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 66 No. 5
June 2026

CSMS General Assembly

Thursday, June 18, 2026 7:00 PM
Colorado Springs Christian School
4855 Mallow Road

~ New Member Welcome ~ and Orientation

Members are encouraged to bring specimens for help with identification and/or to share with us. Also feel free to bring refreshments.

In This Issue …

Society Business Pages	1 - 5
Pebble Pups	6 - 7
Poem - David ST John, *Rocks Told from Past to Present*	8
Article - S.W. Veatch, *Thirty-Eight Years of Unearthing Stories*	9 - 11
Poem - S.W. Veatch, *Smilodon: A Primal Portrait*	12
Article - Mike Nelson, *Johannsenite and Nickle & Dime Novels*	13 - 18
Field Trip pics - Magnetite Ridge	19 - 20
Classifieds and Announcements	21

New Member Welcome

June 18, 2024

New members! You just saw the rock show, now come out and meet fellow rockhounds this Thursday June 18, they're excited to meet you. Tables will be set up with experts on hand to explain various groups and activities, as well as samples to learn about to get you started. We hope to see you there! Refreshments will be served.

President's Corner

Alex Field
CSMS President

2026 CSMS Officers

Alex Field, President
Shane Riddle, Vice-President
Phil Sevenants, Secretary
Kevin Witte, Treasurer
Adelaide Bahr, Membership Secretary
Lisa Cooper, Show Chairwoman
John Emery, Editor
John Massie, Past President
Maureen Richardson, Member-at-Large
Austin Cockell, Member-at-Large

2026 Liaisons

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

2026 Satellite Group Chairs

Austin Cockell, Crystals
Randy Hurley, Faceting
K. Harris/ R. Villareal, Fossils
Teri Adams-Fjellman, Jewelry
Sharon Holte, Lapidary
Vacant, Micro-mount
Fran Anderson, Photography
David St. John Pebble Pups

2026 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
Vacant, Social Chair
Vacant, Store Keeper
Lisa Cooper, Webmaster
Shane Riddle, Facebook Keeper
Mike Nelson, Federation Rep
Vacant, Federation Rep

Non-officer Positions

Mark Mann, Creative Director

Presidential Matters

Happy June, rockhounds!

Well, we just finished up our annual Pike's Peak Gem, Mineral, & Jewelry Show this past weekend, and a good time was had by all!

We saw just under 2,400 people come through our doors over the course of the weekend, we hosted over 60 vendors, held a *very* successful silent auction (which funds students scholarships), and signed up over 40 new members to the CSMS.

If you volunteered to help out at the show this weekend, I just wanted to to thank you! Your hard work made this show a special one for so many people.

Remember, for our next general assembly meeting on Thursday June 18th at 7 pm, we'll have a table set up for every group in our society, so group leaders can talk about their group with members and visitors, and especially brand-new members who signed up at the show. If you're a group leader, feel free to bring pictures, an email list sign up, and other things from your group to show and tell.

Finally, since we are well into June now, if you want to sign up for any of our summer field trips, check out our field trip site at CSMS.tectonictreks.com.

Thanks everyone. Happy rockhounding!

Regards,
Alex

Alexander Field
alexfield1@gmail.com
CSMS President

Secretary's Spot

Phil Sevenants

CSMS General Assembly Minutes

7 PM, Thursday May 21, Colorado Springs Christian School

Address: 4845 Mallow Rd, Colorado Springs CO 80907

Attendance: President: Alex Field - Present; Vice President: Shane Riddle - Present; Editor: John Emery - Absent; Past President: John Massie- Present; Treasurer: Kevin Witte - Present; Secretary: Phil Sevenants - Present; Member-at-large: Maureen Richardson- Present; Member-at-large: Austin Cockrell - Absent; Membership Secretary: Adelaide Bahr - Present; Show Chair: Lisa Cooper - Present

Agenda:

I. The Meeting was called to order by our vise-president, Shane Riddle at 7:04 PM
II. Alex led the club in the Pledge of Allegiance
III. Speaker was Shane Riddle -"The Franklin Mineral District - The Fluorescent Mineral Capital of the World- Franklin, New Jersey"
IV. Meeting
  A. Visitors (5)
  B. Attendance was 69
  C. We gave away 6 mineral specimens as a door prize.
V. Officer Reports
  A. President – Alex Field: No report
  B. Vice President – Shane Riddle: next month (June) Trade show – all the groups show what they have.
  C. Treasurer – Kevin Witte: Tax Return done
  D. Secretary – Phil Sevenants: Google Workspace update
  E. Membership – Adelaide Bahr: QR Code for Membership signup
  F. Editor – John Emery: No report
  G. Members at large – Austin Cockrell: No report
  H. Members at large – Maureen Richardson: No report
  I. Past President – John Massie:
  J. Show and website coordinator - Lisa Cooper:
    1. Sign-ups.
    2. Pipe and drape setup will be done and just minor adjustments (Thur @4pm)
    3. Need people with trucks to get stuff from storage (2 mi away) to Penrose.
    4. Other setup starts at noon.
    5. Need lots of people for teardown (4pm - 8pm).
    6. QR Code for door prized
VI. Satellite groups
  A. Pebble Pups Group – David St John: no report
  B. Photography Group – Fran Anderson: no report
  C. Fossil Group – Richard Villarreal: Continues to meet on 2nd Wednesday, at East Library at 6 -7:30pm. Bring your fossils and the group will try to identify them. Richard brings his microscope to help identify fossils.
  D. Jewelry Group – Teri: 4th Wednesday at 6PM - fire station 19 on Research Parkway
  E. Crystal Group – Next meeting See calendar Interesting Hands on event. Bring specimens for identification
  F. Faceting Group - Randy Hurley: No meeting in June
  G. Lapidary Group - Sharon: no report
VII. Liaisons
  A. Scholarships – Maureen Richardson: Several applications received. Money from silent auction goes to scholarships.
  B. Fundraising - Maureen Richardson: May be asking for money.
  C. 32 Auction: A way to fundraise
  D. Club Library – Frank and Ellie Rosenberg: No report
  E. Claims – Mike McCarthy:
  F. Hospitality – Eric and Sherry:
  G. Field Trips – Kyle and Shelby Atkinson: Canon City Garnets and May 30th needs a leader.
  H. Lapidary Program and Club Loaner Equipment – Pat Malone: The machines are currently available.
VIII. Unfinished Business – none
IX. New Business — none
  A. AJ 101 first and third Monday 6:30 to 9:00 first one is 1 & 3 Monday of the month at Manitou Springs Library
  B. Explanation of our insurance coverage is needed.
X. Meeting was adjourned at 9:05 PM

Respectfully Submitted

Phil Sevenants
Secretary

Alex Field
President

CSMS Group Calendar

June '26	July '26						
10 June	8 July	Fossil Group	2nd Wed	6:00 PM	East Library	Kristine Harris Richard Villareal	719-593-1524 831-760-6985
4 June	2 July	Board Meeting	1st Thur	7:00 PM	Zoom	Alex Field	719-351-4897
2 June	7 July	Pebble Pups	1st Tue	4:15 PM	East Library	David St. John	719-424-9852
18 June	16 July	General Assy	3rd Thur	7:00 PM	Co Sp Christian Sch	Alex Field	719-351-4897
24 June	22 July	Jewelry Group	4th Wed	6:00 PM	Fire Station 19	Teri Fjellman	719-229-7759
25 June	23 July	Crystal Group	4th Thur	7:00 PM	Co Sp Christian Sch	Austin Cockell Kevin Witte (Alt)	719-323-4132
NO	NO	Faceting Grp		6:00 PM	Library 21c rm 6B	Randy Hurley	jrhurley2014@gmail.com
By appt	By appt	Lapidary Grp	By appt	By appt	Sharon's Garage	Sharon Holte	719-217-5683
8 June	13 July	Photography	2nd Mon	6:30 PM	Call Fran	Fran Anderson	719-494-7776

Community Events courtesy of the Colorado Scientific Society

June 11-15: Mineralogical Symposium, June 11-15 with the theme, "Colorado 150" to be held in Berthoud Hall, Colorado School of Mines campus. Registration is now open; information about the lectures, reception, field trips, museum tours and other events, and registration ($75 + $5.04 fee) is at:
https://events.humanitix.com/friends-of-mineralogy-colorado-chapter-2026-symposium-colorado-150

July 3-5: The Lake George Gem & Mineral Club Show is taking place Fri.-Sat.-Sun. July 3-5, 9-5 daily at a completely new (not in Lake George!) date and location, in Cripple Creek. It will be at 5th & Bennett Ave., in the parking lot near northwest of the Cripple Creek District Museum. Free admission and parking.

July 23-26: Fairplay Gem, Mineral and Jewelry Show, Fairplay, CO. Fairplay River Park Event Site.

July 30 - Aug 1: 10 a.m.-5 p.m., Creede Rock and Mineral Show, at the Creede Underground Mining Museum & Community Center. Free admission.

Aug 6-9: Contin-Tail Gem and Mineral Show, Buena Vista, CO, Rodeo Grounds. This weekend is also Gold Rush Days and the Burro Race in Buena Vista.

Aug 13-16: Woodland Park Rock, Gem & Jewelry Show, Woodland Park, CO.

Sept 9: Tues. Sept.14, Colorado Mineral and Fossil Fall Show, Delta Hotel, 10 E. 120th Ave., Northglenn, CO.

Sept 10-13: Denver Gem & Mineral Show + Hardrock Summit, The accompanying outdoor tents/pavilions gem & mineral show runs from Sept. 10-18. Westin Hotel Westminster, 10600 Westminster Blvd, Westminster, CO.

Sept 11 – Sept 20: Colorado Minerals, Fossils & Gems Show at the Denver Coliseum, 4600 N Humboldt St, Denver. Free parking and admission.

Sept 19-20: Grand Junction Gem & Mineral Club 80th Annual Gem & Mineral Show, (Sat. 9-5; Sun. 10-4), at the Mesa County Fairgrounds, 2785 US-50, Grand Junction, CO 81503. 40+ vendors, indoors and outdoors. Rocks, minerals, gems, fossils, geodes, jewelry, kids activities, grab bags, mineral identification, free parking, food trucks. Admission: $5 adults, $4 Seniors and Military, Kids < 12 Free. Show theme is "Celebrating the Dinosaur Diamond." More info: **https://www.grandjunctionrockclub.org/shows-fall-rock-show/**

The Colorado Scientific Society meets monthly, normally on the 3rd Thursday of the month at 7 p.m. at Calvary Golden Church, entrance on 14th St between Miners Alley and Illinois St in Golden. All are always welcome to attend the meetings, or to view the lectures via Zoom. The full schedule and a Zoom link (posted shortly before each meeting) are on their website, www.coloscisoc.org . The meeting schedule this year:

Sep 10: CSS Past Presidents' Dinner, Mesozoic Ecosystems, by Dr. Karen Chin; at Mount Vernon Canyon Club (reservations required)

Oct 15: Turtles and Mosasaurs, by Dr. Josh Lively

Nov 19: Poster Night, presentation by students & early career Earth Scientists

Federation News Post

American Federation of Mineralogical Societies
Rocky Mountain Federation of Mineralogical Societies

***Crack the News*: The AFMS Newsletter for Kids and Teens**

Adapted from an article by Dennis Gertenbach, CTN Editor

The latest edition of *Crack the News*, the AFMS newsletter written by kids and teens for kids and teens, is now available at https://www.juniors.amfed.org/ juniors-newsletter. In this edition, juniors from around the country wrote about wire wrapping, Petoskey stones, field trips to collect zeolites, thunder eggs, and trilobites, uraninite, obsidian, *Sacabambaspis* (a jawless fish from the Ordovician seas), and Cambrian trace fossils. It's wonderful to see the variety of rockhounding interests of the juniors in our clubs. Every junior who contributes to *Crack the News* receives a patch featuring George the Geode, the mascot of the newsletter. Be sure to send every junior in your club a copy to read. And encourage the kids and teens in your club to send an article, poem, artwork, or photos for the next edition. Details about where to send your contribution are at https://www.juniors.amfed.org/juniors-newsletter; just scroll down to the section "Calling all junior journalists, writers, poets, photographers, and artists..." Not only will your juniors receive a George the Geode patch, but they can share their knowledge and excitement about rocks, minerals, and fossils with kids and teens across the country.

Officers of the AFMS, proudly serving our seven regional federations:

President
Ronna Watkins
509-307-0957
<nfmsronna at gmail.com>
Tieton, WA

Past President
JC Moore
309-231-2116
<Jcmoore3rd at gmail.com>
Cuba, IL

President-Elect
Steve Henegar
615-714-3194
<stevehenegar at bellsouth.net >
Murfreesboro, TN

1st Vice President
Liz Thomas
918-671-0047
<mygemsrock at gmail.com>
Tulsa, OK

2nd Vice President
Tony Fender
626-807-5279
<arhfender at gmail.com>

3rd Vice President
Matt Charsky
703-522-7415
<mac2430 at comcast.net>

4th Vice President
Ron Carman
512-754-6587
<rrcarman at centurytel.net >
San Marcos, TX

5th Vice President
Jennifer Haley
<lacybuglane at napablogger.com>

Secretary
Donna Moore
309 789 6501
<MWFsecretary at gmail.com>
Cuba, IL

Treasurer
Mary Ann Ferguson-Rich
330 630 9625
<maferguson rich at gmail.com>
Tallmadge, OH

Reminder:
Advertise your Show in as many Free locations as possible!

- Local newspapers
- Current events sections!
- Local TV stations
- Community Calendars
- Other local shows

Advertise in the *Rock & Gem Magazine!*
Send the information in early so it's published in the magazine as well as online:
www.rockngem.com/showdate-submissions/

Above from *CFMS Newsletter,* April 2024

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.

CSMS Pebble Pups and Earth Science Scholars

fossilfun14@gmail.com

Pebble Pups and Earth Science Scholars

Pebble Pups and Earth Science Scholars May meeting theme was on Geoscience Careers called “Mine your Careers”. We learned about careers in geology, paleontology, volcanology, teachers/professors and many more opportunities in geosciences. We were surprised that Mining Lawyers make the most money in the industry, but when you are dealing with millions of dollars it makes sense.
I also continued this lesson at Edison Elementary School Career night with dozens at other booths like Space Force, Fire fighters, and Cheyenne Mountain Zoologists and (Emu) that looks like a dinosaur from the past.

wonderwoman627 at Pixabay

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

wonderwoman627 at Pixabay

CSMS Pebble Pups and Earth Science Scholars

Fossil Quarry field trip at Florissant

Pups/Scholars and club Field trip May 26 was amazing we had a mixture of pups and club members at the Florissant Fossil Quarry on the second day of the season. We found a bee, seeds, leaves, bugs, and a sequoia tree branch and buds. We all want to go back again and cure the fossil hunting bug the group caught with more hunting time. Some of us then went to the Florissant Fossil Beds National monument and museum had a fun picnic too. Here are few pictures of the group and our finds. Big Shout to Kyle for once again setting up an amazing field trip experience.

We hope to see you all for the upcoming rock and mineral show and visit all the amazing booths, venders, and our Pebble Pup's booth. Thank you for all the support and donations. We will have a pups meeting June 2nd at the East library 4:15-5:15. No July meeting but a field trip in mid/late July to replace the meeting TBA.

Rocks Told from Past to Present

By Three Generations of Poems combined into one M.W. ST. John, R. Rocky ST. John, D. Rockman ST. John
1900-2026

There are rocks of every dimension and shape
Rocks to be cut, buffed, and polished to a shine
Rocks to be collected, bought, and found
Rocks to be sorted, discarded, and shared

There are rocks as big as Uluru in Australia
Rocks can be as small as grains of Hawaiian sands
Rocks can be used to build nations like the U.S.A.
Rocks can tumble and fall like the Roman empire

Rocks tell the history of our Earth
Geologists study rocks and so much more
Rocks are formed in caves or washed from cliffs to the sea
Rocks can be smooth, rough, or in between

Many like the music called “Rock”
Rock festivals echo off the walls of Red Rocks, Colorado
My rock and roll hall of fame is in my house
Rocks are beautiful and music too our eyes and ears

Rocks reveal secrets and lessons from past to present
What other subject fills so many Pages?
Books on rocks pile so very high
Sharing this knowledge our family cannot deny

Thirty-Eight Years of Unearthing Stories

By Steven Wade Veatch

The Deepest Secrets of the Earth

They say that a person starts writing to record history, but they keep writing because they've become a part of it. I still remember the physical toll and the sudden, breathless reward of a specific dig in the Colorado dirt: my rock-hounding partner and I had excavated eighteen feet down, a vertical journey through layers of time. Then, we found it.

Reaching into a fresh rock pocket, my fingers brushed against the cool, sharp faces of blue, blocky amazonite and smoky quartz crystals. The amazonite crystals were stunning. We found over 100 specimens; several amazonite clusters could cover a dinner plate. Some of the smoky quartz crystals were long, elegant scepters; others were stubby crystals larger than an apple. In that moment, I set aside the heavy metal tools for the delicate touch of wooden chopsticks or a small branch, gently coaxing these treasures from their dark berths.

That tactile connection to the Earth is part of the reason I have spent the last thirty-eight years writing for the Colorado Springs Mineralogical Society (CSMS) newsletter. For me, writing isn't just about documenting minerals, rocks, and fossils; it's about the human connection—the friends I have made through the CSMS, the field trips I have gone on, and the memories that fill a lifetime.

Above: Breaking into a pocket at the Red Elephant. A blocky cluster of amazonite crystals is being held in place by tree roots. *Photo date 1997 by S. W. Veatch.*

A Legacy in the Rock

I write a lot about Cripple Creek. My fascination with the "World's Greatest Gold Camp" isn't academic—it's ancestral. When I write about Cripple Creek, I'm not just tracing veins of gold; I'm tracing the foot-steps of my own family. Sharing stories of my great-grandfather, who worked at the Elkton mine, allows me to honor the grit it took for him to survive and prosper in the gold-rush atmosphere of the mining district.

The same holds true for Boulder County. Researching my grandfather's family and their time at the Caribou mine transformed a cold piece of silver ore into a warm family legacy. Through these articles, I've been able to bridge the gap between the modern collector and the pioneer miner, reminding our members that every specimen in a display case once represented a person's livelihood.

Above: View of the Elkton mine. My grandfather worked there for over 20 years. *Photo courtesy of the Cripple Creek District Museum. CCDM A82-143.*

My writing has taken me back to the stories of my grandfather, who was the personal private secretary for Spencer Penrose. Penrose made his first fortune in the goldfields of Cripple Creek and then his biggest fortune in the copper mines of Utah. My grandfather told me many "insider" stories about Penrose. After Spencer Penrose's death my grandfather worked for his widow, Julie Penrose, and then for the El Pomar Foundation until his retirement in the 1960s.

Left: Spencer Penrose reshaped Colorado Springs, transforming it into a destination city through landmark projects like the Broadmoor Hotel, the Pikes Peak Highway, and the El Pomar Foundation, leaving a civic and cultural legacy that still defines the region today. *Photo from the Collection of S. W. Veatch*

From Dinosaurs to Diamonds

Writing for the CSMS has granted me a "press pass" to explore the vast geological timeline of our state. Over nearly four decades, I've had the joy of diving into:

- Ancient Life: Documenting the delicate preservation of the Florissant fossils and the towering giants of the Garden Park dinosaur beds.
- The Mining Frontier: Recording the fascinating and often rowdy histories of Alma, Buckskin Gulch, Gilman, Victor, and other Colorado boomtowns.
- Exploring the diamond fields: Finding red garnets, bright green chromium diopside, and other minerals among diamond-bearing kimberlite pipes on the Colorado-Wyoming border.
- The Thrill of the Find: Sharing the technical and visceral excitement of field collecting topaz and amazonite across the rugged terrains of Park and Teller counties.

The Heart of the Society

While the rocks are the catalyst, the people are the soul. Some of my most rewarding experiences has been working with and being a friend of CSMS members for over 59 years. Recently, I have been writing profiles of past members of the CSMS, individuals who were the stewards of our hobby. By recording their stories, I ensure that their contributions to Colorado rockhounding aren't buried by time. We are a community built on shared wonder, and their stories are just as bright and faceted as the gems they collected.

Why I Keep Digging

People often ask how I haven't run out of things to say after 38 years of writing for the CSMS Pick and Pack. The answer is simple: the more you dig, the more you find. Every article is an excuse to explore a new wonder or unearth a forgotten narrative. Writing has turned my hobby into a lifelong quest for discovery.

I don't just write to fill a page; I write because, like the miners of Cripple Creek or my great-grandfather at the Caribou mine, I know there is always something precious waiting just beneath the surface. As long as there are stories left to tell in the shadows of Pikes Peak, I'll keep my pen—and my rock hammer—ready.

About the author: Steven is a geologist who joined the CSMS when he was 10, in 1965. The club met at that time at the old IBEW hall near the west side of the city. He was inducted into the Rock-hound Hall of Fame in 2015. His complete profile is available at:

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

Smilodon: A Primal Portrait

Smilodon from 1903. By Charles Robert Knight. Public Domain.

Ancient chills cling to the earth as a heavy silence descends
Beneath gnarled branches, the very air thickens with dread
Crouched in the shadows, the *Smilodon* prepares its assault
Draped in pale gold, it haunts the brush with lethal grace
Eyes, intently focused, fix on an unseen prey
Fangs, curved like ivory daggers, catch the light
Grim power vibrates through the coarse grain of its mane
Hunched shoulders ripple; a tidal wave of force held in check
Imposing in shadow, it carves a dark shape through the green
Jaws, built for the kill, remain locked in a terrifying calm
Killing intent burns deep, the singular spark in its soul
Low to the earth, it creeps forward—a silent, golden threat
Muscles coil like wire, every fiber primed for the attack
Near the tree line it waits, a phantom in its domain
Outlining the distance, it measures the distance of its prey
Powerful forelegs, anchored deep, prepare to launch the strike
Raw sinew stretches as the great cat breaks into a sprint
Saber-teeth, the namesake of terror, are bared to the sky
Thick-necked and brutal, it slams into the side of its mark
Unstoppable momentum carries the hunter through the kill
Vales and frozen forests echo with the sounds of the struggle
Warrior of a lost world, a living embodiment of prehistoric power
Xenacious hunger drives its existence, a constant, primal need
Yielding its spirit to the cycle of life, the titan stands tall
Zenith of its era, it vanishes into the mists of time

— Steven Wade Veatch

Johannsenite and Nickle & Dime Novels

Mike Nelson
csrockguy@yahoo.com

Two of my favorite classes in grad school were optical mineralogy and optical petrography. As the names imply, during the first semester we used petrographic microscopes to identify minerals as seen in thin sections. I have noted previously that I was never a stellar student in undergraduate mineralogy class, mostly due to crystallography. I just had, and still do, problems with visualizing and describing, three dimensional objects. Systems, Classes, Space Groups, symmetry, etc. just fogged up my brain. I was about ready to switch to another major, which would have been my fourth, when the crystallography section ended and we moved on to the physical, and understanding, aspects of minerals. Of course, in the spring semester I hit structural geology and stereograms/stereonets and about went bananas. Who thought up these objects of torture? Why was I being punished when all I wanted to do was hunt for fossils? Somehow, I advanced in the curriculum to "fun" courses like geomorphology, sedimentary geology, and the paleo sequence.

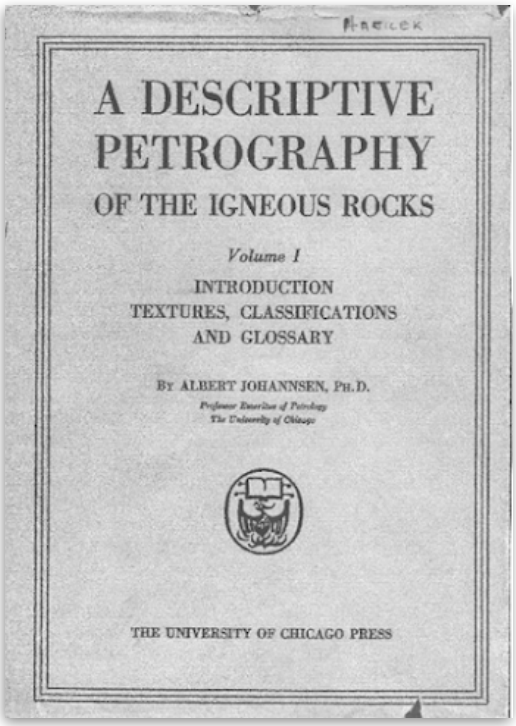
I was sort of terrified in moving on to grad school and finding out that the optical sequence was required for graduation. Then something happened—I loved the classes, the identification of minerals in the fall and following that with petrography in the spring semester where we learned how to better understand igneous and metamorphic rocks via examinations of thin sections. My life became much better, and certainly more exciting.

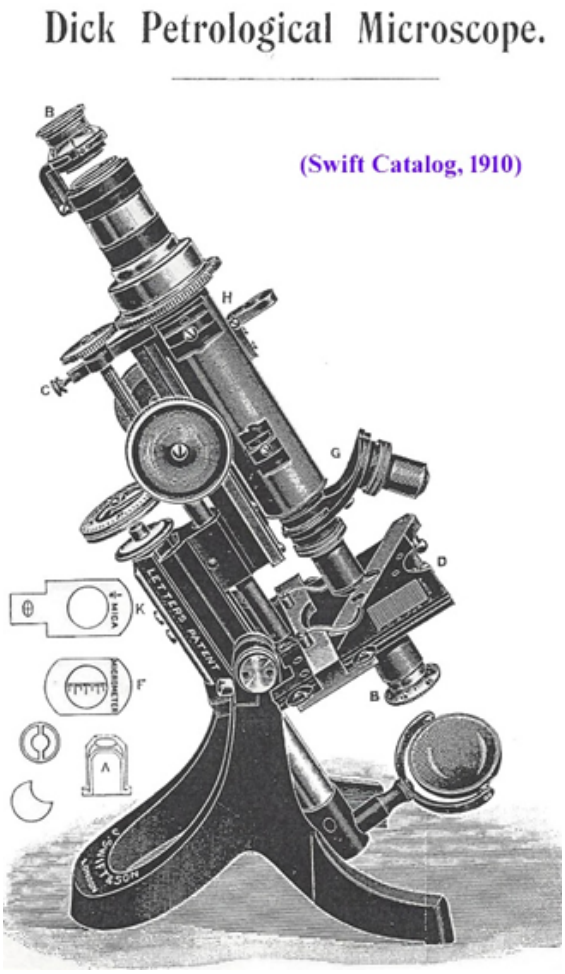
At any rate, our instructor owned several professional books that were available for use and stored in the lab. For some reason one particular go-to reference stood out in my mind: *Petrography of the Igneous Rocks* by Albert Johannsen, a Professor at the University of Chicago. Although Johannsen was no longer living in the mid-1960s, in those days I was awed by anyone teaching at Chicago, and certainly the Field Museum paleontologists who wandered around western South Dakota. Then there was the WOW factor, a commemorative plaque on campus stating: On December 2, 1942 man achieved here the first self-sustaining chain reaction and thereby initiated the controlled release of nuclear energy. The first self-sustaining nuclear chain reactor, an "atomic pile" officially dubbed CP-1 (Chicago Pile-1), operated under the stands of the former football stadium, Stagg Field. This pile of bricks and timbers was able to control nuclear fission. And so, the race was on and never stopped.

But the most remarkable item, at least in my young mind, was that Johannsen's tome consisted of several volumes, four or five at least. My just developing mind wondered how could one person write "so much"? As MinDat stated: "He established quantitative definitions of rock analysis and rock classifications as well as redesigning the petrographic microscope. His descriptive multi-volume Petrography of the Igneous Rocks is a classic in petrography. The scholarly opus has lasted through several editions, thousands of students, and even today can be located on web sites of used book sellers. Although numerous later authors have published multiple books on the classification and description of igneous rocks, Johannsen's works seem to be the father that started it all. Fortunately, today's authors have much more information supplied by modern electronic gizmos.

Jonannsen's original research appeared in over 40 scientific papers and books but his early contributions were papers dealing with improvements of the petrographic microscope, and how to identify minerals using a pet scope:

Determination of Rock-Forming minerals (1908), *Manual of Petrographic Methods* (1918), and *Essentials for the Microscopic Determination of Rock-Forming Minerals and Rocks in Thin Section* (1922).


A DESCRIPTIVE PETROGRAPHY
OF THE IGNEOUS ROCKS
Volume I
INTRODUCTION
TEXTURES, CLASSIFICATIONS
AND GLOSSARY
By ALBERT JOHANNSEN, Ph.D.
THE UNIVERSITY OF CHICAGO PRESS



J. Swift & Son, Dick 'New" Model Petrographic Microscope,1910.

J. Swift & Son, Dick Model Petrographic Microscope, 1891.

Johannsen, in his Manual of Petrographic Methods, described a number of different pet scopes and featured the Newer Dick Model shown above. Goren (date unknown; see references) stated that the first scope capable of "quantitative scientific work was undoubtedly the petrographic microscope by AB Dick, whose principle he described in 1889 and which was conducted in 1891 in the catalogs of the company Swift & Son (color photo above courtesy of Dr. Yuval Goren). The "Newer Dick Model" was illustrated in the 1910 Swift catalog. I was unable to find out if Johannsen used a Dick Model scope; however, since he was an admirer of German scholarship I would bet on a Leitz!

Johannsen retired in 1937 (b. 1871) and the remaining years of his life were spent in nonscientific pursuits. Evidently, he had an interest in the nickel and dime novels of the late 19th century. Actually, it was more than just “an interest” since he wrote two volumes of the well respected *The House of Beadle* and *Adams and Its Nickel and Dime Novels* (1950). In reading this sentence I became completely confused about who/what was Beadle and Adams. OK, the following information comes from Registry.clir.org/projects/2028/.

By 1864, Beadle & Adams had sold more than five million dime novels, making them one of the most successful publishers in the country. The secret to this success was undercutting rival publishers by selling novels for a dime, which was significantly lower than the going rate of a dollar. This was achieved by using inexpensive paper, exploiting cheaper postage rates for periodicals, and reprinting previously published works. Although their popularity waned towards the end of the century, they were among the most significant and innovative publishers of their time, single-handedly responsible for popularizing the dime novel format and playing an important role in the evolution of American popular fiction. Johannsen’s novel, *The House of Beadle* and Adams and Its *Nickel and Dime Novels* (1950), was a landmark work in the study of 19th century popular literature and publishing.

While working on his book, Johannsen amassed one of the largest private collections of dime novels and story papers in the United States, that was purchased by Northern Illinois University in 1967. This collection contains 6,593 publications issued by Beadle and Adams between 1852 and 1897. Johannsen's *The House of Beadle* and Adams and their *Nickel and Dime Novels* (1950), is one of the most significant works of dime novel scholarship and bibliography of the 20th century.

In 1932 W. T. Schaller, speaking at the December meeting of the Mineralogical Society of America, described a new manganese pyroxene that he was naming johannsenite “in honor of Professor Albert Johannsen of the University of Chicago.” Because Schaller wanted to study additional specimens that were showing up from several new localities, the official publication date of the mineral name did not happen until 1938 with the publication of W.T. Schaller, *Johannsenite, a new manganese pyroxene*: *American Mineralogist*, 23 (9) 575-582. To further confuse the issue, Schaller based his description on material from Tetela de Ocampo, Puebla, Mexico, and nine plus other locales. MinDat lists two localities in Italy and Franklin, New Jersey, as the Co-Type Localities. Lauf (2010) believes the locality at Puebla, Mexico, has the strongest claim for the Type Locality. Interestingly, rockhounds collecting in the western U.S. are partial to getting specimens of johannsenite from the Iron Cap Mine in the well-known Aravaipa Mining District, Graham County, Arizona.

Above: Crystals of elongate “pyroxene-like” crystals of johannsenite. Width FOV ~ 4.5 mm. *Photo: M. Nelson*

Above: Mass of slender, acicular crystals of johannsenite. Width FOV ~7 mm. *Photo: M. Nelson*

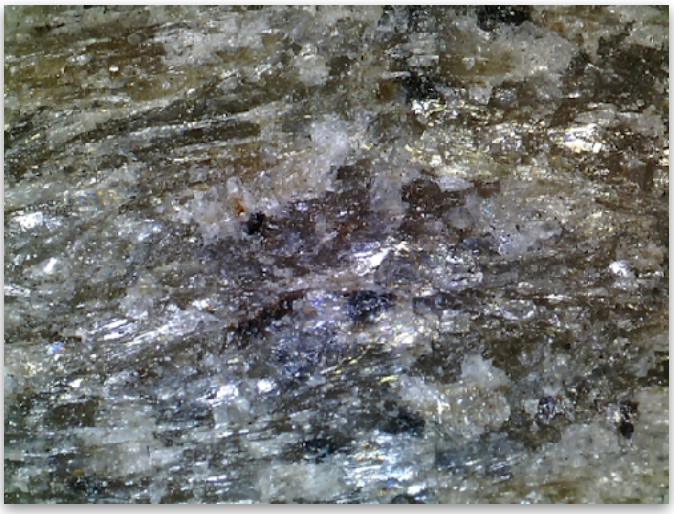
Above: Johannsenite, pyroxene-like crystals with white nekoite. Width FOV ~ 5 mm. *Photo: M. Nelson*

The Iron Cap Mine is a former surface and underground Pb-Zn-Ag-Cu-Au-Fluorspar mine where the major ores were sphalerite (zinc) and galena (lead). Mineralization is found in vein deposits hosted in the Horquilla Formation (Pennsylvanian) and the Pinkard Formation (Cretaceous). Some ore veins occur in faults between formations while others are found wholly in the limestone beds. The mine area also includes numerous intrusive veins of Cretaceous and Tertiary age cutting across Paleozoic rocks (Simons and Munson, 196).

Johannsenite is a somewhat uncommon calcium manganese silicate [$CaMnSi_2O_6$], sometimes containing iron, and is the dominant pyroxene from the Iron Cap Mine. The physical properties of johannsenite vary: color ranges from brown to black to gray to green to light blue to yellow to violet and others; it is translucent to transparent; the habit is massive to acicular needles to radiating aggregates to splintery; the luster varies from greasy to vitreous and the hardness is 6 (Mohs), although the acicular needle masses break apart easily. It usually forms in contact metamorphic zones associated with skarns. Johannsenite in my specimens is composed of massive green prismatic crystals or cleavage fragments (angles of 870 and 930 typical of pyroxenes). A second specimen of johannsenite from the Iron Cap has very dark green patches of acicular crystals.

Johannsenite is in solid solution with hedenbergite when the iron completely replaces the manganese [$CaFeSi_2O_6$] and with diopside as magnesium replaces the manganese [$CaMgSi_2O_6$]. In a process that somewhat confuses me, johannsenite alters to pink rhodonite (see Livi and Verblen, 1992, for a detailed report on this process.). The Iron Cap has produced hedenbergite associated with johannsenite but not diopside.

Above: Clear to white to reddish brown bustamite collected from the Langban ore body, Varmland, Sweden. Width FOV ~ 5 mm. *Photo: M. Nelson*



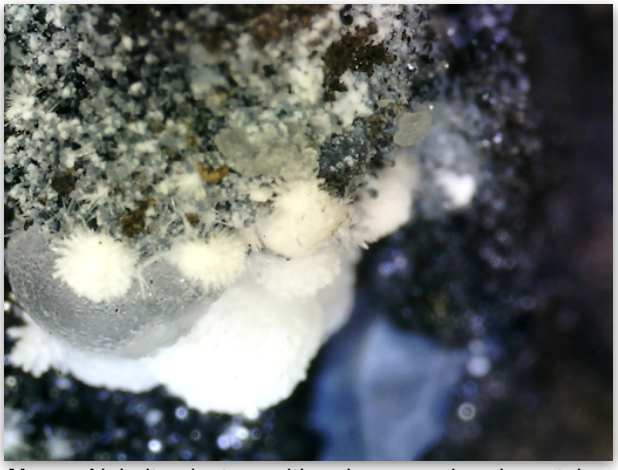
Above: Clear to white to reddish brown bustamite collected from the Langban ore body, Varmland, Sweden. Width FOV ~ 5 mm. *Photo: M. Nelson*

Bustamite [$CaMnSi_2O_6$] is the high temperature polymorph of johannsenite and usually forms where manganese -rich ore bodies are subjected to metamorphism/metasomatism, often in skarns.

Above: Crystals of manganbabingtonite with acicular crystals of johannsenite. Collected at Iron Cap Mine. Length of left largest crystal ~3 mm. *Photo: M. Nelson*

The temperature break is ~830 degrees C. Bustamite is associated with johannsenite at the Franklin Mine in New Jersey but not at the Iron Cap.

Finally, The Iron Cap Mine is also known for: 1) the magnificent crystals of manganbabingtonite, a rare Ca-Mn-Fe silicate [$Ca_2Mn^{2+}Fe^{3+}Si_5O_{14}(OH)$] that is the manganese dominant analogue of babingtonite; and 2) nekoite, a rare, white, hydrated, calcium silicate [$Ca_3Si_6O_{15} \cdot 7H_2O$] that was originally confused with the "zeolite look-a-like," okenite. **Neko**ite is an anagram of **oken**ite!



Above: Nekoite clusters with unknown colored crystal. Width FOV ~3 mm. *Photo: M. Nelson*

Above: Nekoite clusters with unknown colored crystal. Width FOV ~3 mm. *Photo: M. Nelson*

REFERENCES CITED

Goren, Yuval, www.microscopehistory.com; Retrieved December 2025.

Lauf, R.J., 2009, Collectors Guide to the Pyroxene Group: Schiffer Publishing, The Limited.

Simons, F. S. and E. Munson, 1963, Johannsenite from the Aravaipa mining district, Arizona: American Mineralogist, Vol. 48, No. 9-10.

Schaller, Waldemar T. 1938, Johannsenite, a new manganese pyroxene: American Mineralogist, Vol. 23, No. 9.

OF INTEREST

(taken from a Memorial written by F.F. Pettijohn). Johannsen was a Man of Letters and a Polymath.

Johannsen received a B.S. degree in architecture from the University of Illinois in 1894. He returned to school and received a B.S. in geology from the University of Utah in 1898. He then went to the Johns Hopkins University where he received his Ph.D. in petrography in 1903.

Johannsen was pre-eminent in the field of microscopical petrography. He probably was, in a sense, the greatest and last of the American school of petrographers. He is best known for his translation of Weinschenks' "Fundamental Principles of Petrology."

His original contributions appeared in some 40 papers in the technical journals. Chief of these is his quantitative classification of the igneous rocks. He set a standard of excellence that puts most contemporary scholarship to shame. In a sense Johannsen's scholarship was a kind of literary scholarship. He regarded a good rock description as something of permanent value

Johannsen was a collector at heart. At the time of his retirement, he left a superb collection of nearly 5,000 rock specimens at the University of Chicago. For most of these he had thin sections. Johannsen's collecting extended to many fields outside of geology including postage stamps, commemorative half dollars, U. S. vice presidential autographs, first editions of Charles Dickens' works including the MEMORIALS 457, famous Phiz illustrations, and dime novels.

He was an accomplished artist and as a student in Utah he drew the fashion plates for the Salt Lake City Herald. He was also skilled in oil painting. He was a photographer of merit and a Leica enthusiast long before 35 mm cameras became popular. This cultural heritage explains to some degree Johannsen's admiration of the best in German scholarship, his own mastery of German, and his unsurpassed works in the "Handbuch" tradition.

MISC

In 1967 many Ph.D. granting institutions believed that one could not be a geology scholar without understanding and reading German. Therefore, I spent a year trying (without high success) to read German and pass the “reading test.” I passed it. Wow. Next came French, and a pass.

I am thankful to Professor Yuval Goren for allowing use of his microscope photo taken from his tome. www.microscopehistory.com. This web site is an amazing and brilliant piece of work and readers should take a good look at this comprehensive history of microscopes.

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). But mostly he just tries to enjoy life with frosty IPAs, travel, and collecting mundane facts and pretty rocks/ minerals.

CSMS Field Trip Magnetite Ridge April 2026

CSMS Field Trip Magnetite Ridge April 2026

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

Classifieds & Announcements

Editor
John D. Emery

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

Pick & Pack is published ten 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*.

Western Museum of Mining and Industry

The CSMS and WMMI have a cooperative agreement. Be sure to visit the WMMI website and learn about this amazing museum.

https://wmmi.org/

WESTERN MUSEUM OF
MINING & INDUSTRY

When Earth Speaks

CSMS member Fran Anderson leads our photography group, but she also owns a photography business: **When Earth Speaks.** Be sure to visit her website at www.whenearthspeaks.com and if you want to learn more, join Fran at her monthly meetings, 2nd Mondays, 6:30 PM - see her group page for details.

Writing Projects - CSMS History

History buffs, we are producing a new edition of the CSMS history handbook originally produced by CSMS editor Ray Berry (Nov 5, 1928 — May 22, 2017). If you are interested in writing or researching for the book project, contact the editor at:

pickandpackeditor@gmail.com

American Federation of Mineralogical Societies

Code of Ethics

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

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

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

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

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

I will leave all gates as found.

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

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

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

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

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

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

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

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

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

I will appreciate and protect our heritage of natural resources.

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

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

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

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 Colorado Springs Christian School, 4855 Mallow Rd, Colorado Springs CO 80907
- 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, photography group, and Pebble Pups/ Juniors. For details on Satellite Group meetings, check out the calendars enclosed 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