



**Colorado Springs  
Mineralogical Society**  
*Founded in 1936*  
 Lazard Cahn  
 Honorary President  
 May 2020  
 "Pick & Pack"  
 Vol 60 Number 4

**CSMS General Assembly**  
 Thursday, May 7 2020, 7:00 PM  
 Mt. Carmel Veterans Center

**CANCELED**

**Please note:** Members whose names begin with M-Z are responsible for refreshments in May

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

**Inside this issue**

CSMS Calendar Events	2
Community Events	2-3
Article - Chrysocolla/Tenorite	4-7
President's Corner	8
Pebble Pups Corner	8
Haiku - Pebble Pup G. Seltz	8
Article - Unknown mineral	9
Secretary's Spot	11
Membership Application	12-13
Code of Ethics	14
Classifieds & Announcements	15



Pikes Peak, El Paso Co., Colorado | Photo: mindat.org

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

# Upcoming CSMS Events

**ALL CSMS activities are CANCELED until further notice**

General Assembly Meeting	CANCELED	May '20
Pebble Pup Meeting	CANCELED	May '20
Crystal Club Meeting	CANCELED	May'20
Board Meeting	CANCELED	May'20
Fossil Club Meeting	CANCELED	May'20
Faceting Club Meeting	CANCELED	May'20

## CSMS Calendar

May '20	June '20						
05/05/20	06/02/20	Fossil Group	1st Tues	7:00 PM	Pikes Peak United Methodist Church	Jerry Suchan	303-648-3410
05/07/20	06/04/20	Board Meeting	1st Thur	7:00 PM	Pikes Peak United Methodist Church	John Massie	719-338-4276
05/21/20	06/18/20	See session online	3rd Thur	5:30 PM	Mt. Carmel Center	Steve Veatch	719-213-1475
05/21/20	06/18/20	General Assy Meeting	3rd Thur	7:00 PM	Mt. Carmel Center	John Massie	719-338-4276
05/28/20	06/25/20	Crystal Group	4th Thur	7:00 PM	Mt. Carmel Center	Kevin Witte	719-638-7919
05/28/20	06/25/20	Faceting Group	4th Thur	7:00 PM	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

For more information on any of the sub-groups, meetings or other valuable CSMS information, go to our website: [www.csms1936.com](http://www.csms1936.com)

# Upcoming Community Events

## (Submitted by Pete Modreski)

**SUSPENDED** Van Tuyl Lecture Series, Colorado School of Mines, Iron Ores in North America – Past Importance, Future Promise, by Dr. Phil Brown, Univ. of Wisconsin. Berthoud Hall Room 241, CSM campus, Golden. All are welcome. See <https://geology.mines.edu/eventscalendar/lectures/> for the upcoming schedule. [Note:] *Lecture series suspended until further notice*

**CANCELED** Colorado Mineral and Fossil Spring Show, Crown Plaza Hotel - Convention Center, 15500 E 40th Ave., Denver, Colorado, 10-6 Fri. & Sat., 10-5 Sun., free parking & admission. [Note:] previously scheduled Apr 10-12 then May 15-17—now *canceled outright*.

**RESCHEDULED for Sept 2020:** Rise of the Mammals: Exceptional Continental Record of Biotic Recovery after the Cretaceous–Paleogene Mass Extinction (about the Corral Bluffs fossil mammal discoveries), by Ian Miller and Tyler Lyson, Denver Museum of Nature and Science; at the CSS Annual Past Presidents' Dinner, to be held at the Mount Vernon Canyon Club. Social time at 5:30, dinner at 6:00, program at 7:00. Reservations required for dinner but guests are welcome to attend for the program only starting at 7:00 PM. Visit <https://coloscisoc.org/> for further details.

**Sat, May 16, noon-4 PM:** Silent (+ Vocal) Auction, sponsored by Colorado Chapter, Friends of Mineralogy. All are welcome; setup at 11, auction begins at noon. At a new location: Wheat Ridge United Methodist Church, 7530 W. 38th Ave., Wheat Ridge (38th Ave. at Wadsworth Blvd.). *Still on at this time*.

**POSTPONED** Symposium on Water and Energy in Colorado, to be held in Ricketson Auditorium, Denver Museum of Nature and Science. Cosponsored by the Colorado Scientific Society, Denver Museum of Nature & Science, Center for the American West, and others. Details forthcoming. [Note:] was scheduled for Sat, May 16, 2020, now postponed until TBD date.

**UNKNOWN Sun, May 17, noon (ish):** for the monthly FSS (Florissant Scientific Society) meeting, Christine Siddoway (Colorado College) will give a talk on the Tava Sandstone (the geologically famous “sandstone injectite dikes of the Pikes Peak region”) followed by a short field trip. Osborne Center, University of Colorado at Colorado Springs. All are welcome to attend; contact Beth Simmons, [cloverknoll@comcast.net](mailto:cloverknoll@comcast.net), for details or to be put on the FSS mailing list.

**CANCELED Fri-Sat-Sun, June 12-14:** Pikes Peak Gem & Mineral Show, Norris-Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs, CO 80905. Sponsored by the Colorado Springs Mineralogical Society. Hours: noon-7 pm Fri., 10-5 Sat, 10-4 Sun. Adult (12 and older) admission \$5, multiple day \$8, children 11 and under, free.

**Thurs.-Sun., July 23-26:** Fairplay Contin-Tail Gem, Mineral, and Jewelry Show, Fairplay River Park. *Still on at this time*.

### Adult CSMS Rock Hound of the Year

CSMS is in the process of selecting an Adult Rock Hound of the Year. Since there is no deadline, this will be handled at the (TBD) general assembly meeting.

## - End of Event Section -



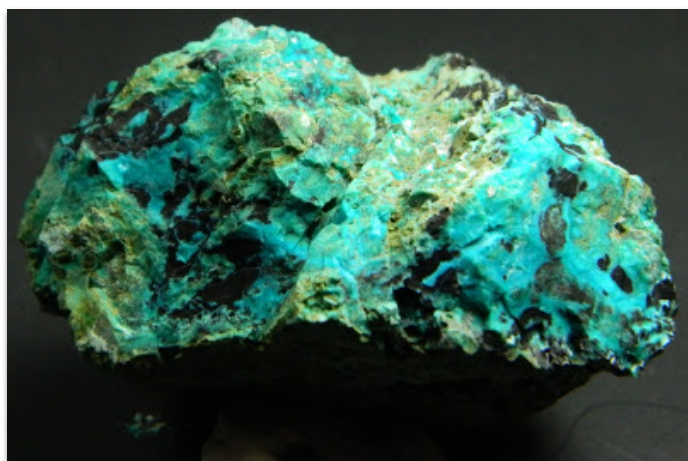
## Grab Me: Chrysocolla and Tenorite

Mike Nelson

*When we recognize the virtues, the talent, the beauty of Mother Earth, something is born in us, some kind of connection, love is born.*

- Thich Nhat Hanh

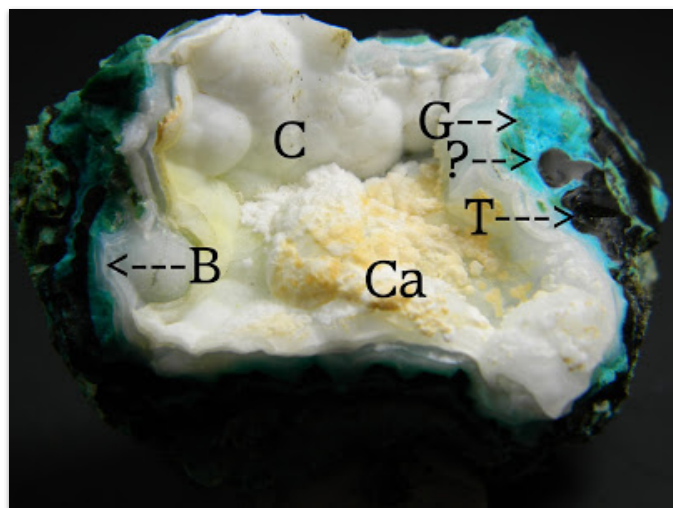
Sometimes, in examining a table or flat of minerals, something just reaches out and grabs you—take me home, take me home... The beckoning mineral need not be expensive nor rare and exotic, just something of beauty in the eye of the beholder. A table of minerals at a recent Tucson Show had one of those specimens that simply reached out and grabbed me. It did not have showy crystals or exotic minerals; however, the banding and colors commanded an allure. So, it became “mine.”



**Fig. 1:** Blue chrysocolla, black tenorite, with “silica” rind. Width of specimen ~5 cm. Photo: M. Nelson

The most striking minerals in the specimen are sky blue chrysocolla, a hydrated copper aluminum hydroxy silicate  $[(\text{Cu}, \text{Al})_2\text{H}_2\text{Si}_2\text{O}_5(\text{OH})_4 \cdot n\text{H}_2\text{O}]$  but with a variable composition] intermixed with tenorite, a black copper oxide  $[\text{CuO}]$ . Also present are calcite  $[\text{CaCO}_3]$ , a

banded light blue silicate such as chalcedony or perhaps silica-infused chrysocolla, and an unknown tan-orange-green mineral. Some might call the specimen a geode or a broken vug. It was collected in the Boleo District, Mun. de Mulegé, Baja California Sur (BC Sur), Mexico.



**Fig. 2:** Reverse of fig.1 — Ca = calcite, C = botryoidal chalcedony, B = banded chalcedony, T = tenorite, ? = blue chalcedony; G = green chalcedony. Photo: M. Nelson

Chrysocolla has been used as a semi-precious gemstone for centuries, often as a substitute for turquoise, but its internal structure is still not well understood. For example, most mineralogy books and web sites believe chrysocolla belongs to the Orthorhombic Crystal System (three crystallographic axes (A,B,C) of unequal length that make angles of 90 degrees with each other). However, Frost and Xi (2013) pointed out that this assignment “remains uncertain.” Some geologists believe chrysocolla is crystalline in nature while others believe it “generally amorphous” and therefore not a true mineral (strict sense) (Klein, 2002). Sun (1963) reported “chrysocolla is not a definite chemical compound but a hydrogel containing mainly  $\text{SiO}_2$ ,  $\text{CuO}$  and  $\text{H}_2\text{O}$ , and minor amounts of  $\text{Al}_2\text{O}_3$ ,  $\text{CaO}$  and  $\text{MgO}$ .”

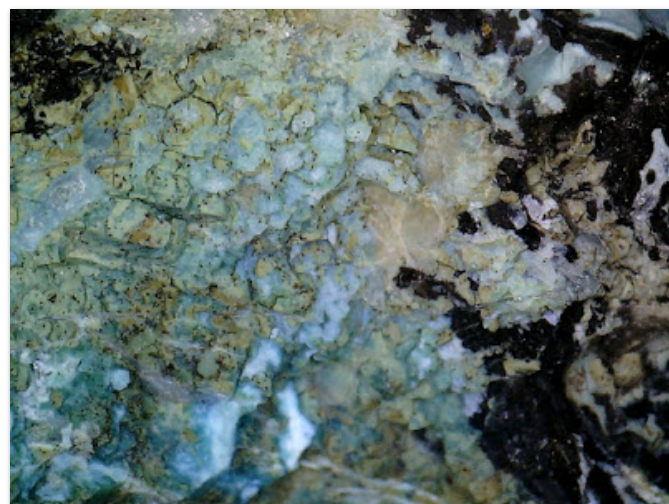
Frost and Xi (2013) stated “chrysocolla is a colloidal mineral...but questioned...whether chrysocolla is: 1) a mesoscopic [somewhere between microscopic and macroscopic; between big and small] assemblage of spertiniite,  $\text{Cu}(\text{OH})_2$ , silica, and water; 2) represents a colloidal gel; or 3) is composed of micro-crystals with a distinct structure.” Their definitive study of chrysocolla, based on X-Ray Powder Diffraction, Raman Spectroscopy, and Infrared Spectroscopy studies, “concluded that chrysocolla is not based upon spertiniite but is an amorphous hydrated copper silicate...with a simplified chemical formula of  $\text{CuSiO}_3 \cdot 2\text{H}_2\text{O}$ .”



**Fig. 3:** Photomicrograph of banded chalcidony and tenorite. Note botryoidal calcite in upper left quadrant. Width of photo ~1.2 cm. Photo: M. Nelson

It would seem that an amorphous substance would not be classified as a *mineral* but as a mineraloid, most of which do not have a definite structure on the atomic scale (chrysocolla is never in visible crystals; [www.minerals.net](http://www.minerals.net)). However, evidently some forms of chrysocolla have identifiable structures at the “nano-level” (crystals acicular; [www.webmineral.com](http://www.webmineral.com)) and hence it has mineral (IMA) status rather than a mineraloid. At least that is my interpretation of the situation and any other explanation is above my pay grade.

Chrysocolla has a variety of colors but usually is some shade of blue and/or green—due to coloring by the major cation, copper (an idiochromatic mineral). The streak on an unglazed porcelain ranges from pale blue to light green. Chrysocolla is quite soft at ~2.5-3.0+ (Mohs), which is a good property to distinguish it from much harder turquoise at ~5-6 (Mohs).

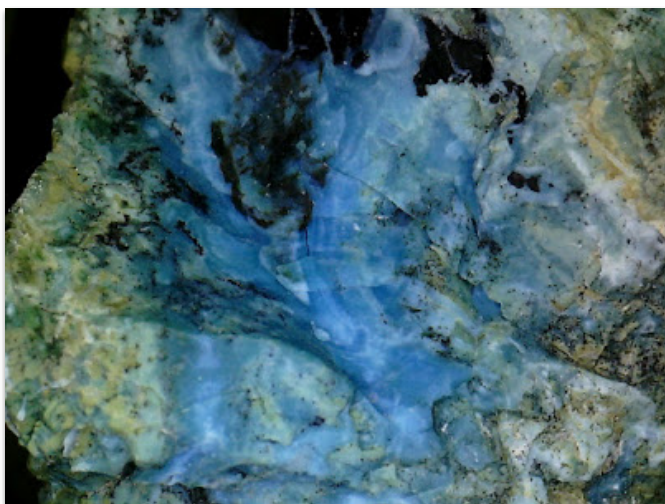


**Fig. 4:** Reverse of fig. 3 with silica rind, blue chrysocolla and black tenorite. Width of photomicrograph ~1.2. Photo: M. Nelson

Chrysocolla has a luster from ranging from earthy (dull) to vitreous to waxy and appears in solid and fibrous veins, in tufts forming tiny crystals, commonly as massive or perhaps as encrustations, as rounded balls or botryoids, and even as stalactitic columns. Most forms are opaque but thin slices are translucent and are fairly brittle when “hit.”

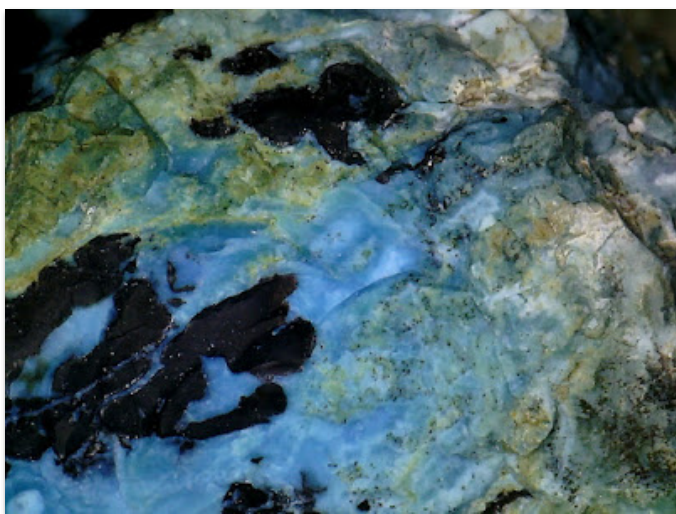
Contrasting with the sky-blue chrysocolla is tenorite, a black copper oxide ( $\text{CuO}$ ). Tenorite would not be an impressive mineral with its earthy to dull to metallic luster and generally massive habit without common accompanying friends—chrysocolla, malachite and azurite. It is opaque with a black streak and is brittle





**Fig. 5:** Blue chalcedony and black tenorite. Width of photomicrograph ~1.2 cm. Photo: M. Nelson

commonly with a conchoidal fracture. It is soft at ~3.5 (Mohs). I have only observed massive and botryoidal tenorite; however, some localities produce small crystals (Monoclinic Crystal System). It appears, from my reading, that visible crystals are only formed when tenorite is the product of volcanic sublimation (crystallized from gasses around volcanic vents). In fact, the type locality for tenorite is around Mt. Vesuvius in Italy.



**Fig. 6:** Blue chalcedony and black tenorite. Width of photomicrograph ~1.2 cm. Photo: M. Nelson

Both massive tenorite and chrysocolla are somewhat common minerals in the oxidized zone of hydrothermal copper deposits. It seems as if every copper mine in the western U.S and Mexico produces these two minerals; they are not uncommon. As noted above, my specimen came from the Boleo District in Baja California. The discovery locality, the Boleo Copper District located near the town of Santa Rosalia, has been the site of major sulfide mining (open pit until the 1980s) and at one time (at least in the 1950s) was the second largest producer of copper in Mexico (Wilson and Rocha, 1955). Underground mining started in 2012 with the first production in 2014 and I presume mining is still active. As best I can decipher, the copper deposits are in an uplifted belt of Neogene (Miocene or Pliocene) rocks within the El Boleo Formation (deltaic and near-shore marine claystone-siltstone-sandstone beds). The major sulfide ore minerals are chalcocite ( $\text{Cu}_2\text{S}$ ) accompanied by chalcopyrite ( $\text{CuFeS}_2$ ), bornite ( $\text{Cu}_5\text{FeS}_4$ ), covellite ( $\text{CuS}$ ), and native copper ( $\text{Cu}$ ). The oxidized zone (above the sulfide deposits) has a large variety of copper oxides, copper carbonates, copper silicates, manganese oxides, and rare halide minerals.

My geode-looking specimen has cream to white massive calcite in the center surrounded by botryoidal “silica”, perhaps chalcedony, and then grades into banded chalcedony or perhaps silica-infused chrysocolla. About all I can tell is the “silica” is much harder (Mohs) than the chrysocolla. The banded chalcedony seems to flow around the tenorite and, at times, seems to grade into the chrysocolla. The “rind” is a tan to gray “crumbly” or shattered microcrystalline “silica.”



**Fig. 7:** Photomicrograph of calcite in center of vug. Width of photo ~ 1.2 cm. *Photo: M. Nelson*



**Fig. 8:** Photomicrograph of banded chalcedony grading into blue chalcedony or silica infused chrysocolla surrounding black tenorite. Notice green chalcedony encased in the blue. Width of photo ~1.2 cm. *Photo: M. Nelson*

#### REFERENCES CITED

Frost, R.L., and Y. Xi, 2013, Is chrysocolla  $(\text{Cu,Al})_2\text{H}_2\text{Si}_2\text{O}_5(\text{OH})_4 \cdot n\text{H}_2\text{O}$  related to spertiniite  $\text{Cu}(\text{OH})_2$ ? -a vibrational spectroscopic study: <http://eprints.qut.edu.au/58692/11/586>

Sun, M.-S., 1963, The nature of chrysocolla from the Inspiration Mine, Arizona: *American Mineralogist*, v. 48.

Wilson, I.F. and V.S. Rocha, 1955, Geology and mineral deposits of the Boleo copper district, Baja, California, Mexico: U.S. Geological Survey Professional Paper 273.

There are many “things” I don’t understand about this specimen but am trying to “learn” additional facts to satisfy my curiosity. It turns out that a specimen I purchased because it grabbed me seems to have a complex history! What more could I ask for?

## President's Corner

John Massie

## Presidential Matters



### 2020 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

**Steven Veatch/ Betty Marchant**, Pebble Pups

No matters to present at this time.

### 2020 Liaisons

**Florissant Fossil Beds National Monument:**

Steven Veatch

**Western Museum of Mining and History:**

Steven Veatch

## Pebble Pups

Steven Veatch



### CSMS Pebble Pups and Earth Science Scholars

- **NOTICE:** Regular Pebble Pup meetings are **CANCELED** until Sept 2020
- Please visit our blog for special announcements and field trips:  
<http://pebblepups.blogspot.com>  
<http://www.csms1936.com>
- Find your assignments at:  
<http://pebblepups.blogspot.com/p/merit-badge-assignments.html?m=1>

Haiku by Pebble Pup Gavin Seltz, age 10



### Paint Mines

Gavin Seltz

Sculptures formed by wind  
Painted by oxidation  
Nature's museum



## A Note on a Rare Mineral Occurrence

Bob Carnein

As some of you know, this past spring (2019), a Club member brought in an unknown mineral he found northwest of Florissant for identification (Figure 1). The specimen came from an area where there are scattered Amazonite occurrences, but the member made the important observation that this mineral wasn't like anything he had seen before (many collectors probably would have tossed it). He showed it to John Rakowski and Bob Carnein, who tentatively identified it as perhaps fluorite or anhydrite.



**Fig. 1:** Sample of an unknown mineral found about 2 miles northwest of Florissant, Teller Co., CO. Photo: C. Carnein

Bob and John visited the locality and collected some additional samples of other minerals. The find was a very small one, consisting of only a few pounds of material in a small trench in a “swale” between two ridges. Bob took a piece home and determined the specific gravity to be about 3.0. He also crushed a small sample and examined the powder under a polarizing microscope, using immersion oils to determine its properties. Long story short, the sample was neither fluorite nor anhydrite, and its properties (namely index of refraction) didn't allow a positive identification by the methods available.

At this point, based on its physical properties, Bob suspected that the sample was the rare aluminum mineral cryolite ( $\text{Na}_3\text{AlF}_6$ ), which is well known from several localities near St. Peters Dome but has not been previously identified in the Crystal Peak area. Knowing that Philip Persson, a recent CSM grad who works for Collectors' Edge Minerals, is an expert on the rare minerals associated with cryolite, Bob sent Philip two samples for identification. Philip, in turn, sent the

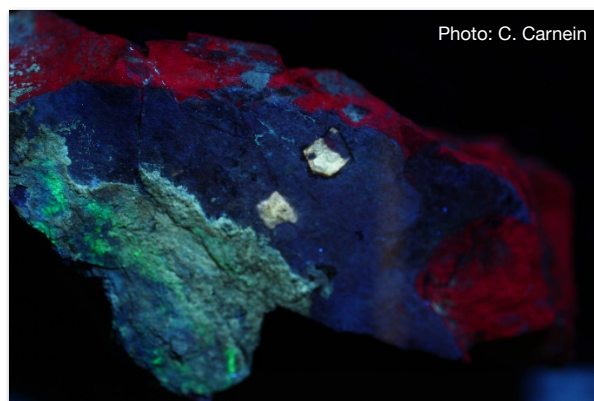
samples to Markus Raschke, Professor of Physics and Chemistry at the University of Colorado, who used a scanning electron microscope (SEM) combined with energy-dispersive X-ray spectroscopy (EDX), to tentatively identify them as cryolite and the rare associated minerals prosopite and gearsutite.

Lacking ready access to X-ray diffraction (XRD) analysis, which gives more certain results, Bob sent two additional samples to New Mexico Tech, where the rare minerals gearsutite, pachnolite, and hydrokenoralstonite (quite a mouthful!) were identified. As a result, we have now tentatively identified seven “new” minerals from the Crystal Peak area (including those covered in a 2019 publication of the CSMS Pick and Pack). Dr. Raschke has several additional samples, including the one pictured below, which he is now analyzing. The sample shown below has an odd mineral that fluoresces yellow in short-wave UV and blue in long wave (figures 3 & 4).

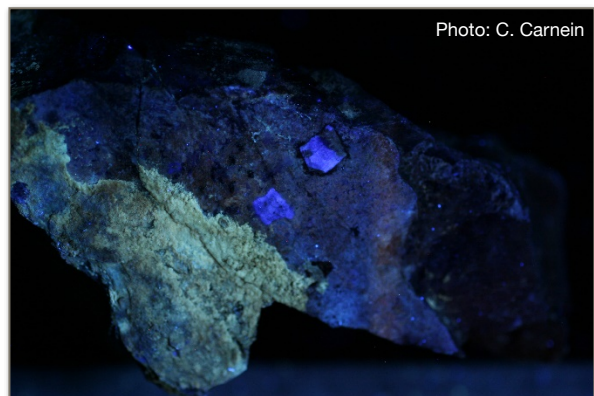
The writer, Dr. Raschke, and Philip Persson will soon publish a more technical description of this find on Mindat.org. If you aren’t familiar with this amazing resource, go to [www.mindat.org](http://www.mindat.org) and check out the 307,000 listed mineral localities and over 1 million photos!



**Fig. 2:** Unidentified sample in white light. Photo: C. Carnein



**Fig. 3:** Unidentified sample in short-wave UV. Red is Microcline Feldspar; green is Caliche; Yellow is unknown mineral. Photo: C. Carnein



**Fig. 4:** Same as above in long-wave UV. Photo: C. Carnein

The writer appreciates the support of the Lake George Gem & Mineral Club, which agreed in 2018 to budget \$150 to fund identification of unknown minerals found by Club members. This paid for the XRD analyses at New Mexico Tech. Collectors are encouraged to bring in any odd minerals they find in our area. Despite 150 years of collecting, there are still new things to be found!

<b>Secretary's Spot</b> Lisa Cooper	<b>Meeting Minutes</b> Colorado Springs Mineralogical Society
<b>2020 CSMS Officers</b>	No minutes to present at this time
<b>John Massie</b> , President <b>Vacant</b> , Vice-President <b>Lisa Cooper</b> , Secretary <b>Ann Proctor</b> , Treasurer <b>Adelaide Bahr</b> , Membership Secretary <b>John Emery</b> , Editor <b>Chris Burris</b> , Member-at-Large <b>Renee Swanson</b> , Member-at-Large <b>Sharon Holte</b> , Past President	
<b>2020 CSMS Chairpersons</b>	
<b>John Massie</b> , Program Coordinator <b>John Massie</b> , Show Vol Coordinator <b>Mike Webb</b> , Field Trip Coordinator <b>Steven Veatch</b> , Science Fair Chair <b>Frank and Ellie Rosenberg</b> , Librarians <b>Mark Schultz</b> , Social Committee Chair <b>Ann Proctor</b> , Store Keeper <b>Lisa Cooper</b> , Show Chairman <b>Lisa Cooper</b> , Webmaster <b>Lisa Cooper</b> , Facebook Keeper <b>Mike Nelson</b> , Federation Representative <b>Vacant</b> , Federation Representative	

**Hey!** We still need to nominate and elect a 2020 **CSMS Adult Rockhound** of the Year!

- Please refer to the November 2019 issue of the Pick & Pack, page 3. If you do not have a copy, you can access [www.CSMS1936.com](http://www.CSMS1936.com) and go to the Newsletters. Print off a form or two and nominate your best rockhound!!





# Colorado Springs Mineralogical Society

Post Office Box 2, Colorado Springs, CO 80901

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

## 2020 APPLICATION FOR MEMBERSHIP

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

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

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

STREET \_\_\_\_\_ CITY \_\_\_\_\_

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

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

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

May your name and contact information 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 Before Jan 31   After Jan 31			New Members Only After June 30 Oct 1 – Jan following year		
Pebble Pup Membership (4 – 12 years old and parent is not a member)		\$10.00	\$15.00	\$ 7.50		\$10.00
Junior (Membership (12 –17 year old and parent is not a member)		\$10.00	\$15.00	\$ 7.50		\$10.00
Individual Membership (18 and over)		\$25.00	\$30.00	\$15.00		\$25.00
Family Membership (2 adults & dependents under 18)		\$35.00	\$40.00	\$20.00		\$35.00
Corporate Membership (entitles up to five (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*

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

### VOLUNTEER OPPORTUNITIES: VOLUNTEERS ARE WHAT MAKE OUR CLUB! - *Fill out each year*

GUEST SPEAKER		FIELD TRIPS		EDITOR/WRITING		List any other things you may be willing to do:
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

Membership Chair: Rev: 12/15/19

## CSMS Application Page 2

- Membership information page -
- Waiver Release to participate in Field Trips -

### Membership Information

- Membership to CSMS is annual, from January 1<sup>st</sup> to December 31<sup>st</sup>. 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 31<sup>st</sup>. 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 June 30<sup>th</sup> shall pay half the yearly membership rate. A person joining CSMS as a new member after October 1<sup>st</sup> 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 26<sup>th</sup> 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.



## **“Code of Ethics”**

A large measure of the enjoyment of our hobby consists of collecting in the field. For that reason, the members are proud to endorse the following:

**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.**





## Classifieds and Announcements

### Our Staff... 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 welcomed. 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, but the editor will correct font.

e-mail to the editor:  
[physikker@gmail.com](mailto:physikker@gmail.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.

### ANNOUNCEMENTS

Unfortunately, and with deep regret, Pikes Peak Gem & Mineral Show originally scheduled for June 12-14 is **CANCELLED** due to circumstances surrounding the COVID-19 pandemic.

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#### CSMS T-SHIRTS, BADGES AND PINS AVAILABLE FOR SALE!

- FREE 1-yr pin award for those who celebrated a CSMS anniversary in 2017 or 2018
  - Contact storekeeper Ann Proctor:  
[annmgmt@msn.com](mailto:annmgmt@msn.com)
- 

## Dick's Rock Shop Liquidation Sale

After almost 42 years, Dick's Rock Shop is closing their doors and liquidating all of their merchandise. Below is just some of the items we are selling:

Tumbled stones, fossils, geodes, mineral specimens from all over the world, Colorado specimens, jewelry, Keyosha, Kingman & other Turquoise, Native American jewelry (from the Zuni Reservation), cut gem stones, cabochons, beads, findings, jewelry wire, Himalayan salt lamps, carved stone animals, stone eggs, spheres, carved animals, onyx vases, mortars and pestals, slabs, rough stone for lapidary, rock splitter, tools, rock hammers, gold pans, books, and more!

Please email Diana Wing at  
[diwing@dicksrockshop.com](mailto:diwing@dicksrockshop.com) to schedule an appointment.



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

Postage Here



**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.rmfm.org](http://www.rmfm.org)