PICK&PACK
THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Colorado Springs Mineralogical Society
Founded 1936
~ Lazard Cahn ~
Honorary President
"Pick & Pack"
Volume 64 No. 1
Feb 2024

CSMS General Assembly

Thursday, Feb 15, 2024 7:00 PM
Colorado Springs Christian School
4855 Mallow Road

Veatch and Blizzard

Garden Park Area
Fossil Discoveries

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

In This Issue …

Garden Park in Colorado is famous for its fossils and is popular among scientists and enthusiasts. Part of the Cope and Marsh Bone Wars, also known as the Great Dinosaur Rush (an intense period of scientific rivalry between two prominent paleontologists, Edward Drinker Cope and Othniel Charles Marsh), were fought here. The region's geological history spans millions of years, preserving fossils from various periods, including the Jurassic and Cretaceous eras.

The Garden Park fossil discoveries have played a pivotal role in expanding our understanding of dinosaur evolution, behavior, and ecosystem dynamics. Fossilized remains of some of the most iconic dinosaurs have been found here, often in exceptionally well-preserved states. These discoveries have not only contributed to scientific research but have also captivated the public, inspiring a profound appreciation for the Earth's history and the remarkable creatures that once roamed the area.

CSMS Group Calendar

Feb '24	Mar '24						
14 Feb	13 Mar	Fossil Group	2nd Wed	6:00 PM	East Library Annex	Kristine Harris Richard Villareal	719-593-1524 831-760-6985
1 Feb	7 Mar	Board Meeting	1st Thur	6:00 PM	Zoom	John Massie	719-338-4276
6 Feb	5 Mar	Pebble Pups	1st Tue	4:15 PM	East Library	David St. John	719-424-9852
15 Feb	21 Mar	General Assy	3rd Thur	7:00 PM	Co Sp Christian Sch	John Massie	719-338-4276
22 Feb	28 Mar	Crystal Group	4th Thur	7:00 PM	Co Sp Christian Sch	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 (Pete Modreski)

Feb 8-11: Tucson Convention Center. These are the dates of the original, "main" show, sponsored by the Tucson Gem and Mineral Society; many (literally, dozens of) other shows also take place in Tucson at multiple locations during the previous several weeks. One of these is the Mineral City Show, Jan. 26-Feb. 10, with about 170 mineral specimen dealers located in multiple adjacent buildings around 516 W. Lester St., Tucson. (One website lists 58 (or is it 60?) different shows; see https://shows.tucsongemshows.net .)

Feb 23-25: Denver Gem and Mineral Guild, Gem and Mineral Show, 10-5 Fri & Sat, 10-4 Sun, Jefferson County Fairgrounds, Exhibit Hall, 15200 W. 6th Ave, Golden. No admission charge. Dealers, club demonstrations, special exhibits, fluorescent display, door prizes, and more.

Mar 22-24: Fort Collins Gem and Mineral Show, 4-8 PM Fri, 9-6 Sat, 10-4 Sun, at The Ranch/Larimer County Fairgrounds, Thomas M. McKee 4-H Building; the Fort Collins Rockhounds Club 61st annual show.

May 4: 12:00-3:00 p.m., Colorado Mineral Society Silent Auction, held at Wheat Ridge United Methodist Church, Exhibition Hall, 7530 W. 38th Ave. (just east of Wadsworth). All are welcome to attend, and to bring specimens to sell in the auction (minimum donation of 20% of selling price to the club). Setup begins at 11 a.m.; there will be a vocal auction as well as silent auction tables.

May 18: 12:00-3:00 PM, Colorado Chapter, Friends of Mineralogy Silent Auction, held at Wheat Ridge United Methodist Church, Exhibition Hall, 7530 W. 38th Ave. (just east of Wadsworth). All are welcome to attend, and to bring specimens to sell in the auction (minimum donation of 20% of selling price to the club). Setup begins at 11 AM; there will be a vocal auction as well as silent auction tables.

June 7-9: Pikes Peak Gem and Mineral Show, at the Norris Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs, sponsored by the Colorado Springs Mineralogical Society. Fri. 12-7 PM, Sat 10-5, Sun. 10-4.

June 13-16: A Mineralogical Symposium, sponsored by the Colorado Chapter, Friends of Mineralogy: "Mineral Oddities: Pseudomorphs, Twinning, Inclusions, and more." As has been previously announced, the Friends of Mineralogy Colorado Chapter will be hosting a symposium in 2024. The 2024 Symposium webpage is now live, with dates and preliminary details: https://friendsofmineralogycolorado.org/symposium/. The symposium will include field trips on June 13, a mineral photography workshop on June 14 conducted by Jeff Scovil plus an evening reception at the Colorado School of Mines Museum, and lecture sessions on June 15 + half day June 16. The lecture sessions will take place in Berthoud Hall, CSM campus. All interested persons will be welcome to register to attend. For more information about the symposium as it becomes available please see the FMCC website.

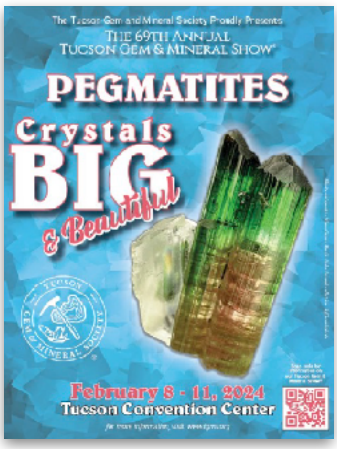
July 25-28: Fairplay Gem, Mineral, and Jewelry Show; Platte Drive, ½ mile west of US-285, Fairplay, CO; free admission and parking.

Aug 8-11: Buena Vista Contin-Tail Gem, Mineral, and Fossil Show, Buena Vista Rodeo Grounds; free admission and parking.

Federation News Post

American Federation of Mineralogical Societies
Rocky Mountain Federation of Mineralogical Societies

Visit the new AFMS Juniors Website! https://www.juniors.amfed.org/



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.

Secretary's Spot
John McGrath

2024 CSMS Officers

Alex Field, 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
John Massie, Past President

2024 CSMS Chairpersons

Shane Riddle, Program Coordinator
John Massie, Show Vol Coordinator
Kyle Atkinson, Field Trip Coordinator
Vacant, Science Fair Chair
Frank and Ellie Rosenberg, Librarians
Tina Cox, 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 18 Jan, Colorado Springs Christian School

Address: 4855 Mallow Rd, Colorado Springs CO 80907
Board Attendance: President: John Massie, Past President: Sharon Holte, Secretary: John McGrath, Member-at-large: Chris Burris, Member-at-Large: Bill Meyers, Editor: John Emery, Membership Secretary: Adelaide Bahr.
Agenda:

I. Meeting was called to order by our President John Massie at 7:04 PM
II. The Pledge of Allegiance was led by our President
III. Introduction of Guests: Robert Kern
IV. Introduction of New Members: Mike Simmons
V. Program Speaker - Kevin Witte and Austin Cockrell- "Two Mineral Fanatics Separated by 40 years." They met at a CSMS Golden Corral dinner 8 years ago. They discussed their Rock hunting beginnings, where they collect together and how to develop, maintain and display a collection. Their presentation was well received.
VI. There were 48 members/guests in attendance and 5 minerals were given out.
VII. Officer Reports
A. President - John Massie
1. The December minutes were approved by voice vote.
2. John thanked everyone for helping him through his 4 year tenure.
3. The 2024 Board was introduced and accepted by voice acclamation. John Massie moved to the immediate Past President position while Alex Fields took over as the new President. All other board members remained the same.
B. Vice - President - Shane Riddle, VP - Absent
C. Treasurer Ann Proctor- Absent
D. Secretary John McGrath - Present
1. The Memorandum of Understanding (MOU) with Western Museum of Mining and Industry (WMMI) is ready for signing. This initiative was pushed by the WMMI as no previous MOU could be found and they believed entrance into their facility for free by CSMS members was an unfair burden.
2. The key points for members in the MOU were that the WMMI would provide a free picnic area for the CSMS annual picnic and that 20 CSMS members would be admitted free on that day.
E. Membership Secretary - Adelaide Bahr, Present, No Report
F. Editor - John Emery. Present.
1. Members have been sending many articles for publication in the P&P and he encouraged that trend to continue.
2. He emphasized the even pictures with a short comment were good for publication.
G. Members at Large
1. Bill Myers - Present. No Report
2. Chris Burris - Present. He encouraged members who would like to learn the art of mineral collecting to contact him and he would be glad to accompany them to the Club's claims.
H. Past President - Sharon Holte, Present. No Report.
I. Website and Show Coordinator - Lisa Cooper, present. She provided an update on the Gem Show
1. Date - 7-9 June 2024 2. Location - Penrose Convention Center 3. Theme - Petrified wood
4. Handed out the postcard sized cards which members can distribute to friends, Family, co-workers, etc
5. Noted that Florence show moving to C Springs 1 month prior to our Show and we've been offered a display area.
VIII. Satellite Groups
A. Crystal Group - Kevin Witte present. He reported that the next meeting would occur on the next Thursday night at CSCS at 7pm. The talk will be on Garnets.
B. Faceting Group - John Massie reiterated that you only need to contact him to bring the machine to your house.
C. Pebble Group -David St John, Absent. The Club will continue to meet at the East Library at 4:15 pm.
D. Fossil Group -Kristine Harris and Richard Villareal stated that 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. Please call her on Sunday night after 6:30 pm to schedule an appointment. She believes the first dates will begin in April.
IX. Liaisons
A. Claims - Frank Rosenberg. Present. Nothing to Report. B. Field Trip Coordinator - Kyle Atkinson, Present. No dates locked in for Trips as of yet. C. Social Coordinator - Tina Cox, Present. She presented a sign up sheet for the Chili Cook off which would be held at the General Meeting in February. D. Store Keeper - Ann Proctor, Absent.
X. Unfinished Business - None discussed.
XI. New Business - Discussed previously
XII. Meeting adjourned by President John Massie at 8: 38pm

RESPECTFULLY SUBMITTED by **John M McGrath** MD COL (RET) USA

President's Corner

Alex Field
CSMS President

2024 Satellite Group Chairs

Kevin Witte/ Bob Germano, Crystals
John Massie/ Bertha Medina, Faceting
K. Harris/ R. Villareal, Fossils
Vacant, Jewelry
Sharon Holte, Lapidary
Vacant, Micro-mount
Vacant, Photography
David St. John Pebble Pups

2024 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 Alex Field:

Happy February Rockhounds!

I hope you're all doing well this month. My name is Alex and I'm excited to be serving the club in 2024. If we haven't met yet in person, please come say hello at our next meeting! I'd love to get to know you and hear about what rocks and minerals you love and why.

Our board and leadership team have some exciting plans for 2024, and lots of ideas and goals for how we can serve our membership and our community this year. In that spirit, if you have ideas for things we could be doing better, or differently, or if you want to help out with some of our meetings, events, or trips this year, come talk to me or shoot me an email anytime. We always need more volunteers, and ultimately this club is what each of us make it together.

I hope you join us on February 15 for our next general assembly meeting at the Colorado Springs Christian School. Also, if you've got any "recent finds" you'd like to share from your own digging and collecting over the last few months, please bring them in to show off and for all of us to enjoy. If we have time, we'll take a moment in the meeting to have you share your specimens, so we can continue learning from each other.

See you soon, and happy rockhounding friends!

Warm Regards,
Alex

Alexfield1@gmail.com

“How I Became a Rockhound” /
A Beginner’s Story of Mineral Hunting the Rockies
OR
“Obsessed with Amazonite”

By Alex Field

My obsession with mineral hunting in the expansive wilderness places of Colorado’s front range began by accident, and *in Oregon* of all places.

While the world still grappled with new strains of COVID19, our family rented a remote cabin in the woods near the Oregon Coast for a week. The cabin kept a shelf full of local interest books in the living room including one called *The Gem Trails of Oregon*. I scoured the map inside the book and realized there was a beach nearby known for its honey-golden colored Agates.

Even though I had no background in geology, I had a modest interest in rocks from childhood, so I organized a day trip to the beach for my wife and son. As we walked on the beach the next morning, an icy wind reared up, chilling us to the core as sand stung our faces, legs, and arms. About halfway to the agate spot, my wife and son abandoned the venture and returned to the car. I gave them the car keys so they could go to the store for supplies, while I continued my hike.

A few minutes later I began hunting in earnest, scouring the sand for any orange rocks I could see. Small piles of tumbled rocks sat in batches along beach, deposited on the sand after being tossed about in the waves. After half an hour, I’d found a couple potential specimens, which I deposited in my pockets. Then, I spotted an older couple hunting with shovel and bucket, so I asked them what they were looking for.

“Agates,” they said with beaming, windswept smiles.

“Have you found any yet?” I asked, nodding to their bucket.

They drew out a couple specimens, agates glowing as the sun shone through their strangely translucent skins. My finds were tiny in comparison, but I was entranced nonetheless. They directed me to to a more promising area down the beach and I moved on.

A couple hours after we’d left the car, I started getting text messages from my wife.

We’re going to go get some lunch now. Let us know when you get back to the parking lot.

But I was deep in the zone, and I’d lost all track of time.

As I hunted, I saw more of the ocean-polished agates amidst huge swaths of gray and brown pebbles and my pockets started to fill up. More text messages came in. More time passed.

Finally, with full pockets and overcome with a feeling of exhilaration despite having hunted much of the day, I hiked back to the car more than five hours after we’d parked.

When we got back to the cabin, I realized that my mind had entered into a flow state while hunting, clearing my head entirely. I hadn’t thought about work all day. My sister has described a similar feeling she gets on the beaches in southern California, where she finds tumbled sea glass, useful for handmade jewelry.

I determined that day that I wanted to learn more about the rocks and minerals of Colorado when we got home, and begin mineral hunting in our wilderness and mountains.

Continued …

COLORADO MINERALS

I quickly discovered that Colorado is one of most mineral-rich states in the US. I ordered a similar book called *Gem Trails of Colorado*, but it wasn't set to arrive for a week or so. So I googled "Colorado minerals" and saw that the Rocky Mountains are home to a wealth of mineral deposits unique to our state, as well as both precious and semi-precious gemstones such as tourmaline, amethyst, sapphire, zircon, garnet, and aquamarine, the Colorado State gemstone, as well as, rhodochrosite, the Colorado State mineral.

I learned that people pursuing this hobby of digging, collecting, and prospecting call themselves "rock hounds," and they usually spend their free time hiking while keeping their eyes open for cool rocks.

Online I kept seeing images of this mind-blowing blue-green feldspar mineral, growing in unique crystal formations, sometimes shown alongside dark, root beer-colored smoky quartz crystals—and the images arrested me, stopped me still.

Is that turquoise? I thought.

However, this particular mineral possessed a brighter, deeper color (sometimes), and to me, its formations were more impressive than any turquoise I've seen. I found that this stone is also quite rare and can be difficult to find, especially for beginners (like me).

Of course, it was amazonite. In geology books and journals from the early 20th century some geologists refer to it as *Amazon-stone*, because it was once believed to be found along the Amazon River in Brazil, a fact that is to this day unproven but thought to be false.

I don't know how I'd never seen amazonite before in my life, and I couldn't fathom why it wasn't more famous or well known amongst non-rock hounds. Soon after I saw it, I set myself a goal: I determined that I would find Amazonite in its natural habitat in our very own Rocky Mountains.

Even before the *Gem Trails of Colorado* book arrived, I embarked on several 5-10 mile hikes on our local trails in the foothills around Pike's Peak, my eyes peeled for the barest traces of this rare blue mineral. Reading up on Colorado Springs, I learned about the large mineral-rich area called the Pike's Peak Batholith, known for its granite formation, which creates highly mineralized locales featuring exceptional occurrences of quartz, fluorite, feldspar, goethite, onegite, topaz, and amazonite. Even more rarely, these minerals form together in awe-inspiring combinations that collectors prize for their color, contrast, and variety.

Once the book arrived, I used its maps and simple guidance to explore a dozen collecting areas, most of which had been thoroughly picked over by other hobbyists, but I still found no evidence of amazonite. Instead of giving up, I grew even more obsessed.

On any number of trails rumored to bear traces of amazonite, I searched high and low for weeks. I discovered that the further down the trails I traveled, the fewer people I saw, the deeper into the wilderness *off trail* I hiked, the more likely I was to find something interesting.

FIRST FIND

One morning I took off on a familiar trail I'd hiked many times before, but this time I packed additional supplies so I could hike further and hunt off trail longer. To add to the intrigue, I'd read about old mining sites a good ways up the trail.

Continued …

I hiked past the furthest point I'd explored on the trail, about three miles up where it got quite steep, and I kept moving increasing in elevation one step at a time. In time I came across a stunning Aspen grove where the trail turned right and went on higher up the mountain. Instead of following the path, however, I struck off along a creek and walked into a narrower forested canyon.

My eyes roved the ridgelines, looking for formations or indications of mineralization. I know now that I should be on the lookout for signs of white and clear quartz, or any angled crystal faces of any kind, and then follow those individual pieces of quartz (or float) uphill to see if it spilled out of a vein or outcropping in the mountainside. Rarer minerals often grow in or near quartz veins in the rock.

A mile or so up this canyon (and 4-5 miles from the trailhead), I came across an old stone and dirt foundation for either what used to be a cabin or camp site. I moved past this flat area, and started looking around near the creek when…*suddenly there it was*. Amazonite.

It's green-blue color was unmistakable. Amazonite is a kind of potassium feldspar (feldspar is a very common rock variety that most often occurs in a pink, white, or reddish color), sometimes called microcline. Studies suggest that the blue-green color derives from a complex combination of quantities of lead, lead monoxide, and iron in the feldspar.

And there it was right in front of me in piles of broken rocks, blue green streak in the rocks all around me. The area had since grown over with lush vegetation, so if you weren't looking for it, you wouldn't see it.

I saw a boulder the size of a small Fiat lodged in the middle of the stream, with a much larger and more prominent streak of blue amazonite striped across it length. More pieces of amazonite sat under hedges and at the base of trees. I found amazonite in the creek, and more spilling down out of a rock outcropping, presumably the source. Even though these pieces weren't high quality specimens, I felt elated that I'd achieved the goal.

Above: Amazonite and smoky quartz pulled out of the CSMS April Fool's claim by the author. *Photo: Alex Field*

Digging around the outcropping, I drew a few small pieces right out of the dirt, some of them a deep blue color that still stuns me when I see it come out of the ground. I spent a few hours hunting the area and brought a few pieces to bring home, then hiked the 4-5 miles back down the mountain. After some additional learning, I've since gone back to this area and filled in any holes I left, trying to return the natural environment to its semi-original state.

Even though most of these pieces came from the tailings (or leftovers) from someone else's old dig site, I felt a new appreciation for the land, the earth, and our spectacular mountains ranges in Colorado.

JOINING THE CSMS

I continued hiking and started to find amazonite all over the foothills of Pikes Peak.

In summer 2021, I joined the CSMS and quickly met a number of other similarly-obsessed people, and learned about reclamation and how to carefully clean the specimens we brought home. As you all know, our local club owns the rights to several mining claims, or twenty-acre parcels of public land we all get to explore and maintain.

Continuing to dig all through 2021 and 2022, I learned that amazonite often forms in veins running through rock, called "pegmatites," which you can follow to find voids in the rock in which larger crystals formed. I learned that tree roots sometimes search out these pockets (or miarolitic cavities) in search of underground moisture. Sometimes, these cavities form near the surface, but more often they are deeper underground and are difficult if not impossible for surface collectors or hand diggers to access.

The other truth came through experience: Finding these veins and pockets is highly unpredictable and difficult and rare, and some days rock hounds come home empty handed. When I go out hunting with others from the club, we always come home tired, dirty, and sore, and if we find a couple cool rocks, we call it a great day.

One late Fall day after another year or more of learning and hiking and researching and digging, I drove my Jeep up into the mountains for a solo dig day on one of our club claims in Lake George, CO. By this point, I'd made this hobby a regular practice that helped me clear my mind, get some exercise and fresh air.

On a previous hike exploring the claim, I'd noticed an area peppered with tiny hints of blue Amazonite showing up on the surface. After parking in my usual spot, I pulled out my gear and hiked out toward the spot I intended to explore.

As the sun rose, I walked carefully down a quiet path I'd used before until I heard a sound. Looking up, *I stopped suddenly*. Twenty yards in front of me stood a majestic stag presenting a large rack of antlers up into the air and watching me with dark eyes.

I watched him back calmly, not making any threatening movements. I've always considered seeing a deer in the wild to be an honor of sorts, so I paused and took a deep breath. He considered me for a moment, then calmly moved on down the mountain.

I made my way to the spot I'd identified previously, put down my backpack and gear, and searched around the area just the way I had on that beach in Oregon when I hunted for those honey-colored agates.

At the barest sign of the blue mineral, I began digging down carefully. I dug for a few hours, moving dirt into small piles and scanning

them for evidence of what might lay further below. After digging in one spot and finding nothing, I moved over and tried a new spot, where eventually the material got better and more colorful. Little bits of amazonite, an occasional smoky quartz crystal face.

I also noticed veins of amazonite streaking through part of the rock and heading lower down. Following these signs helped me zero in on the right area.

After a short lunch I started pulling out small mineral combinations. The first few pieces to come out were tiny pieces of amazonite attached to small crystals of dark smoky quartz, creating a lovely contrast in color with the blue set off against the black crystals. These combinations are exceedingly rare on a good day, so I felt an extra thrill.

Above: The central piece was pulled out of the CSMS April Fool's claim by the author. *Photo: Alex Field*

A few feet down, I saw a crack in the rock showing a slight opening. The crevice was filled with dirt and mud, and yet, I spied crystalline shapes and hints of color growing off the rock and into the cavity. Gently, I started to draw more pieces out of this pocket, many of them additional combinations leading me to start calling this spot "Combo City." Amazonite crystals grew all along the interior walls of the crack, forming alongside dark smoky quartz crystals, and other minerals, including a few specimens of a thorny, black-spined goethite, an iron-oxide based mineral. Each new piece was a thrilling discovery as I lay prone on the ground, head in the hole, completely covered in dirt and bringing out pieces one-at-a-time similar to specimens I'd only seen in pictures.

I did as much as I could as the sun went down, carefully packing everything up in a bag and a small basket, which I'd retrieved from the Jeep. Then I made my way home, tired and exhilarated once again. Later, I took some other club members back to Combo City, finding a few more pieces from the same area, including a nice pocket of smoky quartz crystals. Later, we reclaimed the spot, filling in the hole as best we could.

If I contracted the rockhounding bug years before while hunting agates on an Oregon beach, I really had the bug now. Now, whenever I've had a stressful week at work or at home, I head up into the mountains and find the flow state hiking and hunting deep in the heart of the wilderness.

About the Author

Alex Field has written and reported for *Los Angeles Times, Writer's Digest*, *Relevant Magazine*, the *Associated Press*, among others. Field grew up on the beaches of Southern California and today he and his family live along the front range of the Rocky Mountains in Colorado. He is an active member of the Colorado Springs Mineralogical Society.

REPORT
A Rockhound's Christmas Party
21 Dec 23

Christmas was a joy for CSMS rockhounds at Mt Carmel Vet Center Thursday night, Dec 21, 2023 where we had our annual Christmas party and "white elephant" gift exchange. This was our last meeting in the Veteran Service Center and future meetings will be held at Colorado Springs Christian School at 4855 Mallow Rd mid-town. Before dinner, we announced our rockhounds of the year and presented their awards. Congrats to our best rockhounds, Kyle Atkinson and Sawyer Blizzard. Rock on! On the menu: Turkey, ham and many, many side dishes and desserts. Happy new year!

Makerspaces - Pikes Peak Library District

Tina Cox

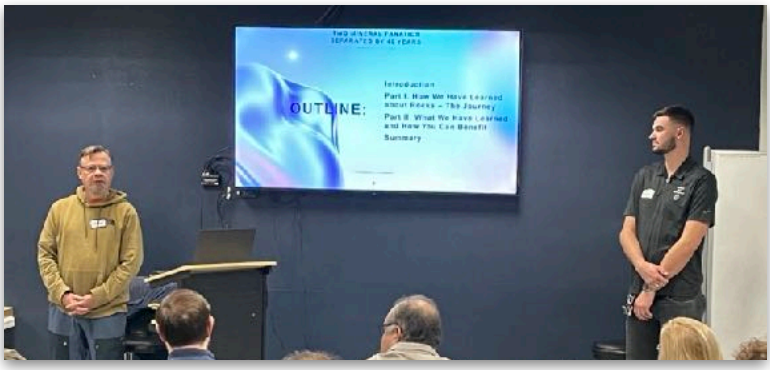
Did you know that the Pikes Peak Library District (PPLD) can add to the club's arsenal of lapidary tools? No, they don't have lapidary machines or slab saws. However, they do have laser engravers in their Makerspaces.

Perhaps the term "Makerspace" is new to you. A Makerspace is a room within the library that offers free access to various tools/equipment such as sewing machines, 3-D printers and laser engravers. It is also a fantastic place to meet creative people! To access a Makerspace, an individual must be a library card holder. Many of the pieces of equipment (laser engravers included) require annual "badging" to use. This is accomplished by taking an online course specific to the desired piece of equipment. Equipment use requires reservations. Reservations can be made online. Each Makerspace is staffed with a library employee who can help you if you encounter issues of have questions about how to use the equipment. The library patrons utilizing the Makerspaces are also very knowledgeable and helpful.

General information about PPLD Makerspaces, links to individual libraries' Makerspaces and access to the reservation system can be found at https://ppld.org/makerspaces

Laser engravers can be used to engrave a wide variety of items – wood, cork, glass, even fabric. Of course, rocks can also be engraved. The resulting product depends on the type of rock. Some engravings are dark while others are light. Also, the texture of the rock will determine, in part, how finely detailed of an image may be engraved. The lasers owned by PPLD Makerspaces are Epilog Lasers, and they offer a photo gallery of some engraved stone projects at https://www.epiloglaser.com/how-it-works/laser-photo-gallery/stone/

To the right are some examples of rock engravings I have made. Whether you simply want to label a rock with its location of origin or create a detailed work of art, the free lasers at our local libraries are a fantastic (and FREE!) resource you should consider utilizing. The possibilities of what you can create are limited only by your imagination.



REPORT
General Assembly
18 Jan 24

53 hardy rockhounds gathered on a beautiful, bitterly cold starry night (windy too) to talk about rocks, at Colorado Springs Christian school, the new meeting place. The guest speakers were Austin Cockell and Kevin Witte, local club phenoms and rockhounds extraordinaire. Thanks Kevin and Austin! The new meeting place was fun and cozy with the high school vibe, plus the meeting room is far away from the principle's office. CSMS president John Massie performed his last official acts when he installed the new board and adjourned his last official meeting. New CSMS prez Alex Field presented a certificate of appreciation to John for his amazing service to the society during COVID and his 5-year tenure. Thanks John Massie, for everything. We gave out free minerals to new members and guests, plus the raffle.

Rock Hounding the Lake George Intrusive area of the Pikes Peak Batholith – Teller County, CO

By Kevin Witte

A new discovery rock hounding, is it possible? In the fall of 2023, I attended a Colorado Springs Mineralogical Society (CSMS) Club sponsored field trip to one of Joe Dorris's claims. Joe is a local miner who allows Clubs, by appointment, to prospect his claims. I spent the morning prospecting a hillside that many had dug before me. The mineralization signs on the surface of the hill looked promising. I reasoned that if others had dug here, maybe there was something someone had missed or overlooked for me to find. There were gemmy shards of quartz and light blue/green chips of amazonite left by others long ago. Some machine digging had also been done. Mother Nature was eroding away a bit of the side of one of the machined pits. I decided to check the old dig. The pit was about 6 feet deep. Near the bottom of the pit-wall I noticed a bit of yellowish clay. The yellow clay contrasted sharply with the greyish/brown surrounding scree. I stuck my pickaxe into the yellowish clay and was soon in a thin seam of microcline crystals. I began an adventure that lasted a few days—could this be the Mother Lode?

I followed the yellow clay seam until it intersected with a larger formation of quartz and formed a pocket of crystals. The pocket was filled with smoky quartz crystals that were covered with purplish clay. Unfortunately, the crystals were nearly all broken and deeply fractured. A few single microcline crystals showed a bluish tint to them, so I knew I had amazonite.

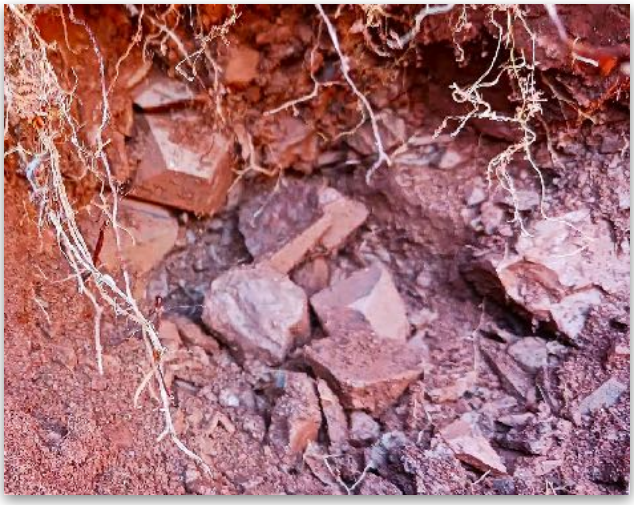
I probably pulled out a couple hundred quartz crystals that day, but only a few crystals were collectible due to damage. I decided to give this dig a name, and it will hereafter be referred to as the Eclipse pocket. I found the pocket a day before an annular eclipse and came back to the dig a day after the eclipse.

After cleaning out the large pocket I retraced my excavation and followed some quartz shards to my left. The broken-up shards of quartz led me into a small, but nicely formed pocket of gems. I got a few complete smoky quartz crystals from this pocket and a well-formed, albeit small, amazonite smoky quartz combination specimen.

As I finished the day I sent my good friend Bob into the dig to see what he could find, while I sorted and packaged my finds. Bob

pulled out some fluorite and interesting pseudomorphs. I was barely able to keep up with what Bob was pulling out. Pseudomorphs are minerals that replace other minerals, taking on the original mineral's crystal form. The new crystal has the form of the original. (See Twinning, Polymorphism, Polytypism, Pseudomorphism (tulane.edu)). I was finding quartz in rhombic forms, suggesting to me that the quartz was replacing a carbonate mineral, maybe siderite? At the end of the day I showed Joe Dorris my finds. He was a bit surprised by the odd pseudomorphs.

I returned a few more times to the site with permission of the claim owner and was never disappointed. It seemed I would just finish up one pocket of crystals when another pocket showed itself. I believe there were 5 distinct pockets of crystals. Minerals in all 5 pockets were covered in a purplish clay. While I was digging, as soon as I saw a change of color (reddish brown to purple), I knew I was coming into another pocket of crystals.



None of the additional pockets came close in quantity or quality to the crystals I found in the first pocket. All the other occurrences had amazonite, purple fluorite and pseudomorphs of quartz after a carbonate. I found very few smoky quartz crystals as I progressed along the microcline formation/ pegmatite. It seemed like the higher up I dug along the pegmatite, the more faded out the amazonite became. Also, the purple color of the fluorite diminished in intensity.

I made sure to show Joe Dorris my finds, and he got a share of the minerals. I am a bit stumped on the rhombohedron shaped quartz pseudomorphs. I can't be sure what the original/replaced mineral was. Similar drusy quartz also encrusted some of the plates of amazonite, making epimorphs of quartz over microcline. The largest unknown is what kind of carbonate was dissolved and replaced with quartz. "The most common quartz pseudomorphs are those of calcite, barite, fluorite, and siderite" (https://www.mindat.org/glossary/pseudomorphous_quartz). The common theory among local diggers is that the carbonate was most likely a siderite. I guess I will go with pseudomorphs of quartz after siderite for now.

After finishing up digging out the Eclipse pockets, my next project was to clean my finds. The first step was to sort out all the fluorites to clean separately by hand. Next, I took the clay-enveloped minerals to a local car wash for a good soak and spray. After doing a secondary wash at home, I carefully examined my specimens for quality—no sense wasting time and energy cleaning minerals that are chipped or broken. While checking for quality I noticed some very odd crystals. I am used to finding quartz, microcline, fluorite, and goethite, but now I was looking at something different. Time to get out my microscope and take a closer look. I had seen black rod-like minerals before and reasoned this was columbite—Fe.

Another mineral looked a bit like zircon. After some consultation with subject matter experts, it was determined that the suspected zircons are actually xenotime.

Finally, I started cleaning the fluorite I set aside earlier. While cleaning clay from the fluorite, I realized that a piece I was cleaning was not fluorite at all but appeared to be barite. The barite fluoresces and even phosphoresces a light yellowish-tan under long-wave illumination.

Time to check my reference book, *Minerals of Colorado*, by E.B. Eckel, 1st Ed, 1997. Xenotime, an yttrium phosphate mineral, referred to as xenotime-Y, was first found by R.E. Ziegler in the Pikes Peak Batholith. This was corroborated by E.E. Foord and D.E. Kile (pg. 534). Columbite--Fe or ferrocolumbite was first noted in Teller

county by Lazard Cahn (pg. 161). L. Cahn was the CSMS Club co-founder and is the honorary Club president. Finally, barite. According to a Ray Berry communique, small well-developed barite were found associated with smoky quartz, microcline, and calcite in Teller County (pg. 92). No spectrographic or XRF analysis was conducted on any of my minerals. Long-time diggers and subject matter experts of the Pikes Peak Batholith helped me identify my finds.

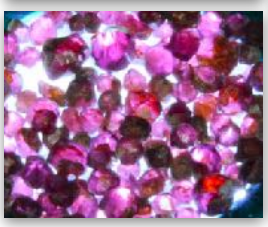
On behalf of all the local Clubs, I wish to give Joe Dorris a hearty thank-you for scheduling and permitting Clubs to organize field trips to his claims. Thank you also for allowing me the extra time and pleasure to dig out and finish a world-class pocket of minerals. Even though it is now the middle of winter, I need to contact our Club's field trip coordinator and get myself signed up for more fun during the upcoming rock hounding season!

About the Author

Kevin Witte has been rock hounding for 15 years and a member of the Colorado Springs Mineralogical Society (CSMS) for just as long. He joined the Club to find like-minded folk who enjoy a shared hobby and to hopefully find some interesting rocks. Fifteen years later Kevin is enjoying the friendships and the rocks of his labor.

REPORT
Crystal Group

At our January Crystal Group meeting our own Bill Myers gave a very interesting in-depth talk about Garnets including their chemical formula and crystallography.



Gillulyite: A Rare Thallium Arsenic Sulfosalt

Mike Nelson
csrockguy@yahoo.com

Those were the days my friend

In several of my P&P articles, I noted that my time in graduate school at the University of Utah (1967-1970) was intellectually exciting as well as personally full of satisfaction and "what more could I ask for." Within a 10-day stint in August 1967 I graduated with an A.M. from the University of South Dakota, drove all night to Kansas with my soon to be wife, got married, and headed to Utah with virtually no money; more grad school was waiting. I chose Utah since: 1) I wanted to live in the mountains; 2) Wyoming and Colorado could not fund my applications; and 3) the NDEA Title IV Fellowship at Utah was more money than I had ever made in my life. We were still rather "poor" but found an apartment for $70 a month; however, we could only afford payments of $35 every two weeks! But we found new friends (mostly students), and we were all in the same boat—not much money but excited about geology and our spouses (most of us were newlyweds).

Once upon the time there was a tavern,
Where we used to raise a glass or two
Remember how we laughed away the hours,
And dreamed of all the great things we could do?

Intellectually the University was an exciting place to be in the late 1960s—things, they were a' changin' in the world of geology. Plate tectonics, then better known as Continental Drift, was being discussed in every classroom. Armand Eardley, a professor in the Department, had published the best-known textbook on structural evolution of North America, and it was the "go to" book in the pre-continental drift days. However, he constantly brought in external speakers to discuss the new "theory" in his classes, the pros and cons. Exciting stuff!

Fridays were observed as days of field trips and/or research—we could walk to outcrops in the Laramide Wasatch Mountains bordering east campus. Evidence of Pleistocene Lake Bonneville was everywhere, and we could drive 25 miles or less to observe rocks of every geological period except the Silurian. Observing fantastic geology was an everyday experience.

Above: The campus of the University of Utah (2005) next to the Wasatch Mountains. Photo picked up from Pinterest: https://i.pinimg.com/originals

Lee Stokes, my major advisor, hauled his students all over the state since his Utah geological knowledge was legendary. Jim Madsen, my mentor, and friend was pulling all sorts of dinosaurs out of the Cleveland-Lloyd Quarry in central Utah. Others, such as Dick Robison took his advanced invertebrate paleo students out to the west desert to hunt for trilobites in the Cambrian rocks. We then had to write a "pretend" professional paper for publication. It was just a great time to be a student of geology.

Those were the days my friend
We thought they'd never end

The U.S. Geology Survey had a small office in Salt Lake City and their geologists were tromping all over the Intermountain states. As they traversed through the city, the department tried to nab them to "present a lecture on their work." Myself and my classmates were privileged to hear, and often meet, some of the most famous geologists in the

west. I remember one of the speakers was a USGS scientist by the name of James (Jim) Gilluly. I remembered his name since the grad students were expected to constantly read journals and other professional papers ("you really need to take a look at XX paper since it may show up on your exams") and one of these papers (USGS PP 150) was authored by Reeside and Gilluly describing the sedimentary rocks of the San Rafael Swell in central Utah. Now the Swell was every softrocker's favorite place for a field trip---and there were many.

Above: Interstate 70 cutting through Mesozoic rocks on the east side of the anticline known as the San Rafel Swell. *Photo: M. Nelson*

Gilluly also worked with Ralph Roberts and others in describing the Antler Orogenic Belt and the giant Roberts Mountain Thrust in north central Nevada (almost unknown events in the 1950s). But perhaps Gilluly's most interesting paper was published in 1968-- The role of geological concepts in man's intellectual development. Gilluly lived a long (1896-1980) and extremely productive life, and his name always sticks in my mind when thinking of those halcyon days of the late 1960s at the University of Utah.

We'd sing and dance forever and a day
We'd live the life we choose
We'd fight and never lose
For we were young and sure to have our way

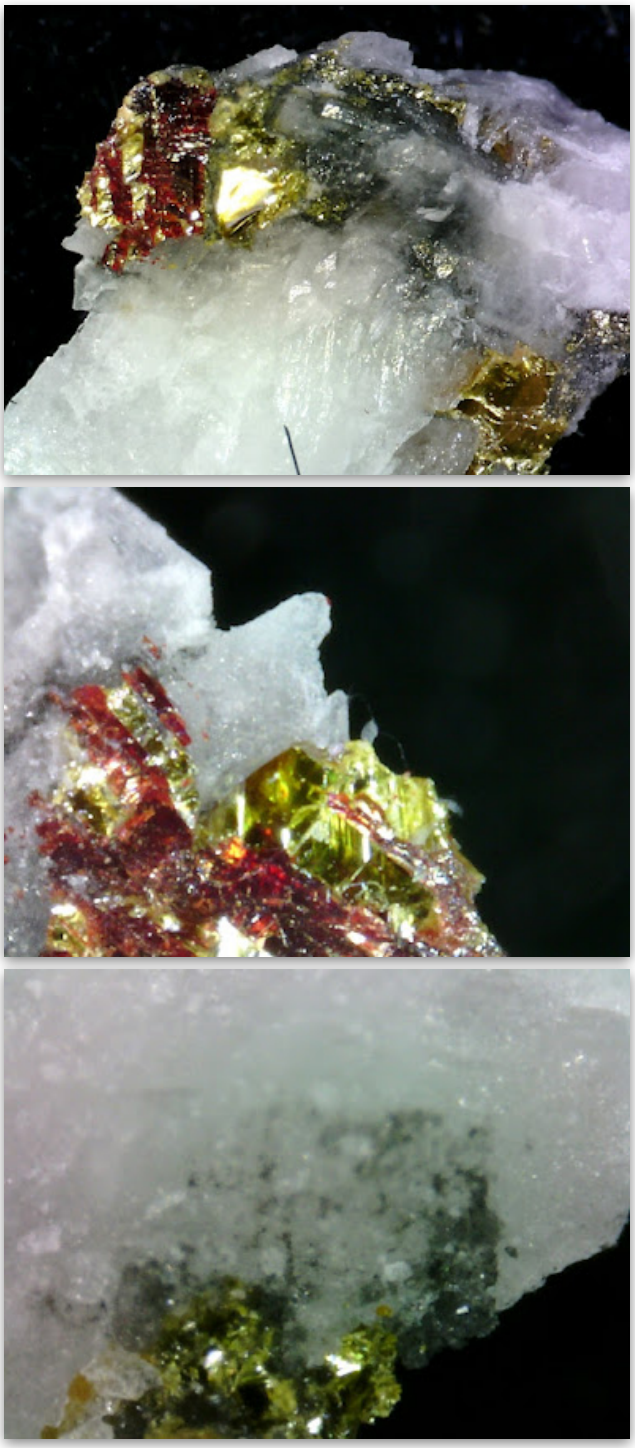
So, how does my reminiscing relate to minerals of any sort? Many/most readers realize that past editions often point out interesting tidbits about Utah minerals, and especially minerals named after instructors at the University: whelanite, stringhamite, and callaghanite. Well, a thallium arsenic sulfosalt mineral named gillulyite (after the Utah geologist) is certainly an interesting mineral (if nothing else for its thallium content) and one of the rarest in Utah (and most likely in the country). It also has an interesting collecting history, and the following paragraph was picked up from Lehigh Minerals in Bountiful, Utah.

"In 1990 five members of the club, Mineral Collectors of Utah, went on a field trip to the Lulu Cut in the South Mercur Pit of the Mercur Mine in search of thallium minerals. An odd-looking red mineral that looked different than Realgar was found. Two members searched for crystals, only ever finding 3 specimens with small crystals. One of which is pictured on mindat.org . The three other collectors collected a few flats of specimens of the strange mineral with dark red cleavages. Dr Jim Wilson from Weber State was one of the three and the analysis done the next day did not match any known mineral species. Going back the following day to collect more specimens, he was disappointed and found the Barack mining

operation mined through the collecting area and the new level was 30 feet below the area of the new mineral find. Nothing more was able to be collected. The mineral became Gillulyite with the Lulu Cut being not only the type locality but still the only locality to this day in the world. One collector sold his specimens at the next Denver and Tucson shows. These are the source of specimens currently held in collections worldwide. The mine geologist collected some superb Lorandites at another location at the mine but was present when the club was there and also had a few Gillulyites. Scott Klein and Rob Lavinsky handled these several years ago. I was able to acquire the specimens that Jim Wilson collected that day. These vary in size from thumbnails to large cabinet specimens."

I have recently corresponded with Jim McEwen, the proprietor of Lehigh Minerals, and amazingly he still has about seven specimens of this 30-year-old find sort of hidden away, but available for sale! They are listed on the Lehigh Minerals home page.

Gillulyite [$Tl_2(As,Sb)_8S_{13}$] is a dark red in color, like many mercury minerals, is soft at 2.0-2.5 (Mohs), has an adamantine luster that commonly tarnishes to a metallic luster. It needs to be protected from light as the mineral will turn such a dark red that it almost appears black. Crystals (Monoclinic Prismatic) are rare (some crystals shown on MinDat), and most specimens appear massive (and all are small). At Mercur, gillulyite is often associated with baryte ($BaSO_4$), orpiment (As_2S_3), and realgar (As_4S_4). As a sulfosalt the elements in gillulyite are: a metal (thallium), a semi-metal and/or tin (arsenic + tin), and sulfur—$Tl_2(As,Sb)_8S_{13}$.



Above: Bright to dark red gillulyite with yellow orange orpiment on a baryte matrix. The FOV in the photos is ~4mm. The gillulyite fragments are sub millimeter and my camera had a tough time with focusing on the minerals, partially due to the bright refection of the orpiment. At any rate it is an extremely rare mineral from the Lula Cut, South Mercur Pit. *Photos: M. Nelson*

The Mercur Mining District is on the southwest flank of the Oquirrh Mountains, one of the easternmost ranges of the Basin

and Range Province, that dominates the western skyline at Salt Lake City (and also home to the famous Bingham Copper Mine). The initial mining at Mercur started in ~1870 with a high-grade silver deposit but soon faded and mining turned to cinnabar, the valuable major ore of mercury.

Early miners knew that gold was present at Mercur; however, the small flakes were invisible and tied up in dark gray to black carbonaceous, silty limestone. The gold could not be extracted with traditional mercury amalgamation processes (today we know Mercur as a Carlin Type Deposit).

About 1890, as the mining was about "done for" a couple of the investors decided to try a new process rumored to be effective—cyanide leaching. And it was successful for by 1897 the Golden Gate Mill at Mercur was the largest cyanide mill in the U.S. and operated until ~1913. After that date the gold production was intermittent with starts and stops by various companies.

By 1983 Getty had established a very successful, large open pit with a cyanide heap leach operation. Barrick Gold acquired this operation in 1985, added some additional equipment and produced ~ 100,000 ounces of gold per year until reserves became exhausted in 1995.

The mines have now been reclaimed and gillulyite is gone forever from Mercur (the official Type Locality is Lulu Cut, South Mercur Pit) and has never been located elsewhere. As for the Mercur Mining District, it was Utah's largest primary gold mining district, "despite the fact that no gold was ever recognized in hand specimens" (Utah Geological Survey). I tried to visit the dumps in the early 2000s but was turned away by signs, fences, and "guards."

Then the busy years went rushing by us
We lost our starry notions on the way
Oh, my friend, we're older but no wiser
For in our hearts, the dreams are still the same

— Songwriter Gene Raskin
— Singer Mary Hopkin
(1968)

ENDNOTE:

You can't reminisce too much. Because you've got to keep pushing forward, you know?

— Daniel Caesar

About the Author

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.rmfms.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.

PICK & PACK
THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Classifieds & 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. The newsletter is produced in Mac Pages.

e-mail the editor:
pickandpackeditor@gmail.com

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

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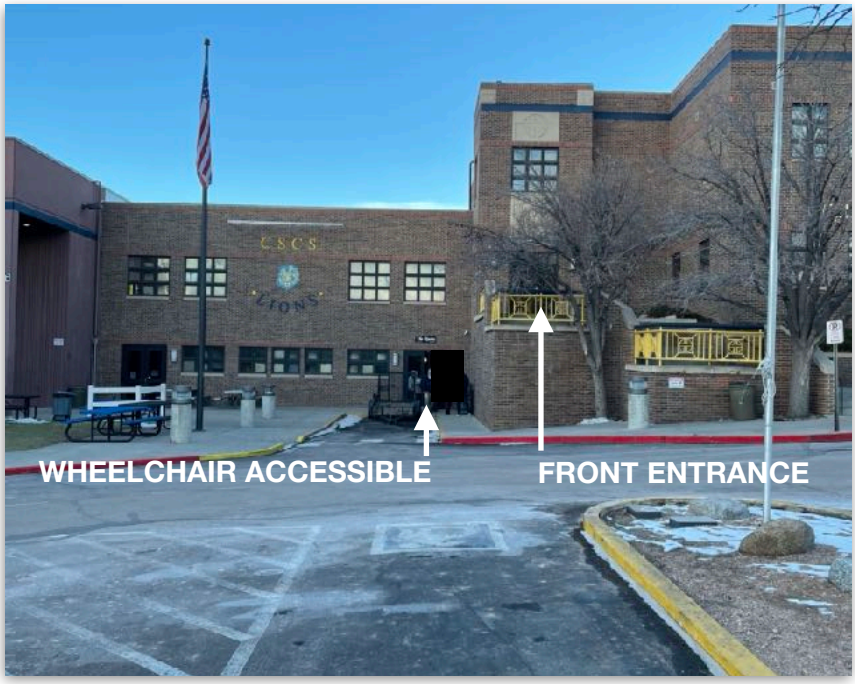
New Meeting Place

General assembly will be held at a new meeting place:

Colorado Springs Christian School
4855 Mallow Road

Find David St John by the front door at the top of the stairs, to the right of the flag pole, see the pic below.



Front entrance to the new CSMS meeting place at Colorado Springs Christian School

CSMS T-Shirts, Badges, and Pins
are available for sale.

If you celebrated a CSMS anniversary, you are eligible for your one year pin award!

Please contact the CSMS Storekeeper, Ann Proctor:

annmgmt@msn.com

Dreams in a River of Gold

Beside the meandering stream,
a prospector worked his gold pan
while water tumbled over
smooth granite boulders.

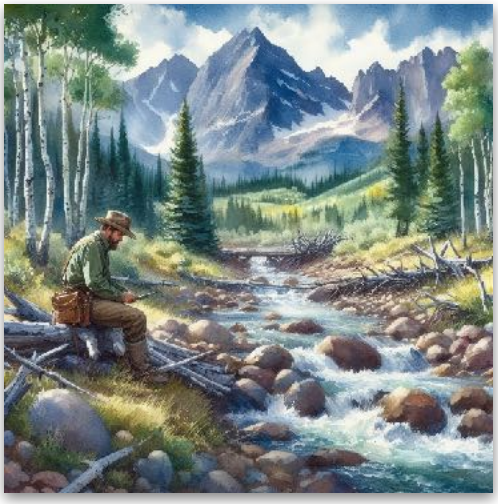
Here the mountain stream
grew deeper in its channel
and formed pools, a likely place
for gold to settle.

The prospector tirelessly shoveled,
sifted, screened, and panned—
then picked gold nuggets
from the black sand in his pan.

Laboring by the stream, he knew why
he left home, saying goodbye—
swapping his life for one on the frontier,
a life of hardship, danger, and brutal work.

The reason was clear when he bedded down
by a crackling campfire, under a cold
sky filled with stars and a half-moon.
As he slept, next to the stream,
the aspens whispered dreams
making a strike, taming a new land,
and building the West.

By Steven Wade Veatch



The author created this AI image with the assistance of Microsoft Bing

Established 1936
MINERALOGICAL SOCIETY

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**.** 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), 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
- Rocky Mountain Federation of Mineralogical Societies (RMFMS) www.rmfms.org