealed an animal den. Purple asters dotted the late

summer grass; busy ants maintained their hills while grasshoppers broke the silence with their clattering wings. Meanwhile, I continued hiking, crunching twigs and gravel underfoot. As I made my slow climb up, I startled a silent snake, sunning on a pitted rock.

After looking to avoid the sharp spines of barrel cacti, I sat down under a ponderosa pine and ate lunch. Jelly dribbled on my jeans from my peanut-butter sandwich. After eating lunch, I looked at the rocks I had picked up earlier and wondered about their origin. Although I was at the edge of my knowledge, I sensed geologic forces at work. The bluff's prehistoric past played out over a frenzy of cataclysmic events: surging seas, volcanoes, floods, earthquakes, mudslides, and endless change. This place also changed me, connecting me deeply to nature, to rocks, to minerals.

Later, I learned that geologists call the two sandstone units of the bluff the Dawson and Laramie formations, and they date back to the Cretaceous Period—the last part of the Age of Dinosaurs. The Dawson and Laramie formations formed from rushing streams flowing off the Ancestral Rockies. These active streams stripped off sediments from those ancient mountains, then deposited those sediments in radiating fans. The Western Interior Seaway was nearby, with bordering stream channels, coal swamps, and lagoons.

The day grew longer as I picked up interesting specimens and put them in my ragged cloth sack. These rocks all have meaning; they record the events of the primordial past: continental plates drifting and colliding, oceans rising and falling, inland seas advancing and receding, mountains growing skyward and then eroding away, and sediment being converted into layers of rock. Conglomerate whispers stories of swift streams mixing sand and gravel. Fragments of volcanic rocks reveal a past unsettled by violent eruptions of ash and lava. I selected rocks that day for their heft, their color, their unusual shapes—not knowing they held the secret of a good geological story, a story I learned to decipher many years later as an adult.

When I reached the bluff's top, I sensed an affinity for this place. I held pieces of it in my hand. I felt the bluff pulling me into the natural world, where I made a deep connection. What did it all mean? My hike to the top that day marked the start of my life-long study of the Earth and its past. It put me on the pathway toward becoming an Earth scientist and teacher.

From my perch on the bluff, I saw dark rolling clouds bring a weight to the afternoon. I turned and walked back down the slope—carrying pieces of the day in my cloth bag— and headed toward home.

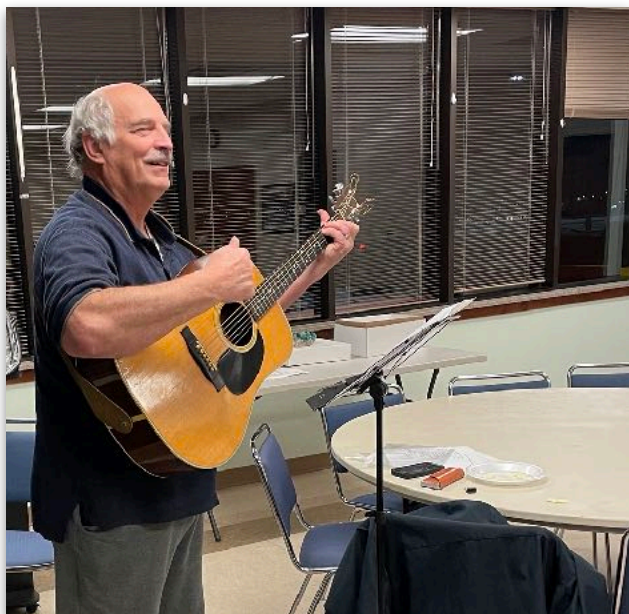
That night, I climbed a neighbor's willow tree and sat on a branch. I looked up toward the moon and stars. From my perch I saw a meteor burn itself out in the cold nothingness of the night sky. I thought about my hike earlier—it was a good day for discovery.



**About the author.** Steven is a geologist who joined the CSMS when he was 10, in 1965. The club met at that time at the old IBEW hall near the west side of the city. His complete profile is available at:

<https://www.blogger.com/profile/06566101278318062273>





## REPORT General Assembly 15 Dec 22

For general assembly the club had a Christmas party. Club members brought in pot luck including turkey and ham. Some club members also brought in donations for the holiday food drive. After eating Christmas dinner, VP Rick Jackson led us in traditional Christmas singalongs and those participating in the "white elephant" picked out their gifts. Kevin Witte brought in some beautiful amazonite and smoky quartz specimens he found (see pics). We had enough members in attendance to take care of some official club business as well. It was a wonderful evening of holiday festivity and just a little business.





*A Poem*

## **The Michigan Puddingstone**

By Steven Wade Veatch

I saw the stone on a long furrow, after the farmer's spring plow,  
like a glob of pudding packed with raisins, nuts, and bits of cranberry.  
When I picked it up, I held eons of time.

As I wondered how the stone looked long ago, it broke its silence  
and whispered its ancient origin, from an era when rushing streams  
tumbled rock fragments, in a wild dance over time's expanse.

As the days passed by, slowing water scattered pebbles on sand  
and mixed them. Over time the material hardened into a rock  
with a chaotic fabric of colorful stones cemented by sugary grains of white quartz.

More time, then more time, and with heat and pressure  
it became quartzite,  
a metamorphic rock,  
a puddingstone.

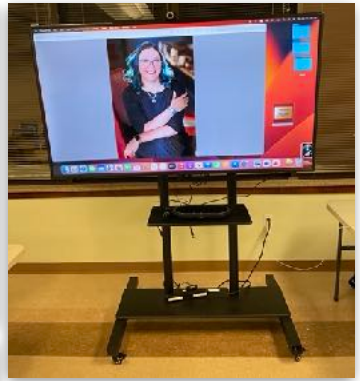
And then more change, and the days grew gray, cloudy, and cold,  
with dark, blowing winds. Glacial ice crept south and plucked  
this stone from Ontario's bedrock  
and carried it away.

The climate shifted, the blue ice melted, and the stone released  
on a quiet Michigan landscape for me to find 12 centuries later.  
I put the stone back down, where agents of weathering  
and time will change it once more, breaking  
it down to its original ingredients.

The puddingstone makes me pause and ponder,  
and I am here to say the only true constant  
is endless change. Nothing stays the same,  
not time,  
climate,  
the puddingstone,  
or even me.

**Below:** An unpolished puddingstone from Michigan. Some puddingstones contain trace amounts of gold and diamonds. These rocks are commonly found just after farmers plow their fields in Michigan. Puddingstones were brought to Michigan by Ice Age glaciers. A Jo Beckwith specimen. *Photo by S. W. Veatch.*





### Report: General Assembly 19 Jan 23

Guest speaker Jennifer Farnes talked to us about what to look for when shopping for jewelry while traveling. Jennifer was born, raised, and attended college in Montana. As a child, her brothers would take her adventuring into the mountains in search of rocks, fossils, and crystals. From sapphire hunting and digging for garnets, to panning for gold and collecting minerals, her love of the outdoors and rock-hounding never subsided. In 2003 she accepted an opportunity to learn the art of stone faceting, which expanded her love of rocks into a new career. She is a full-time Master Faceter, providing custom gemstone cutting and lapidary services to jewelers across the country. She has continued her education in the jewelry industry by receiving recognition as a Certified Gemologist. Jennifer is the heart and soul of Revolution Jewelry Works and provides expertise in all aspects of custom jewelry design.

After the talk by Jennifer, 2023 board members were sworn in during club business. We also raffled away several free gems and minerals, and gifted a free gem or mineral for any new club members.

*Photos: F. Rosenberg and J. Emery*





## Colorado Theisite: Just Because You Don't Understand It Doesn't Mean it Isn't So

Mike Nelson  
csrockguy@yahoo.com

I am always on the lookout for funky and sort of quirky uncommon to rare minerals. My small mineral collection has numerous specimens that I purchased due to the facts that I did not recognize the name, and it was cheap. Anything coming off of a dusty shelf with an older label was a bonus. An extra, extra bonus was created if the new mineral was collected in Colorado. And a three-level bonus appeared if the mineral came from near Tuckerville, Colorado, a town, well really a former town now inhabited by ghosts. After purchasing a three-level bonus mineral I didn't have the slightest idea about the location of Tuckerville until I noticed it was close to Vallecito Reservoir. That particular body of water, on the Pine River, is located about 18 miles northeast of Durango. I have camped there twice in absolutely beautiful USFS campgrounds and spent the time fishing rather than exploring back roads. Tuckerville is then located about 12 miles northeast of the Reservoir on FS 2274 or Middle Mountain Road, a winding road that feels better in a 4-wheel drive pickup than a low-slung passenger car. The elevation is ~ 10,600 feet. After speaking to the ghosts of "almost nothing left" Tuckerville, rockhounds must take a hike (400 feet elevation gain) on the established "jeep trail" to reach the old mines of Tuckers Tunnel or Tuckerville Prospects. Evidently the tunnel has collapsed as have other adits. Mineral collectors who made it this far have zeroed in on what remains of the Tunnel dump. MinDat lists 31

valid mineral species collected in the dump and noted the Tunnel dump as the Type Locality of theisite  $[\text{Cu}_5\text{Zn}_5(\text{AsO}_4)_2(\text{SbO}_4)_2(\text{OH})_{14}]$ .

### WORDS OF THE DAY

Funky Mineral: Theisite

Ghost Town: Tuckerville

New Geological Term to Learn: Fahlore Deposits

There is not much to say about the Tuckerville Prospects except I regret not being able to visit the locality (at the time of camping at Vallecito I was chasing fossils). Very little information, at least that I could locate, is published on the mining area. Certainly, the best publication is a Rocks and Minerals article by Haynes and Paul Hlava (1998). In addition, Williams (1982) described theisite as a new mineral in the Mineralogical Record; however, I could not locate a copy of that article, but did find the abstract.



**Above:** Google Earth© image of the location of Tuckerville (nothing to see on image) and the Tuckerville Prospects. The winding road comes north from Vallecito Reservoir.

According to Haynes and Hlava (1998) the Tuckerville Prospects are part of the Cave Basin Mining District where in 1913-1914 speculators and investors were overly optimistic about future production of copper, silver, and gold—many claims were filed but production was minimal. As best I can



determine in adding figures together, the Cave Basin mines, mostly the Mary Murphy, Holbrook, and Silver Reef, produced a tad less than 100 ounces of gold, ~270 ounces of silver, ~2900 pounds of copper, and ~1700 pounds of lead---all from ~120 tons of ore shipped (via animal drawn wagons or mule trains?) down the mountain to an unknown processing plant. Mining was sporadic from 1913 to 1936. The above production figures are from Schmitt and Raymond (1977) and Steven and others (1969).

I may be missing something but have been unable to locate base metal production figures for the Tuckerville Prospects (the above production figures are from the entire District). However, it must have been minuscule. The minerals listed by MinDat do not include silver or gold; however, some minerals do include copper, mercury, zinc and maybe a grain or two of galena (lead). Theisite was discovered in 1980 at Tucker Tunnel by two geologists, N.J. Theis and Michael Madsen (Theis and others, 1981), as they tromped through the area looking for uranium—evidently there are some rocks that excite a Geiger Counter, perhaps uraninite and/or zeunerite, as Haynes and Hlava stated, “the prospect [Tuckerville] is radioactively anomalous (up to 700 gamma counts per second).” Steven and others (1969) noted that “base and precious metals in the Cave Basin District were replacement deposits in lower Paleozoic sedimentary rocks”—perhaps the Ouray or Leadville formations.

Now down to the new mineral from Tucker Tunnel—theisite, a copper zinc arsenate

antimonate. We know the chemical makeup of the mineral due to analyses by X-ray Powder Diffraction and Electron Microprobe studies. Unfortunately, I don’t have either gizmo in my office.

Visually (with a microscope) theisite is very difficult to identify, especially for an ole plugger like me. First of all, specimens are usually quite small (mine are really, really tiny) and rarely occur as crystals but as crusts, spherical aggregates or simply individual spheres, cleavage plates, micaceous plates, or just plain globs. The color is some sort of blue + green: greenish blue, turquoise-green, turquoise-blue, pale green, or pale blue. Specimens have a pearly luster and are very soft (MinDat states 1.5 Mohs). I found it very difficult to identify my small specimens and if not for the collection and identification by David Shannon I could have guessed any number of copper zinc minerals.



**Above:** Two dark green spheres of theisite and two lighter green spheres of "your guess." The dark mineral is a manganese oxide. Width FOV ~4.0 mm. Photo: M. Nelson.

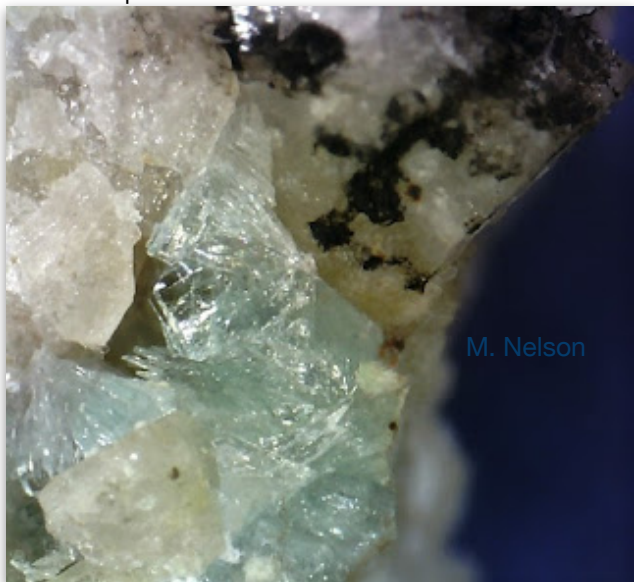
Continued ...



**Above:** Green to blue green theisite spheres or cluster of spheres in and around a vug. Width FOV ~4.0 mm. Photo: M. Nelson.



**Above:** Scattered green to blue green theisite spheres or cluster of spheres. Width FOV ~3.0 mm. Photo: M. Nelson.



**Above:** Clear gemmy crystals of platy hemimorphite with black manganese oxide. Width FOV ~2.0 mm. Photo: M. Nelson.

MinDat pointed out that theisite was a rare secondary mineral in fahlore deposits. Well, that piece of info rattled my brain and sent me scrambling. The best I could do with an understanding definition of fahlore was from Wikipedia (accessed December 2022): Fahlore refers to an ore consisting of complex sulfosalt minerals (a metal + semi-metal + sulfur) and in the case of theisite the mineral is formed due to oxidation of a mineral(s) in the tennantite--tetrahedrite solid solution series.

*Just because you don't understand it doesn't mean it isn't so.*

- Lemony Snicket

## REFERENCES CITED

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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.rmfmts.org](http://www.rmfmts.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.



### Pebble Pups and Earth Scholars

Happy New Year Pebble Pups and Earth Scholars, 2023 is going to be Rockin.' Calling all Pebble Pups/Scholars, we are going to try and change locations to a more central location in Colorado Springs. After surveying parents at meetings and outreach events the East Library on Union has come up several times. That is the same location as the Fossil group and hopefully will improve club attendance. We will try to set up a Tuesday meeting around

4:15 - 5:00 PM starting in March 2023. February meeting will be at Mt Carmel at the usual time 5:30 on the third Thursday. WE MISS YOU ALL VERY MUCH and hope the change will allow more K-12 students to attend with feedback that the Thursday meeting were challenging on club members to attend both Pups/Scholars meeting and the General meeting. Questions? email fossilfun14@gmail.com or cell 719-424-9852 David.

### Geology Day at WMMI 1/21/23

It was a great success with over 300 more visitors than the previous year. It started cold and snowy, but we filled the entire Library room with Earth Science activities, free samples, and opportunities to meet our community. The partnership with the museum and the Lake George Mineral Club (Betty Merchant) made it extra special. Our outreach programs are thriving and sharing positive learning with schools, scouts, and special events (STEM CAMPS). We can always use volunteers as these events get scheduled until more pups can help. Please contact me if you are interested in the future or if you would like to share your knowledge in future meetings.

### Things coming up Submit Art or Poetry

With the new year here we traditionally submit poems from the Pups/Scholars for regional and national organizations with many past winners local and nationally. Also, the Parks service and other government agencies are requesting Earth Science art from our junior rockhounds, winners can win prizes and scholarship opportunities. Please send them to me email or bring them to any meeting. April is poetry month please, share your talents and represent our club.

### February Meeting 2/16/23 5:30-6:15 PM

We were donated plaster molds and casts from our great friends of Lake George Pebble Pups leader Betty Merchant. Betty has made cast/molds for years for schools, Museums, and clubs for decades of learning. I will bring paint and you create your fossil masterpiece pieces to take home. We will also do a quick talk on real fossil, free samples, and treats. Mt Carmel Veteran Center.

**Please continue to bring donations of fossils, minerals, and rocks, simple tools for our pups/scholars, outreach, and the rock show in June. Thanks!**



## **New Meeting Time**

The regular Pebble Pup meeting date, time and place is changing to the first Tuesday of the month, 4:15 PM - 5:00 PM, East library room F1, starting in March, as noted below.

March 7th 4:15 PM - 5:00 PM room F1, East Library

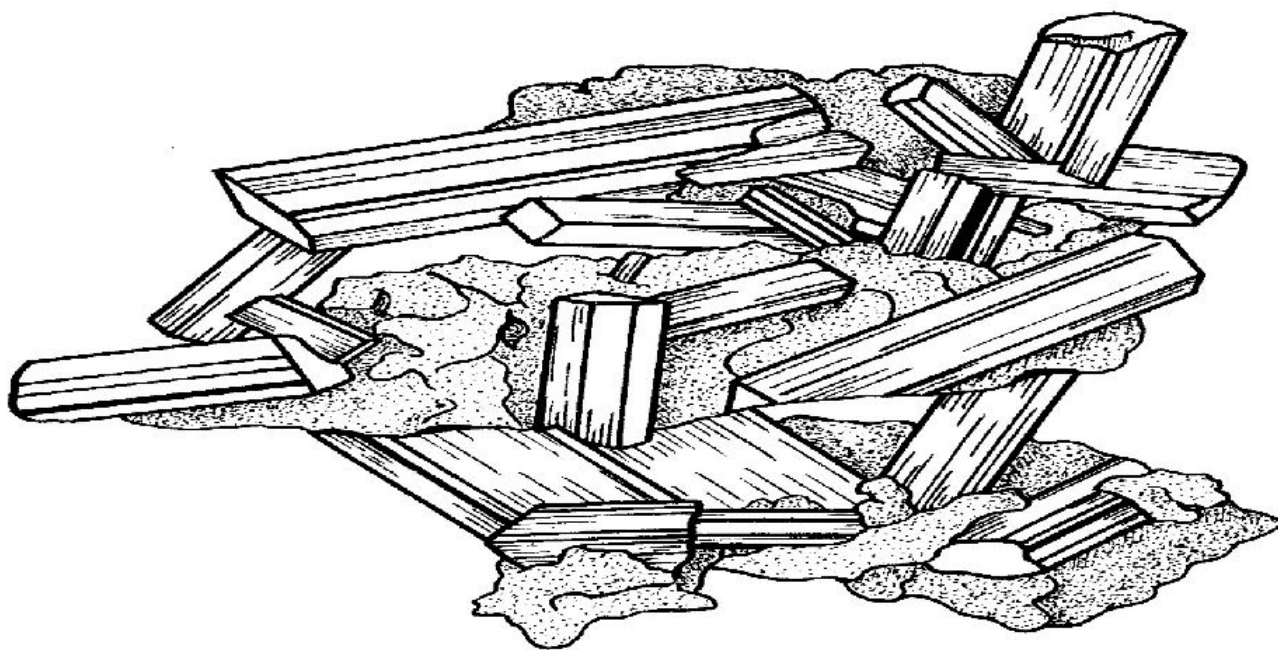
April 4th 4:15 PM - 5:00 PM room F1, East Library

May 2nd 4:15 PM - 5:00 PM room F1, East Library

The February meeting is still at Mt Carmel Vet Center 5:30 PM - 6:15 PM, Feb 16

## **Mineral of the Month: Realgar**

Realgar contains one element of sulfur and arsenic and the crystals are rare and often beautifully red and gemmy. Realgar is photosensitive and often is damaged or altered in direct sunlight. It will change from deep red to yellow or orange and become brittle and crumble. It has a hardness of 1.5-2 with specific gravity of 3.6. Realgar can also be poisonous, and gloves should be used while handling the mineral. Color the mineral from Romania picture below.



Visit the CSMS Pebble Pup website: <http://pebblepups.blogspot.com/>

## Classifieds and Announcements



**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.

Feature 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.

### Geo-caching with CSMS

CSMS is geo-caching. Visit the CSMS geo-cache website (link below) for everything you need to know about finding CSMS geo-caches. Rockhounds go! Might be best to wait for Spring though.



[https://www.geocaching.com/geocache/GCA1WXD\\_colorado-springs-mineralogical-society](https://www.geocaching.com/geocache/GCA1WXD_colorado-springs-mineralogical-society)

### The Denver Gem and Mineral Show: Moving Beyond 2020

The Denver Gem and Mineral Show (DGMS) started in 1967 as a collaborative effort among the Denver area's numerous rock clubs. Held annually in the Denver Merchandise Mart, the show celebrated its 50th anniversary in 2017. In 2020, the show was forced to cancel due to the pandemic and, more importantly, the Denver Mart was sold, leaving DGMS without a home.

In 2021, the organizers of The Munich Show in Germany sponsored their first HardRock Summit at the Colorado Convention Center and invited DGMS to join them. While the Convention Center was a big change from the Denver Mart's ample free parking and "mom and pop" vibe, the dealers and attendees were for the most part satisfied with the outcome. The 2022 HardRock Summit had several improvements and our attendees seemed to appreciate the diversity of displays and specimens for sale.

Looking to the future, the clubs that run the DGMS hope to expand the hands-on and educational activities at the show. Volunteers are needed to engage visitors in rock games, give out free specimens, and share information about our clubs. We hope to see you in Denver in September! Volunteers are reimbursed for parking, bus, and rail expenses and get free entry to the show.

Contact the author: [anitacolin@hotmail.com](mailto:anitacolin@hotmail.com)

## **Field Trips With Rock Clubs Can Be Life Changing**

Intro by David St. John

My father Rocky loved CSMS and his experiences with field trips with several clubs changed our lives. The bond became so real between us and the amazing members that we shared over the years. I was a pebble pup when we first joined the rock scene and the many clubs, we belonged to, but this club has been our rockhound family like no other. I listened to my dad share his experience at the Minerva mine since I was 5 years old, he and I presented on this topic twice over the years. He always loved sharing with all ages and wanted both of us to someday be a part of the Pebble pups/ Scholars. Every time I teach a lesson he is the rock in my head that wants to be a life changer and keep the passion of Earth Science alive. The following article was originally written by my dad Rocky in 1970 and I hope everyone understands that our field trips are such a key element in the club relationships and many stories that spring from it.

### **Rockhounding at Minerva Mine No. 1**

Cave-In-Rock, IL

March 21-22, 1970

By Rocky St. John

The Cincinnati Mineral Society sponsored a field trip to Cave-In-Rock, Illinois to collect minerals over the weekend of March 21-22, 1970. We left at 7:00 PM Friday evening and returned at 12 Midnight the next night - a trip of over 600 miles.

Cave-In-Rock is a small town (approximately 250 people) in Hardin County, Southern Illinois. This small town is in the largest fluor spar producing area in the world - at least until recent years. This area includes the southeast corner of Illinois and the northwest corner of Kentucky. Fluor spar is used as a flux for the steel and aluminum industries as well as to make glass opaque (such as milk glass).

The geology of this area is different than found around the Cincinnati area. An igneous oval-shaped dome, 30 miles long by 20 miles wide, has intruded into the limestone bedrock, causing extensive faulting of the bedrock. Hot gases and molten rock solutions followed these "cracks" and replaced the limestone with fluor spar (fluorite mineral) and other minerals. The mineralization process was helped by a cross-bedded sandstone bedrock that capped the limestone and prevented the gases from escaping to the surface.

The Cincinnati Mineral Society arranged with the Minerva Oil Company to visit their No. 1 mine just north of Cave-In-Rock. This mine visit is available only to organized groups on a pre-arranged basis. The mine engineer described the area geology, the mine mineralogy, and the operation of the mine. We entered the mine about 9:00 AM and left about 12:30 PM on Saturday. We were lowered in a "birdcage" 880 feet below the surface to the entrance of the mine shaft. Another 100 feet of vertical shaft was below the birdcage so we stepped over the 8-inch gap to the floor of the horizontal shaft. One birdcage went up as one went down - each would hold approximately 6 people, tightly packed. A sheet metal wall and steel door sealed the entrance to the horizontal mine shaft so that the vertical birdcage shaft could function as an exhaust for the ventilation system throughout the mine.



Once inside the horizontal shaft, we were transported by JEEP flatbed trucks for about 10 minutes (these trucks were brought down in sections and welded together). Our collecting site was at the end of one of several shafts leading from the birdcage. We were about 900 feet below the surface. Hard hats and battery-operated lights were required while in the mine. Also, it was hot and humid. I was soaked with perspiration and I was wearing a short-sleeve shirt.

Two faults (vertical cracks in the bedrock) about 40 feet apart provided the area of mineralization for our collecting. It was also “comforting” to know that the area we were working (about 400 feet under the Ohio River) floods over each week-end when the pumps are shutdown. Fortunately, the pumps were working this Saturday.

We were quite successful in collecting the following minerals in sills (horizontal ribbons of fluorspar) in the limestone:

Blue Fluorite  
Calcite  
Sphalerite  
Barite

The remainder of the day was spent visiting private homes in Rosiclare and Cave-In-Rock to obtain other minerals, such as purple fluorite, calcite, and witherjite.



**Left:** Photo of a specimen collected from Minerva Mine No. 1 by David St. John's father, Dick “Rocky” St. John. *Photo: from the private collection of David St. John.*

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\* “Birdcage” is a steel plate floor, sheet metal roof, and walls of steel webbing with a steel cable through the middle of the cage. About 2000 lbs of rock hang under the cage to act as ballast.



# Colorado Springs Mineralogical Society

Post Office Box 2, Colorado Springs, CO 80901

www.csms1936.com

## 2023 APPLICATION FOR MEMBERSHIP

LAST \_\_\_\_\_ FIRST \_\_\_\_\_ MIDDLE INITIAL \_\_\_\_\_

SPOUSE \_\_\_\_\_ Child (Name) \_\_\_\_\_ Age: \_\_\_\_\_ GRADE \_\_\_\_\_

Child (Name) \_\_\_\_\_ Age: \_\_\_\_\_ GRADE \_\_\_\_\_

#/ STREET \_\_\_\_\_ CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_ EMAIL \_\_\_\_\_

CELL PHONE \_\_\_\_\_ HOME PHONE \_\_\_\_\_

Have you previously been a member of the CSMS? YES \_\_\_\_ NO \_\_\_\_ WHEN \_\_\_\_\_

May your name and contact information be published in the CSMS Membership Directory, distributed only to members? YES \_\_\_\_ NO \_\_\_\_

May your photo may be used in the CSMS Publication "The Pick & Pack"? YES \_\_\_\_ NO \_\_\_\_

	New/Continuing Members		New Members Only that signed up on/between:			
	Before Jan 31, 2023	After Jan 31, 2023	May 31, 2022 - Sep 30, 2022	Oct 1, 2022 - Jan 31, 2023		
<b>Pebble Pup Membership</b> (4 - 12 yrs old; parent is no a member)	\$10.00	\$15.00	\$7.50	\$10.00		
<b>Junior Membership</b> (12 - 17 yrs old; parent is no a member)	\$10.00	\$15.00	\$7.50	\$10.00		
<b>Individual Membership</b> (18 yrs old or older)	\$25.00	\$30.00	\$15.00	\$25.00		
<b>Family Membership</b> (2 adults and dependents under 18)	\$35.00	\$40.00	\$20.00	\$35.00		
<b>Corporate Membership</b> (Up to 5 individual memberships)	\$95.00	\$100.00	\$50.00	\$95.00		

**SATELLITE GROUPS:** Please check all you may be interested in joining - *fill out each year please*

PEBBLE PUPS	FACETING	LAPIDARY	Other: _____
JUNIORS	FOSSILS	PHOTOGRAPHY	
CRYSTAL	JEWELRY	OTHER	

**VOLUNTEER OPPORTUNITIES:** Volunteers are what make our club! - *fill out each year please*

GUEST SPEAKER	FIELD TRIPS	EDITOR/ WRITING	Other: _____
CLUB OFFICER	LOCAL ROCK SHOWS	LIBRARY	
HISTORIAN	ARTIST/MEDIA	REFRESHMENTS	

I hereby agree to abide by the Constitution and By-Laws of the Colorado Springs Mineralogical Society available at:  
[http://www.csms1936.com/wp-content/uploads/2017/02/Constitution\\_and\\_By\\_Laws.pdf](http://www.csms1936.com/wp-content/uploads/2017/02/Constitution_and_By_Laws.pdf). I have read the membership information, as well as the request and waiver for field trips on page II (following). I understand that all members must sign a separate waiver at each field trip to participate. I agree to abide by the American Federation of Mineralogical Societies (AFMS) Code of Ethics available at:  
<http://www.amfed.org/ethics.htm>

Signature of Primary Applicant or Guardian if Minor \_\_\_\_\_

Application Date \_\_\_\_\_

Mail this form and your payment to: Colorado Springs Mineralogical Society, PO Box 2, Colorado Springs, CO 80901 - 0002

Membership Chair Rev: 3 Dec 21

**Page 2: CSMS Application 2023**  
- Membership Information Page -  
- Waiver Release to Participate in Field Trips -

Membership Information

- Membership to CSMS is annual, from January 1st to December 31st. Membership dues must accompany this application, which must be filled out each year.
- Members must abide by the CSMS Constitution and By-Laws, located on the web at:  
[http://www.csms1936.com/wp-content/uploads/2017/02/Constitution\\_and\\_By\\_Laws.pdf](http://www.csms1936.com/wp-content/uploads/2017/02/Constitution_and_By_Laws.pdf)
- Members in good standing receive the following benefits: 10 electronic issues of the CSMS Pick & Pack newsletter; right to participate in all field trips (additional fees may be required on some field trips and members are responsible for all transportation to and from); participation in one or all Satellite Groups (some groups may request additional fees to help cover resource costs); free admission to the Western Museum of Mining and Industry; a year of learning and enjoyment, plus a lifetime of memories. The Pebble Pup program is a satellite program.
- Continuing memberships must pay full-year dues; a \$5 discount can be applied to renewals on or before January 31st. Anyone who has previously been a member must pay the full rate each year regardless of the time of the year they pay their dues.
- A person, family, or corporation joining the CSMS as a new member after May 30th shall pay half the yearly membership rate. A person joining CSMS as a new member after October 1st receives the rest of the current year plus the next year's membership. The partial year membership shall not apply toward the 25 year Lifetime Membership.
- Members who have paid their dues for 25 years will be awarded a Lifetime Membership on their 26th year. Lifetime Members receive all of the CSMS benefits and no longer have to pay the annual dues. Individual Memberships provided by Corporate Membership are excluded from Lifetime Status. Corporate membership grants up to 5 individual memberships and one yearly (10 issues) 3.5" x 2" advertisement in the CSMS Pick & Pack.

**Release by Participants from Claims Arising By Virtue of Mineral Collecting**

Led By Field Trip Leader of the Colorado Springs Mineralogical Society  
A Non-Profit Corporation – Member: Rocky Mountain Federation of Mineralogical Societies

I/we, the undersigned, hereby request permission to participate in mineral collecting led by the Field Trip Leader of the Colorado Springs Mineralogical Society, a non-profit corporation.

I/we know the risks and danger involved in such activities and that unanticipated and unexpected dangers may arise during such activities, and I/we assume all risks of injury to my / our persons and properties that may be sustained in connection with the stated and associated activities in and around the premises.

In consideration of the permission granted to me/our participation in the stated activities, I/we hereby for myself, my heirs, administrators, and assigns release to the Colorado Springs Mineralogical Society and the Rocky Mountain Federation of Mineralogical Societies, and their representatives, servants, agents, officers and officials and all other participants in the stated activities of and from all claims, demands actions and causes of actions of any sort, for injuries sustained to my/our person and/or property during my presence on the premises and participation in the stated activities due to negligence or any other fault.

\_\_\_\_\_  
Signature of Primary Applicant or Guardian if Minor

\_\_\_\_\_  
Date





## American Federation of Mineralogical Societies Code of Ethics

I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.

I will keep informed on all laws, regulations or rules governing collecting on public lands and will observe them.

I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.

I will use no firearms or blasting material in collecting areas.

I will cause no willful damage to property of any kind such as fences, signs, buildings, etc.

I will leave all gates as found.

I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.

I will discard no burning material - matches, cigarettes, etc.

I will fill all excavation holes which may be dangerous to livestock.

I will not contaminate wells, creeks, or other water supplies.

I will cause no willful damage to collecting material and will take home only what I can reasonably use.

I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.

I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.

I will cooperate with field-trip leaders and those in designated authority in all collecting areas.

I will report to my club or federation officers, Bureau of Land Management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.

I will appreciate and protect our heritage of natural resources.

I will observe the "Golden Rule", will use Good Outdoor Manners and will at all times conduct myself in a manner which will add to the stature and Public Image of Rockhounds everywhere.

<http://www.amfed.org/ethics.htm>

### Field Trip Oscar Price

Go do the exciting things rock hounds do.  
Find smoky quartz, topaz and other gems, too.  
And, there's beautiful fossils to be found by you.

So grab your rock hammer and old knapsack.  
Take plenty of water and your favorite snack.  
And wear your old, worn diggin' hat.

It doesn't matter if you're a woman or man.  
Go find a gemstone for someone's hand.  
Go on field trips as often as you can.



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)