



**Colorado Springs  
Mineralogical Society**  
Founded in 1936  
**Lazard Cahn**  
Honorary President  
"Pick & Pack"  
Vol 61 Number 7

## CSMS General Assembly

Thursday, September 16, 2021 7:00 PM  
Mt. Carmel Veterans Center

### GUEST SPEAKER:

CSMS VP Rick Jackson

"A Survey of Paleontological Finds from Saudi Arabia"

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

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



### In this issue...

Upcoming Events	2
Secretary's Spot	3 - 4
Federation News Post	5
Presidential Matters	6
CSMS Picnic Report	7
Awards Night Mt Carmel	8
Feature Article - S. Veatch, <i>Keeper of Cripple Creek Light: the Miners' Candlesticks</i>	9 - 13
Feature Article - M. Nelson, A <i>Schooner of Schuetteite</i>	14-16
Classifieds/ Field Trip Pics/ Gem Show form	17-22

### Guest Speaker: Rick Jackson - Select Finds from Saudi Arabia



**Above:** Rick rockhounding in the desert in Saudi Arabia. Photo: Rick Jackson.

CSMS Vice President Rick Jackson is a USAFA grad ('72). On active duty, Rick spent time in places like Riyadh, Saudi Arabia and would visit the desert almost weekly to go rockhounding. In 2008 he moved to Riyadh, Saudi Arabia where he was the Chief of the Financial Management Division for the Office of the Program Manager, Saudi Arabian National Guard. In 2016 he moved back to Saudi Arabia again, where he served as Chief of the Program Management Division in charge of all Foreign Military Sales programs between the US Army and the Saudi Arabian National Guard. At the Sept 16, 2021 CSMS General assembly, Rick will bring samples and speak to us about some fascinating finds from desert areas in Saudi Arabia.



**Above:** Ammonite found by Rick Jackson in Saudi Arabia. Photo: Rick Jackson 2017.

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

# CSMS Calendar

Sep '21    Oct '21

7 Sep	5 Oct	Fossil Group	1st Tues	7:00 PM	TBD	Jerry Suchan	303-648-3410
2 Sep	7 Oct	Board Meeting	1st Thur	6:00 PM	Zoom	John Massie	719-338-4276
16 Sep	21 Oct	Pebble Pups	3rd Thur	5:30 PM	Mt. Carmel Center	David St. John	719-213-1475
16 Sep	21 Oct	General Assy Meeting	3rd Thur	7:00 PM	Mt. Carmel Center	John Massie	719-338-4276
23 Sep	28 Oct	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

## Other CSMS Events

**Oct 1-3:** Pikes Peak Gem, Mineral, & Jewelry Show, at the Norris Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs. Sponsored by the Colorado Springs Mineralogical Society; see <https://pikespeakgemshow.com>. This is the gem & mineral show normally held around June 1. The theme is Turquoise.

## Community Events (P. Modreski)

**Sep 10-13:** "2021 Just Minerals and Crystals Event-Denver." Fri Sept 10, 2-9 PM; Sat-Sun Sept 11-12, 10 AM-6 PM; Mon Sept 13, 10 AM-5 PM. "Not fossils, jewelry, or supplies... just natural crystal and mineral specimens and gems. Moving location this year to the ballrooms of the Marriott Denver Airport at Gateway Park, 16455 E 40th Circle, Aurora. Just a minute from the Crowne Plaza lot; turn right on 40th St then right at the first traffic light. This event is open to the public with wholesale pricing to all. Some dealers will also have some of their regular retail items. Sales Tax must be collected from non-resale customers."

**Sep 10-18:** Colorado Mineral and Fossil Fall Show, at the Crowne Plaza Denver Airport Convention Center, 15540 E. 40th Ave, Denver. No admission charge; see [www.coloradomineralandfossilshows.com](http://www.coloradomineralandfossilshows.com).

**Sep 10-18:** JG&M Expo Denver Show, at the Clarion Hotel, 200 W 48th St, Denver; open to the public, free admission. Jewelry, Gems, Minerals, Crystal, Fossils, Beads.

**Sep 10-19:** National Western Complex Denver Mineral, Fossil, Gem & Jewellery Show. 10 AM – 6 PM daily; no admission charge; on the north side of I-70 at Exit 275-B, Brighton Blvd.

**Sep 16-19:** Denver Gem & Mineral Show; at the Colorado Convention Center, held as part of the "Hardrock Summit" mineral and gemstone show. See [www.denvermineralshow.com](http://www.denvermineralshow.com). This is the show hosted by a Council of area gem and mineral clubs, and formerly held at the Denver Merchandise Mart; it is "The original" Denver Gem and Mineral Show, with special exhibits by clubs and museums. This is approximately the 53rd (not quite annual—there was no show in 2020) Denver Show. The featured mineral this year will be Fluorite.

**Sep 16-21:** "Hardrock Summit 2021" gem and mineral show, Denver. This will consist of two separate shows; "Evolution," Sept. 16-19, a gem and mineral show open to the public at the Colorado Convention Center (admission and parking fees [consider using public transportation!]), and "Sparkle and Joy," Sept 18-21, a gem trade show held at the Sheraton Denver Downtown Hotel, Plaza Ballroom. For more information see [www.hardrocksummit.com](http://www.hardrocksummit.com).

**Oct 1-3:** Pikes Peak Gem, Mineral, & Jewelry Show, at the Norris Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs. Sponsored by the Colorado Springs Mineralogical Society; see <https://pikespeakgemshow.com>. This is the gem & mineral show normally held around June 1.

**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:** Denver Gem and Mineral Guild Show, to be held (new location!) at Wheat Ridge United Methodist Church, gymnasium, 7530 W 38th Ave, Wheat Ridge (just east of Wadsworth Blvd).

**Mar 25-27:** 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  
**Steven Veatch**, 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

Thursday: July 15, 2021 7:00 p.m.  
At: Mount Carmel Veteran Center  
Address: 530 Communication Circle  
Colorado Springs, CO 80905

#### Agenda

- I. The meeting was called to order by CSMS President John Massie at 7:05 PM.
- II. The Pledge of Allegiance was recited.
- III. Adelaide Bahr, Membership Secretary, named the new members. Only one, David St John was present.
- IV. Rick Jackson introduced the speaker, Chris Burris. Chris, a CSMS member talked about his 13 years of collecting. Chris explores locally, primarily up the Gold Camp Road, in the Lake George area and in the club claims. He showed pictures of his notable findings, primarily amazonite, smoky quartz and fluorite. He also brought some specimens for the members to handle and discuss with him.
- V. Meeting: There were 26 members at this meeting, 5 minerals were given out.
  - i. The April minutes were approved
  - ii. Two changes to the Constitution were approved unanimously. These were: 1) The amendment to Article IX p 5, and p 17 Annual Show to read – Vendors will be charged booth fees based on the size of the booth and the cost of the Venue. The fees will be determined by the Show Chairman. 2) The Amendment to article X, p 17, Annual Picnic, to read -- The annual picnic will be held on a Saturday in August.
  - iii. The Show Chairman Lisa Cooper distributed show postcards and asked members to sign up for various tasks, including: Setup Sept 30; Ticket booths, hospitality booth and silent auction October 1-2-3; Take down October 3.
- VI. Officers Reports

**President – John Massie**

  - i. John handed out awards to John Emery for Senior Rock Hound, and to Ben Elick for Junior Rock Hound.
  - ii. John with the help of Mike Nelson handed out writing awards from the RMFMS and AFMF. Members of our society won many awards including: Adult writing for Steve Veach, Mike Nelson; Adult Advanced Writing for Mike Nelson; Adult Poetry for Ben Elick and Steve Veach; New Editor for John Emery; Photo Collage for John Emery; Junior Essay for David Hair. Junior Poetry awards for the Teague sisters were announced by mistake, they are members of the Lake George Club.

- iii. The Annual Picnic will be held on August 21 at the Mining Museum. Member voted to share potluck dishes, and bring own drinks and utensils.
- iv. A teacher from Colorado Mountain College has requested specimen donations for her class. John will email to members the list of specimens requested and where to send them.

**Vice-President** - Richard Jackson requested volunteer speakers.

**Secretary** - the position is empty. We need a volunteer.

**Membership Secretary** - Adelaide Bahr will e-mail a revised copy of the directory with corrections and the inclusion of the new members.

**Treasurer** - not present.

**Editor** - John Emery, will conduct the next field trip to the claim.

**Members at Large** - Renee Swanson and Chris Burris, **Past President** - Sharon Holte and **Web Site Coordinator** - Lisa Kinder had nothing to report.

#### **Satellite Groups**

- a. Crystal Group – Kevin Witte, the group meets the 4<sup>th</sup> Thursday of the month.
- b. Faceting Group – John Massie, the group meets by appointment.
- c. Pebble Pups – The new director is David St Johns, the group meets the 3<sup>rd</sup> Thursday of the month.
- d. Fossil Group – Jerry Suchan, the group has no restarting date and no venue.
- e. Jewelry Group - the group needs a chair.
- f. Lapidary Group – Sharon Holte, the group meets by appointment only please call Sunday evening after 6:30 p.m.
- g. Field Trip Leader – Mike Webb / Sharon Holte, the next trip is at the claim. Frank Rosenberg is trying to arrange a trip at Brian Busse claim in Mt Antero.

#### **VII Liaisons**

- h. Claims – Frank Rosenberg had nothing to report.
- i. Social Coordinator – Mark Schultz thanked Members for bringing refreshments.
- j. Store Keeper – Ann Proctor was not present.

The Meeting was adjourned by CSMS President John Massie at 8:45 PM.

*Minutes: Adelaide Bahr (Membership Secretary)*





# 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.

## 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



Belt buckle created by Richard Stearns, formerly of Dicks Rock Shop (Fountain, CO). Two smoky quartz crystals straddle an amazonite crystal mounted on silver.  
*Photo: Sharon Holte.*



## Presidential Matters



The Pikes peak Gem and Mineral Show is scheduled for October 1, 2, and 3 and we will set up on Sept 30. The theme is Turquoise. We need volunteers to help with the show, especially ticket takers; set up and take down; silent auction; hospitality table; display area workers.

I thank everyone who has participated on the field trips and other activities this summer.

The September meeting will be an important meeting, we need to finalize plans for the gem show, find a volunteer, or volunteers for the nominating committee for the board of directors next year.

Nominations will be in October, and elections in November.

John Massie  
CSMS President

### Thank You, Diana Wing of Dicks Rock Shop, Fountain Colorado

When Diana was closing her shop in Fountain, Colorado, she gave many items to the club and various other entities.

One of the items was a silver belt buckle that Dick - Richard Stearns - created many years ago. It has a very nice design etched in the silver and shows an amazonite crystal surrounded by two smoky quartz crystals.

I was given the task of selling or doing something with the belt buckle. After discussing the item at General Assembly, the club voted to make it a traveling belt buckle to be passed from President to President. It will be given to John Massie, the current CSMS President, and will be passed onto the next president to be worn at the Board meetings and to the General Assembly meetings and to any other functions the President deems appropriate.

See the picture to the left. The buckle is valued at about \$150.00.

Sharon Holte  
CSMS Past President



# Annual CSMS Picnic, WMMI, 21 Aug 21



## REPORT CSMS Annual Picnic

CSMS club members gathered for the annual CSMS picnic August 21, 2021 at the Western Museum of Mining and Industry, 11 AM.

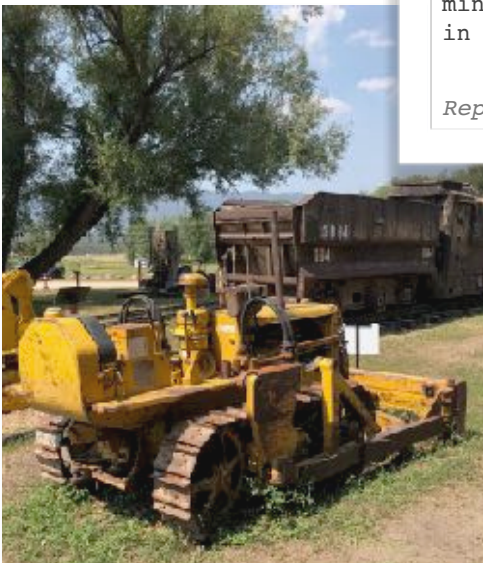
The picnic was attended by 12 members.

CSMS VP Rick Jackson brought several fossil samples he collected while living in Saudi Arabia for people to study.

We presented the mining museum with our annual donation of \$500.00. This donation enables current members to visit the museum for free. The museum is very educational, which makes it a very interesting family outing.

Some of the members took a tour of the mining equipment around the campus and in the museum.

*Report by J. Massie*





## Another Big Night at CSMS General Assembly 15 July 21



CSMS Pres J. Massie and Fed Rep Mike Nelson present wards together



**Junior Rockhound of the Year**  
Ben Elick  
2020 CSMS



**Rockhound of the Year**  
John Emery  
2020 CSMS



**6th Place Adult Poetry**  
Ben Elick  
2020 AFMS



**1st Place Adult Poetry**  
Ben Elick  
2020 RMFMS

### REPORT

CSMS General Assembly  
15 Jul 21

CSMS had another big night at General Assembly. Our own Chris Burris kicked it off with an amazing presentation of his more extraordinary finds. That was followed by an awards presentation - we have great writers! It was a big crowd - enough to vote and close out multiple club business items.

### **Notes**

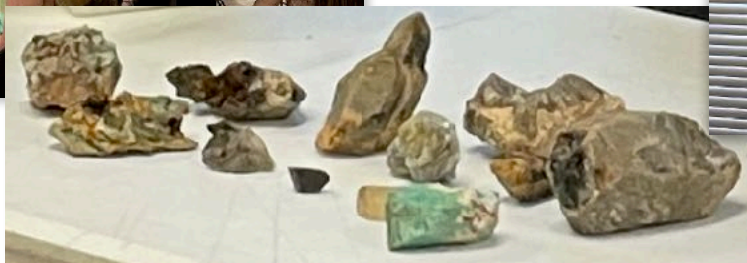
1. Award winners not shown: Josilyn and Karah Teague, S.W. Veatch, Jonathan Hair.
2. Ben Elick and Steven Veatch were also awarded belatedly for poems submitted in 2019.
3. The full list of 2020 awards is posted in the July 2021 Pick & Pack.



**Fists full of writing awards**  
Mike Nelson  
2020 RMFMS/AFMS



Guest speaker Chris Burris wowed us with a talk about his amazing finds.



Some of Chris's amazing specimens on display



Chris taking questions from club members in the audience



# Keeper of Cripple Creek Light: the Miners' Candlesticks

Steven Wade Veatch

Miners in the Cripple Creek mining district once drilled, blasted, and mucked deep underground by the light of a candle. Not only did these candles illuminate their work areas, but they also provided shadows for Tommyknockers to hide in.

In Cripple Creek, as in other mining districts, mine owners supplied miners with candles; however, they required miners to buy the holders for the candles. Miners called these holders “candlesticks.” Most candlesticks were mass-produced and sold through mining supply stores and catalogs—even Sears and Roebuck sold miners’ candlesticks. These generally had similar designs, but there were a large number of patented variations.

To make it easier for miners to replace damaged or worn out candlesticks, a purveyor of these basic devices visited Cripple Creek and other mining towns and peddled them directly to the miners. In figure 1, a man is selling candlesticks to a group of miners. He used two burros to pack the miners’ candlesticks from town to town.

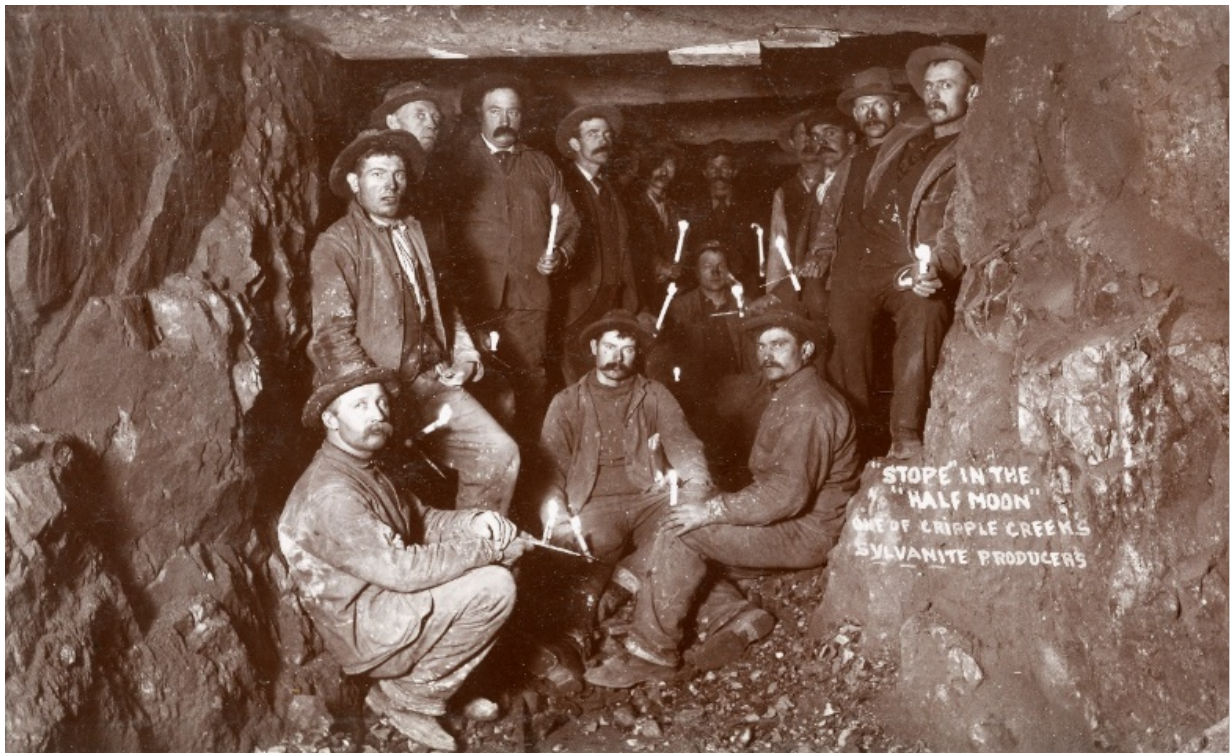


**Figure 1:** A man, next to the donkey in the right side of the photo, is selling candlesticks to miners in the Cripple Creek mining district. Candlesticks are piled on the back of one burro (right side of photo) for display. A group of miners, some carrying lunch pails, gather around him. The photo, by an unknown photographer, is dated November 12, 1897. From the Olla D. Burris collection. *Photo: courtesy of the Cripple Creek District Museum.*

Continued ...

An entire industry developed producing mining candles made from stearic acid and paraffin wax. The stearic candles used in Cripple Creek had many benefits: They emitted little smoke and were suited for some of the poor ventilation found in underground mining. These candles gave a steady source of light and were not easily blown out in a draft. Candles were easy to handle and simpler to transport than oil lamps. Mine owners viewed candles as less of a fire risk than oil lamps. A miner could easily put out a candle that tumbled over before it set mine timbers on fire. If a miner knocked over an oil lamp its destructive flames spread rapidly.

Candle manufacturers set the standard diameter of candles at 0.75 inches. Candle lengths varied, but averaged about 9 inches (Bartos, 2010). Manufacturers wrapped candles in sets of six and packed them into boxes of 120 or 240 candles. The cost of a 240-unit box was between \$3 and \$5 (Bartos, 2010). Miners burned through three or four candles per day (Bartos, 2010).

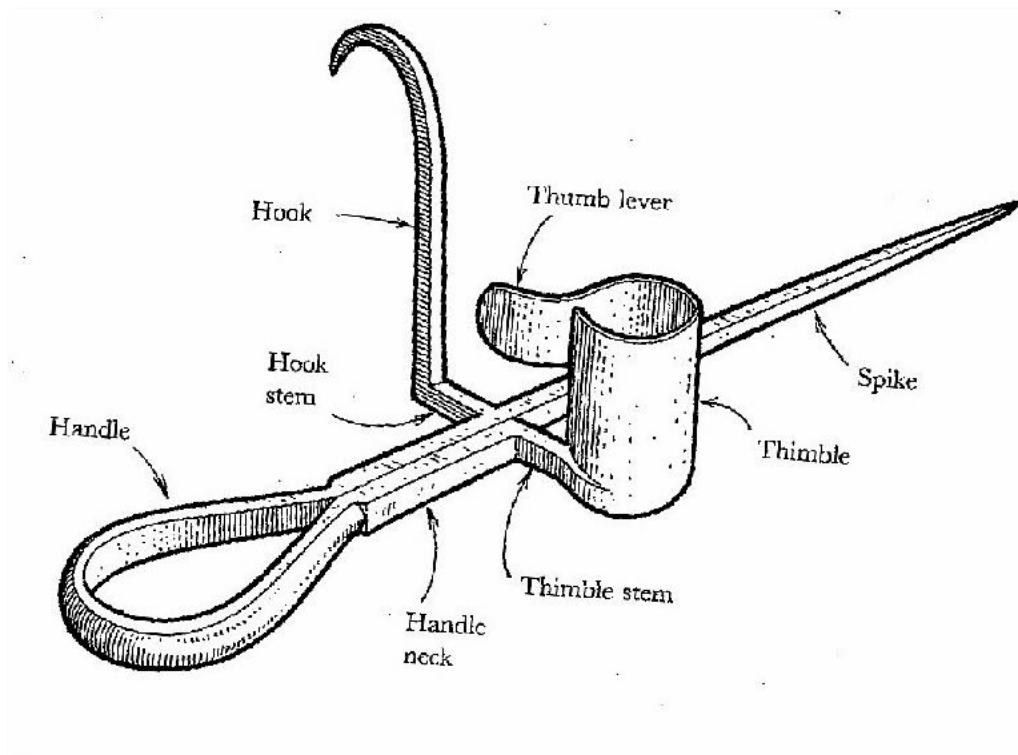


**Figure 2:** Miners with burning candles in their candlesticks take a short break while in a stope in the Half Moon mine. Unknown photographer and date. From the Olla D. Burris collection.

*Photo: courtesy of the Cripple Creek District Museum.*

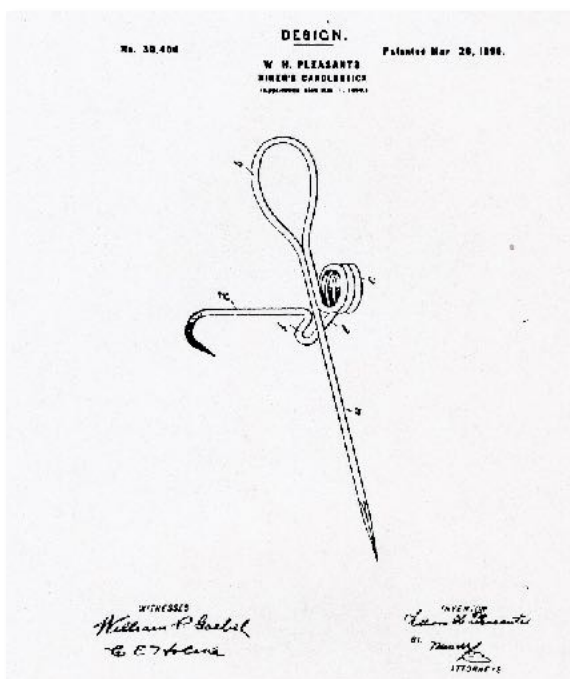
Candlesticks used in metal mining began to appear in California in 1860 and were used in mines throughout the American West (Bartos, 2010). The traditional miners' candlestick was simply an iron spike, about one-quarter inch in diameter, averaging 12 inches in length. Miners hammered the iron spike on candlesticks into a mine timber or a fracture in a rock surface (Weicksel, n.d.). A miner with a burning candle in a candlestick could put it close to where he needed light to work. At the end opposite of the candlestick's point is a loop that acts as a handle (see figure 3). A circular holder (thimble) near the handle or center of the spike holds the candle perpendicular to the spike.





**Figure 3:** Diagram of a typical miner's candlestick. *Source: Wilson and Bobrink, 1984.*

Next to the candleholder is a hook to hang the candlestick on rocks when the miner could not find any mine timbers or rock cracks to drive the spike into. It was also used to attach the candle to his cap.



**Figure 4:** The March 1899 patent design for William Pleasants' candlestick. Pleasants was a resident of Victor. *Source: Ramsdell and Wagner, 1982.*

Candlesticks came in many varieties and sizes: Some were handmade by a local blacksmith, homemade by a miner, manufactured, unpatented or patented (table 1 shows candlestick patents held by Pikes Peak area inventors). Some candlesticks folded up around a central pivot point, allowing a miner to slip it into his pocket as he walked into the mine (Pohs, 1989). Others were simple in their design (see figure 4).

The two largest candlestick manufacturers were Nathan Varney of Denver and the Ludlow-Saylor Wire Company of St. Louis. A 1911 catalog advertised Varney candlesticks that cost six dollars per dozen (50 cents each). More elaborate candlesticks advertised in *Mining Science* in 1914 cost \$1.50 each.

Continued ...

**Table 1. Miner's Candlesticks Patents**

As applied for by residents of the Cripple Creek Mining District, Colorado Springs, and Colorado City, Colorado.

Applicant	Residence	Date	Patent Number
William Lincicum and Charles F. Lewis	Colorado City	Nov. 1895	549,925
William H. Pleasants*	Victor	Mar. 1899	D-30,406
William H. Pleasants	Victor	June, 1899	D-30,991
Amede Bernier	Victor	Aug. 1899	631,270
Christopher Peacock*	Altman	Aug. 1900	656,209
Charles Cornell and Felix John Troughton	Victor	Jan. 1901	665,067
John B. Lindahl*	Colorado Springs	Oct. 1905	801,465
Harry D. Pelham and Charles P. Kaba*	Colorado Springs	Aug. 1913	1,069,170

\*Known to have been manufactured. *Source: compiled by Ed Hunter from Ramsdell and Wagner, 1982.*



**Figure 5.** Advertisement for the Lindahl candlestick patented by John Lindahl in 1905. Lindahl lived in Colorado Springs. The candlestick was adjustable, reversible, interchangeable, and featured a case containing matches that replaced the loop handle in this model. *Graphic: From the S.W. Veatch postcard collection.*

Candlesticks were simple, reliable, and easy to use. Cripple Creek miners used candlesticks for many years until carbide lamps and electric cap lamps made them obsolete in the early decades of the twentieth century.

Miners found other uses for candlesticks. Crafty high graders used a hollow area in the curved handles of specially made or modified candlesticks to conceal high grade gold ore with candle wax or mud before they went home (Pohs, 1995). With their sharp, piercing points, candlesticks were used as weapons to settle arguments in the heat of the moment (Gosling, 1969). In 1903, Colorado's governor James H. Peabody escaped being killed by an assassin at a meeting



he was scheduled to attend. The assassin intended to use the spike of a concealed candlestick as the murder weapon. The governor skipped the meeting and instead enjoyed a football game at the Colorado School of Mines (Pohs, 1995).

Today, candlesticks can be found in private and museum collections. They are a symbol of the underground miner and the hard work he did.

### **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.

### **References and Further Reading:**

Bartos, P., 2010, A light in the darkness: U.S. mine lamps, the early years—candlesticks, oil lamps, and safety lamps: Mining History Journal, vol. 17, p. 45-63.

Gosling, E. M., 1969, Miners' Candlesticks: Spinning Wheel, vol. 25, Jan-Feb, p. 21.

Pohs, H. A., 1989, Early Underground Mine Lamps: Mine Lighting from Antiquity to Arizona: Museum Monograph No. 6, Tucson, Arizona Historical Society, p. 7-16.

Pohs, H. A., 1995, The Miner's Flame Light Book: Denver, Flame Publishing Company, p. 121-214.

Ramsdell, J. and N. S. Wagner, 1982, Patents, Miners' Candlesticks: Carson City, NV, privately published.

Weicksel, S., n.d., Mining Charity, Retrieved from <https://americanhistory.si.edu/fr/node/47976> on 5/18/2021.

Wilson, W. E. and T. Bobrink, 1984, A Collector's Guide to Antique Miners' Candlesticks: Tucson, The Mineralogical Record.

## A Schooner of Schuetteite

Mike Nelson  
csrockguy@yahoo.com



The WORD OF THE DAY is *Alliteration*, the repetition of identical initial consonant sounds in a group of words, words such as a *Schooner of Schuetteite*.

No, the mineral does not come in a beer glass; however, at the time of this writing I was getting tired of 90+ degree smoky weather and wished that I had a cold schooner of IPA or lemonade.

Many rockhounds have a nice, bright red crystal of cinnabar, a mercury sulfide [HgS], in their collection, with many coming from recently opened localities in China. Cinnabar crystals are impressive, if for nothing else, then the brilliant color.



**Above:** Cinnabar crystals (largest ~ 7 mm) in a calcite matrix.  
*Photo: M. Nelson.*

Other collectors shy away from cinnabar as

they fear absorbing mercury into their body. However, MinDat notes that mercury sulfide is relatively insoluble and generally safe to handle. But be aware and do not inhale dust associated with the crystals, and always wash hands after handling the specimens (that warning goes with essentially all minerals).

Mercury minerals were quite valuable during the various “gold rushes” to the western U.S. The minerals were heated to produce raw mercury which was then used to obtain fine-grained gold gathered from screening activities. It seems when raw mercury was mixed with the “fines” the result was the formation of an alloy called amalgam. This amalgam (gold plus mercury) was easy to separate from the other fines composed of heavy minerals such as iron minerals. The end product was a “hunk” of gray amalgam that was then heated in some sort of a retort pot allowing the mercury to evaporate; however, due to the difficulty of locating raw mercury most miners tried to catch the retort fumes in a condenser and cause the mercury to reprecipitate for another use. In most placer mining the process was much less than perfect and the mercury escaped into the atmosphere and water and pollution was rampant. Mercury seems to stick around “forever” and so the polluted water and soil remains. The miners who “cooked” the mercury also had a variety of health problems including losing their teeth.

As a fan of U.S. history, I have consumed a number of books/articles about the cross-country expedition of the Corps of Discovery—better known as the Lewis and Clark expedition. Besides the geology they

Cont ...

described, I have been fascinated with the material they took along, specifically, “Dr. Rush’s Bilious Pills.” Now, who could not be inquisitive about pills with a name like that? Better yet was the everyday name used by the population—*Thunder Clappers*!

In the early 1800s medical advice given for a variety of ailments, including syphilis, was heavy purging, meaning emptying one’s stomach and gut via both ends. Does not seem like an exciting process!

Since Dr. Rush was a personal friend of President Thomas Jefferson, the guy who authorized the Corps of Discovery, and since Thunder Clappers were a common go-to medicine, the boys stocked up on several tens of pounds of the pills.

This wonder medicine of the age, the main ingredient of Thunder Clappers, was known as calomel but today we know it as mercury chloride [Hg<sub>2</sub>Cl<sub>2</sub>]. Calomel is a very heavy, soft, white, odorless, and tasteless halide mineral formed by the alteration of other mercury minerals, such as cinnabar.

So, on 21 May 1804 the Corps started out from near St. Louis heading up the Missouri River. They certainly did not have much room for food staples containing fiber, no 10-grain bread nor prunes. As a result, the men foraged food from the field—mostly they lived off fresh meat. So, one of the major problems with the group was constipation. What to do? Grab a Thunder Clapper and make certain you are near land. But perhaps the most serious medical problem for the Corps was the STD syphilis, brought along by several men and also contracted from a segment of Native Americans. What to do—grab the Thunder Clappers, or raw mercury.

Commonly the elemental mercury brought along was “cooked” over a fire while the men sucked in the fumes. All in all, mercury poisoned their body causing loss of teeth

(especially from the fumes) and severe damage to internal organs. Over time it also affected their mental abilities—the term Mad Hatter came from hat makers using mercury to process felt for hats.

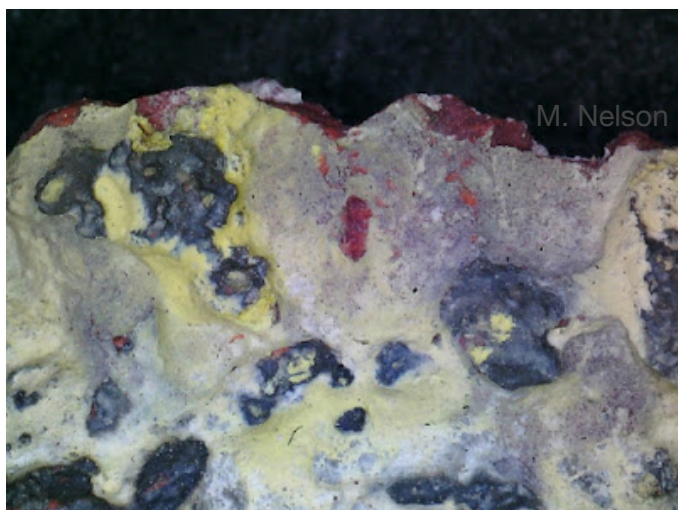
As previously noted, mercury sticks around in the environment for centuries. So as members of the Corps purged their guts undissolved mercury “marked the spot!” Several campsites of the Corps have been identified by the presence of mercury in the soil—a mini-Superfund site!

Cinnabar is/was the major mercury producing ore while China and Kyrgyzstan are/were the last two countries mining ore. Most mercury today is produced as a byproduct of precious metal mining, or recycled from previous mercury-containing products (many electrical switches).

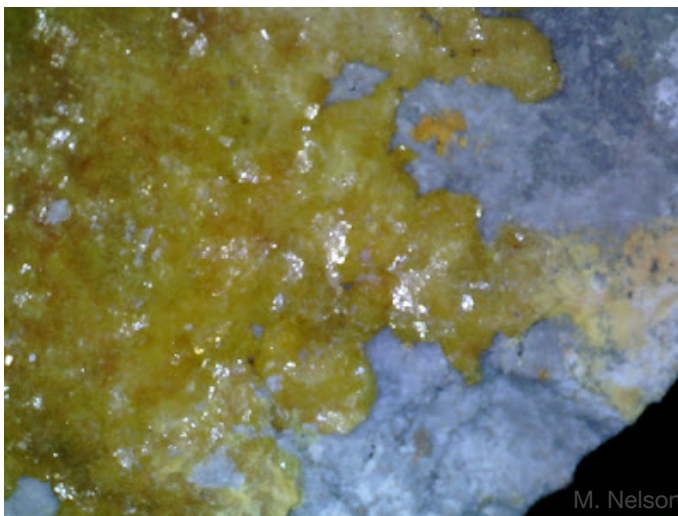
Mercury has not been mined in the U.S. since 1992 with peak production in 1877. Major mining districts included the Terlingua District in Texas, and several districts in California and Nevada.

Schuetite is an interesting mineral that is often found with cinnabar and chalcedony in old mercury mining districts in the arid deserts and ranges of the western United States. In the original description of schuetite, Baily and others (1959) noted that it was a common secondary alteration product found on: 1) dumps at old mercury mines; and 2) bricks from furnaces that refined mercury ore. In natural occurrences schuetite, a mercury sulfate [Hg<sub>3</sub>O<sub>2</sub>(SO<sub>4</sub>)], forms by direct oxidation of cinnabar, a mercury sulfide (HgS), by oxygen-bearing surface water with sunlight providing the energy.

Schuetite is identified by its yellow to yellow-orange color, its occurrence as very thin encrustations on cinnabar, a measured hardness of ~3 (Mohs), and if need be, an x-ray comparison with synthetic schuetite.



**Above:** Thin, earthy, yellow, crusts of schuetteite surrounding tarnished cinnabar on an opalized matrix of rhyolite (or some other volcanic rock). Bottom photomicrograph width ~1.6 cm; top 1.3 cm. Photo: M. Nelson.



**Above:** Bright yellow to orange adamantine kleinite. Width FOV ~1.9 cm. Note "earthy" crust in right central—could this be schuetteite? Photo: M. Nelson.

It can be confused with other mercury alteration products such as kleinite, a mercury oxychloride. However, kleinite and the others contain chlorine that causes the yellow mineral to darken in sunlight. Schuetteite does not contain chlorine and therefore retains the original yellow color.

My particular specimen obtained in Tucson was collected from dumps of the Silver Cloud Mine, Ivanhoe District, located near Midas, Nevada, north of Battle Mountain. It was one of numerous small mines operating in the area (1940-1944) and production was minor. Most of these miners were looking for cinnabar in opalized Tertiary (Miocene) volcanics—rhyolite, andesite, and "tuffs." Concentration of cinnabar was deposition by circulating hydrothermal fluids (Thedigging.com). In reality, it seems to look much like other pits dug in the desert volcanics that I observed while hunting for fossils.

### References Cited

Bailey, E.H., F.A. Hildebrand, C.L. Christ, and J.J. Fahey, 1959, Schuetteite, a new supergene mineral: *American Mineralogist: Journal of Earth and Planetary Materials*, v. 44, no. 9-10.

So, in this time of renewed COVID illness, masks, heat, smoke, and arguing politicians, a little learning is a wonderful thing. However, my mind tends to wander and all of a sudden, a tune from the past pops up.

*Don't ask me,  
Mike why do you write?  
Why do you Blog?  
Why must you fuss about rocks that are bright?  
If I'm down in a honky-tonk  
And some dufus is givin' me friction  
I'll say leave me alone  
I'm writing all night long  
It's a rockhound tradition.*

OK, that was pretty sad! Sorry, and apologies to Hank Williams Jr.



## Classifieds and Announcements



**John Emery**  
Editor

Thanks to our contributors. We encourage everyone to submit articles, photos, illustrations or observations. Don't be shy.

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 are preferred in MS Word, 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.

### Club Officer Vacancies

We have one club officer position and two chairpersons vacant. Please consider volunteering for these fun and rewarding club positions.

#### **Secretary** (Club officer)

- Produce General assembly and board meeting minutes for publication in the Pick & Pack newsletter
- Ensure updates are made to the Society constitution and By-laws when resolutions and/or revisions are duly authorized by the membership
- Have name plates and position plates created for officer installation in January
- Preserve all records necessary to conduct the business of the Society
- Receive, read and answer Society communications
- Submit to the Pike Peak Library: Penrose Library: Historical Department, for the purpose of maintaining the Society's history as stated in the constitution

#### **Field Trip Coordinator** (Club Chairperson)

- Plan summertime field trips for the club

#### **Federation Representative** (Club Chairperson)

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

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

## Field Trip Schedule - CSMS 2021

### Aquamarine Mine, Mt Antero

**Date:** Wednesday, September 8, 2021

**Leader:** Frank Rosenberg

**Contact:** [fs\\_rosenberg@hotmail.com](mailto:fs_rosenberg@hotmail.com); 719-271-7440

**Notes:** \$75.00 fee per person; aquamarine

### Rocky Mountain High Claims (CSMS), Teller Co, CO

**Date:** Saturday, September 11, 2021

**Leader:** John Emery

**Contact:** [csmseditor@hotmail.com](mailto:csmseditor@hotmail.com); 443-370-6289

**Notes:** Bring your club card for verification; Amazonite, Smoky Quartz.



## Trip Report: Gold Camp Rd, 14 Aug 21, Co Springs CO



**Above:** Hardy rockhound crew heading out on an adventure led by CSMS Member-at-Large Chris Burris. This photo was taken on Capt Jack's Trail, off Gold Camp Rd, near Mays Peak 14 Aug 21. Spirits were high. *Photo: CSMS VP Rick Jackson*



**Above:** The locale. View of a mountain peak from Gold Camp Rd near the upper Gold Camp parking lot. *Photo: J. Emery*



**Right:** Upper Gold Camp Parking Lot. Gold Camp Road appears on the left behind the barriers. *Photo: Brandon M., Google Maps.*

**Left:** An old abandoned mine off Capt Jack's Trail near Mays Peak. The tunnel is dug into solid rock and goes in about ten feet. *Photo: CSMS VP Rick Jackson*

### REPORT Gold Camp Rd 14 Aug 21

CSMS Member at Large Chris Burris led a hardy crew of intrepid rockhounds on a field trip up Capt Jack's Trail below Mays Peak in Cheyenne Canyon. The parking lot was already full at 9:30 AM and the group scattered to find parking elsewhere. After meeting at Upper Gold Camp parking lot (pictured below), the group hiked Gold Camp Road to Capt Jack's Trail and then on to an unnamed dig site about 1 1/4 miles up Capt Jack's trail. It got hot fast but there was plenty of shade in the forest pines.

*Report by J. Emery*



**Above:** Hardy Rock Hound and CSMS editor John Emery is waiting for the outside temp to drop below 80 deg. *Photo: Valerie Babitz.*

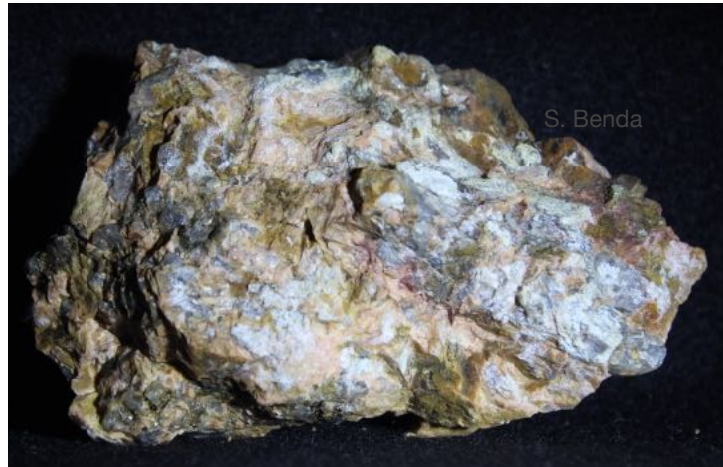




## Rock Report: Gold Camp Rd, 14 Aug 21, Co Springs CO



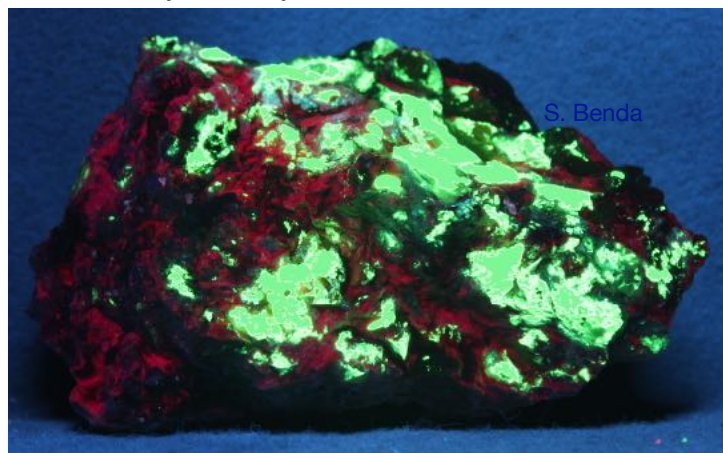
**Above:** Small plate of various minerals found by field trip leader and CSMS Member-at-Large Chris Burris, aka, "Crystal Whisperer," off Capt Jack's Trail near Mays Peak 14 Aug 21. Photo: C. Burris.



**Pic 1:** Specimen found by CSMS club member Sidney Benda off Capt Jack's Trail near Mays Peak 14 Aug 21. The matrix is common Pike's Peak batholith coarse granite with pink feldspar, coarse quartz and some biotite mica. Photo and analysis: Sidney Benda.



**Above:** Two smoky quartz/ fluorite combos found by field trip leader and CSMS Member-at-Large Chris Burris, aka, "Crystal Whisperer," off Capt Jack's Trail near Mays Peak 14 Aug 21. Photos and analysis: C. Burris.



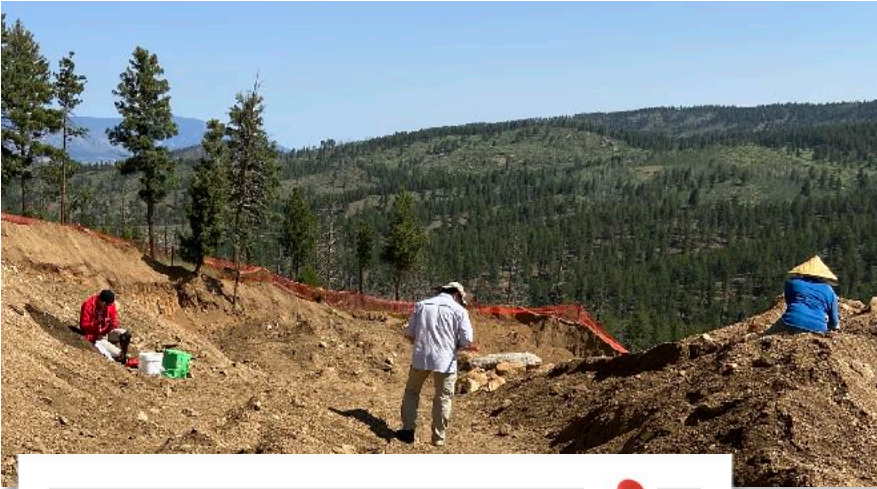
**Pic 2:** The sample shown in pic 1, under short ultraviolet light (254 nm). The feldspar shows dark red/purple. The bright green areas are from the white coating apparent in picture 1 above. Composition of the white coating is unknown. Photo and analysis: Sidney Benda.



**Right:** Close-up (digital microscope) of the white coating in pic 1 that glows green in pic 2. FOV ~ 5mm (~25X). Composition of the white coating is unknown. Photo and analysis: Sidney Benda.



## Trip Report: Smoky Hawk Mine, 10 Jul 21, Co Springs CO



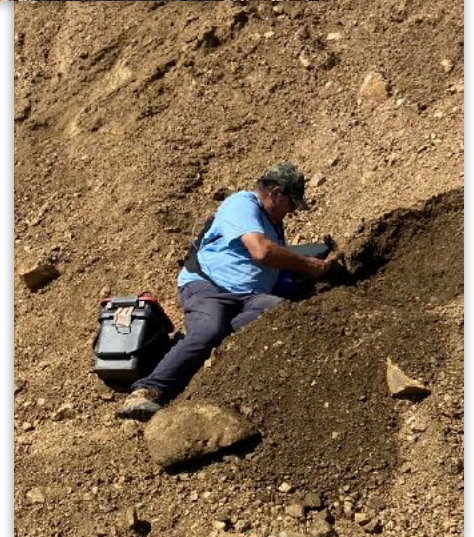
### REPORT **Smoky Hawk 10 Jul 21**

Twenty members enjoyed the field trip to the Smoky Hawk Mine on July 10, 2021. Several new members participated on the field trip.

Linda, the mine representative showed us several samples of amazonite, smokey quartz crystals, micro fine and feldspar. She also showed us samples of several specimens covered in mud, which made it clear we needed to break open mud clumps and use a little water to make sure we had a good specimen.

After the safety orientation the group spread out and started digging for specimens. Several members went up the mountain looking for new deposits. The mountain climbers brought back several nice specimens. Others, like me, walked around and surface-collected. I found several nice, but small amazonite samples on the ground. The largest sample was the yard rock brought by the Lovelace's.

*Report by J. Massie*





**Request for Non-competitive Display Space**  
Colorado Springs Mineralogical Society  
Pike's Peak Gem & Mineral Show  
Norris Penrose Indoor Event Center  
1045 Lower Gold Camp Rd, Colorado Springs, CO  
October 1-3, 2021

**Name:**

**Society:**

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**Address:**

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**Phone:**

**Email:**

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**City:**

**State:**

**Zip:**

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Exhibitors are urged to bring their own cases. A limited number of club cases are available upon request. Exhibitors using club cases will need to furnish any risers, linings, padlock or accessories as needed. EACH CASE WILL BE LIMITED TO 150 WATTS.

**Describe Display(s):**

	<b>I will bring my own display</b>	<b>Your case length:</b>	<b># of cases:</b>
	<b>I will need a case*</b>	<b>Case size desired:</b>	<b># of cases:</b>

\* CSMS cases are approximately 36" by 24" outside measurements. A few 4-foot cases are generally available. There is a hasp on the case that accepts an exhibitor-supplied padlock.

Setup is from 12 PM to 8 PM on Thursday Sept 30 or 8 AM to 12 PM on Friday before the show opens. Note new show hours for Friday. Tear down is 4 PM to 8 PM on Sunday.

**Signature of Non-Competitive Exhibitor:** \_\_\_\_\_

*With the signing of this request, email submission of this document or showing up with an exhibit, it is mutually agreed that the Colorado Springs Mineralogical Society and the Norris Penrose Indoor Event Center shall not be liable to any exhibitor for damage, loss or destruction of any exhibit or injury to his person for any cause and all claims for injury are expressly waived by the exhibitor.*

**Please return by mail or email by: Sept 20, 2021**

- To reserve a case and exhibit space.
- After September 20 exhibitors are still welcome based upon availability of cases and space.

**RETURN TO:** Bob Landgraf

304 Palmer Trail

Manitou Springs, CO 80829

719-685-1364

[rmlwp74@aol.com](mailto:rmlwp74@aol.com)

After September 20<sup>th</sup> contact Lisa Cooper with late entries:

Lisa Cooper

6070 Colony Circle

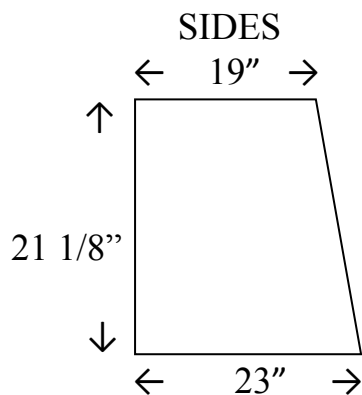
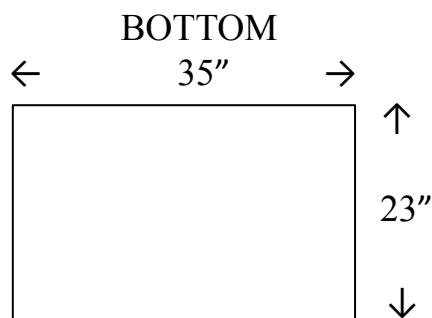
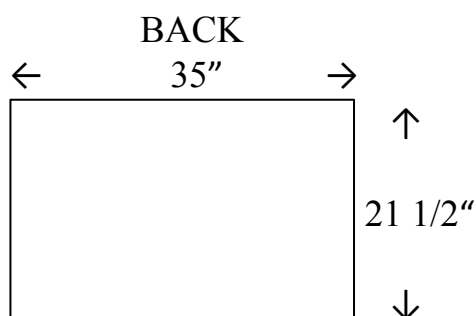
Colorado Springs, CO 80919

[lisavcooper@comcast.net](mailto:lisavcooper@comcast.net) 719-351-4018

**\*\* [Note:] Exhibits will not be judged during this fall show \*\***

### **The Colorado Springs Mineralogical Society Case**

All measurements are inside measurements. However, since all cases are handmade there may be some slight variations in the cases. Be sure to bring any necessary tools required to make adjustments to your liners.





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



**CSMS is an incorporated nonprofit organization with these 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.rmfmfms.org](http://www.rmfmfms.org)