PICK&PACK

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Colorado Springs Mineralogical Society
Founded in 1936

February 2016
PICK&PACK
Vol 56 ..... Number 1

CSMS General Meeting

Thursday, February 18, 7:00 PM

This month's speaker is Colorado Springs Utilities

Topic: Representative(s) will speak about the geologic considerations of building the Southern Delivery System

Refreshments provided by the Micromount Group

Inside this Issue:

CSMS 2015 Christmas Party Photos

Submitted by Frank Rosenberg










CSMS Calendar

February 2016

Tue., Feb. 2—Fossil Group, 7 p.m., Senior Center. Jerry Suchan 303 648-3410
Thu., Feb. 4—Board Meeting, 7 p.m., Senior Center.
Tue., Feb. 9—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719 495-8720
Thu., Feb. 18—Pebble Pups & Juniors, 5:30- 6:15 p.m., Senior Center. Steven Veatch, 719 748-5010
Thu., Feb. 18—General Assembly, 7 p.m., Senior Center
Thu., Feb. 25—Crystal Group, 7 p.m., Senior Center. Kevin Witte, 719 638-7919
Thu., Feb. 25—Faceting Group, 7 p.m., Senior Center. Paul Berry, 719 578-5466
Appointment Only—Jewelry Group, Bill Arnson, 719 337-8070
Appointment Only—Lapidary Group, Sharon Holte, 719 217-5683

March 2016

Tue., Mar. 1—Fossil Group, 7 p.m., Senior Center. Jerry Suchan 303 648-3410
Thu., Mar. 3—Board Meeting, 7 p.m., Senior Center.
Tue., Mar. 8—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719 495-8720
Thu., Mar. 17—Pebble Pups & Juniors, 5:30- 6:15 p.m., Senior Center. Steven Veatch, 719 748-5010
Thu., Mar. 17—General Assembly, 7 p.m., Senior Center
Thu., Mar. 24—Crystal Group, 7 p.m., Senior Center. Kevin Witte, 719 638-7919
Thu., Mar. 24—Faceting Group, 7 p.m., Senior Center. Paul Berry, 719 578-5466
Appointment Only—Jewelry Group, Bill Arnson, 719 337-8070
Appointment Only—Lapidary Group, Sharon Holte, 719 217-5683

The Senior Center is located at 1514 North Hancock in Colorado Springs. For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to our website, http://www.csms-web.org/

Other Events of Interest to CSMS Members

Submitted by Pete Madreski

These science fairs can use volunteers to be judges. Please consider volunteering to help if you can!

Friday, Feb. 19 is the **Denver Metro Regional Science & Engineering Fair**, to be held on the Auraria Campus, University of Colorado, Denver. You may register online to be a judge at http:/denversciencefair.com/ .

Thursday, April 7 is the **Colorado State Science & Engineering Fair**, held on the Colorado State University campus, Fort Collins. You may register to be a judge online at *http://129.82.204.188/csef/gaj/login.php*. For more information or with questions, please feel free to contact Nancy Glissmann, Grand Awards Judging Coordinator, GrandAwardsCSEF@gmail.com, , Colorado Science and Engineering Fair (CSEF).

February 2016

Jan. 30 – Feb. 13, Arizona Mineral and Fossil Show at the Hotel Tucson City Center, Tucson AZ. And of course, numerous other "satellite" mineral shows all around the city, during and before these dates.

(Continued on page 4)

CSMS UNDERGRADUATE RESEARCH AWARDS 2015-2016

Mike Nelson, Committee Chair

The primary goal of the Colorado Springs Mineralogical Society (CSMS) Student Research Grant Program is to promote and support original research on Colorado geology by undergraduate students. The grant program does not seek to cover all of the researcher's expenses but instead is viewed as a professional endorsement of their research endeavor.

Undergraduate students who are undertaking original research projects on Colorado geology are eligible to apply for CSMS research grants. Undergraduate students must be currently enrolled in degree-granting institutions and their research must be part of a degree requirement. The research proposals will be evaluated on the basis of the feasibility and scientific merit of the project, the abilities of the researcher, and the reasonableness of the budget.

For summer 2015 research projects CSMS made the following awards. The students will complete laboratory work during the 2014-2015 academic semesters and the projects will culminate in a written Senior Thesis required for graduation.

Miocene Magmatism in the San Juan Volcanic Field: Jackson Mountain Pluton

Michael Scott Vandervert; Fort Lewis College: $300

The Jackson Mountain pluton belongs to a suite of intrusive rocks that were emplaced from 27-25 Ma across the western San Juan Mountains; this 20 km intrusion is exposed about five miles east of Pagosa Springs. The pluton is broadly similar in composition to many intrusive masses of this age group, but it has a distinctive texture. The rock has phenocrysts and megacrysts of plagioclase and orthoclase that are up to several centimeters in dimension. These large crystals are set in a very fine-grained matrix giving the rock a distinctive porphyritic texture. No previous detailed petrographic studies have been done on the intrusive rocks in the Jackson Mountain stock. A crude zoning is recognized in the pluton, but details on the mineral assemblages and chemistry, rock chemistry and petrogenesis are lacking.

In many respects, the Jackson Mountain pluton resembles shallow plutonic rocks related to the Platoro caldera which is exposed about 20 miles east. In this investigation a detailed study of petrologic features, mineral association, and feldspar chemistry will be conducted on rocks from the Jackson Mountain pluton. Jackson Mountain stock contains abundant plagioclase and potassium feldspar crystals, with some measuring 70 mm in maximum dimension. They plagioclase appears to be late solidus plagioclase, with pronounced zoning along the rims that is presumed to be a less-sodic plagioclase or orthoclase. In addition the feldspar crystals have rounded shapes suggestive of resorption as a result of changes in temperature, pressure, or both.

The information gathered in this study will provide a basis for understanding of the compositional changes that took place during crystallization with insight into the petrogenesis and crystallization history of the Jackson Mountain stock. The stock shares similar mineral association and textural features as rocks exposed in eroded core of the Platoro caldera complex.

Crystallization Ages and Magma Source of Diabasic Dikes in South West Colorado

Ethan Coppage; Fort Lewis College: $450

This investigation will attempt to obtain a Uranium (U) Led (Pb) zircon age from two samples of dike rock. In addition, a comprehensive description of the mineral assemblages of these rocks, and identification of Samarium (Sr) and Neodymium (Nd) isotope data.

Collectively, these data will provide insight into when these intrusive rocks formed and the origin of the melt from which they crystallized.

Testing of zircons from each dike will be done at the University of Arizona. The Laserchron center staff has permitted the use of their Laser Ablation- Inductively Coupled Plasma Mass Spectrometer (LA-ICPMS) for Identification of U/Pb concentrations.

The accompanying investigation will be conducted at University of Colorado in Boulder. Analysis will be on whole rock samples rather than isolating Zircons. Sample preparation will take four weeks to complete so the University will perform that task. The testing done at Boulder will be ICPMS, here, concentrations of Samarium (Sr) and Neodymium (Nd) will be determined.

(Continued on page 4)

Age Determination and Petrology of Volcanic Clasts in the Telluride Conglomerate.

Joshua Mudge; Fort Lewis College: $500

The Telluride Conglomerate is an important rock unit in the tectonic evolution of the San Juan Mountains in western Colorado. Preserved within the matrix of the Telluride Conglomerate are volcanic clasts that contain insight into the timing and geologic events that were occurring during the deposition of the unit.

Our understanding of geologic history in the western San Juan Mountains from 40 to 5 Ma is improving from recent studies, but major gaps in our knowledge still remain. The Telluride Conglomerate records a period of erosion and stream development at about 30 Ma. The age constraint for this is based on detrital zircons in the sandy matrix of the rocks. At several locations within the conglomerate, there are intermediate to felsic clasts of volcanic rock. These clasts could provide insight into the timing and nature of regional geologic events from 30 to 27 Ma. If the clasts are around 30 Ma, then they would represent the products of an older, but undefined, volcanic center in the western San Juan Mountains. If the clasts are 28-27 Ma, then they could be products of eruptions from the caldera centers in the area. In the latter case, this would mean that ancient streams were forming on the rim of the calderas, possibly in response to uplift from magmatism.

Two samples of the volcanic clasts will be sent to the University of Arizona to undergo U-Pb zircon analysis. Thin sections will be cut from 12 volcanic clast samples (samples not yet collected), and a petrographic microscope will be used to determine the petrology and history of the volcanic clasts. For samples that are too complex to quantify through thin section analysis, geochemical analysis will be conducted. The samples will be sent to Activation Laboratories in Ancaster, Ontario, and the chemical composition of the rock will be determined.

CSMS may again sponsor awards for 2016-17. Information will appear on the CSMS web site: www.csms.us

(Continued from Pg 2)

Thurs., Feb. 4. , 7:00 p.m., monthly “First Thursday” lecture sponsored by the **Friends of the Colorado School of Mines Geology Museum** . Topic and speaker(s) are still TBA, but the program *may* be about the Gold King mine wastewater spill. In Berthoud Hall, Room 240 on the CSM campus; admission is free and all are welcome. Socializing at 6:00 p.m., program at 7:00. Check https://www.facebook.com/LikeCSMGeoMuseum/ for updated info.

Tues., Feb. 9, 4:00 p.m., **Friends of Mineralogy, Inc., Annual Meeting and Social Hour,** in the restaurant of the Tucson City Center Hotel, Tucson, AZ. (with thanks to Marty Zinn for making this meeting location available—with refreshments!)

Feb. 11-14, Tucson Gem and Mineral Show, the “main” Tucson Show in the Tucson Convention Center, sponsored by the Tucson Gem and Mineral Society. The show theme is “Shades of Blue – Minerals of the World”; one may expect a few copper minerals to be included in this.

Fri., Feb. 12, 3:00 p.m., Earth Sciences Colloquium at the Denver Museum of Nature & Science, ", **Feathering Utahraptor: The real star of Jurassic Park**, by Jim Kirkland (Utah Geological Survey). In the Ricketson Auditorium for this lecture; all are welcome, museum admission is not required.

Sat., Feb. 13, 10:00 a.m. – 2:30 p.m., **Friends of Mineralogy Annual Symposium,** Tucson Convention Center, Crystal Ballroom, on the Tucson A series of talks on the show theme, “Shades of Blue”.

Sun., Feb. 21, noon, monthly meeting of the Florissant Scientific Society, **Rock Glaciers,** by Alex Paul, at the Woodland Park Library, Woodland Park, CO. See http://www.fss-co.org/index.html or contact Beth Simmons for more info.

Feb. 26-28, Denver Gem and Mineral Guild, Gem, Mineral, and Jewelry Show, at the Jefferson County Fairgrounds, Exhibit Building. No admission charge.

Thurs., Mar. 10, 7:30 p.m., Friends of Mineralogy, Colorado Chapter, bimonthly meeting, at Denver Museum of Nature and Science, VIP Room. Special invited speaker, Jeff Scovil, internationally famous mineral photographer; “**The Best of Colorado Minerals**”.

NONFICTION WRITING CLASS

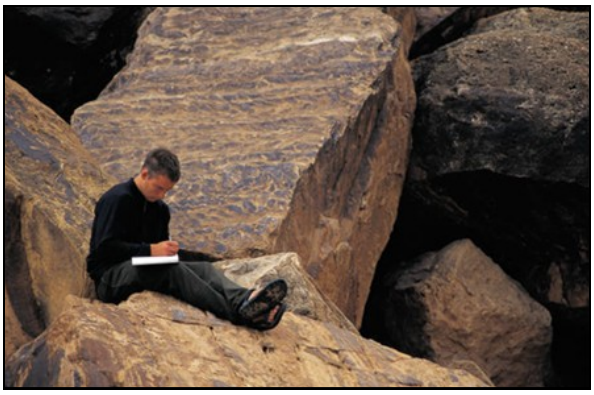
FOR STUDENTS AND LEARNERS OF ALL AGES!

The Western Museum of Mining and Industry invites you to join our 3rd annual Winter Writer's Class. Are you ready to take your writing to the next level? We provide an intimate, inclusive program in a spectacular setting. This workshop combines superb instruction with unparalleled resources and is ideally suited for the general public, teen writers, and especially beginners. ***Creative writing happens here.***

Immerse yourself in our intense one-day winter writing class designed for those who want to learn more about writing and publishing. Writing about nature, science, history and other nonfiction subjects offers exciting opportunities to be published. Magazines, newspapers, bloggers, clubs, and schools are looking for articles to share with their audience, and this class can teach YOU how to PUBLISH.

Class highlights

- Work with a published author who will teach the class
- Learn about creative nonfiction, nature writing, science writing, history writing and even poetry
- Discover powerful research methods
- Identify and develop story ideas
- Learn potent craft tips
- Practice how to outline and structure stories
- Work with photos for your articles
- Understand the role of an editor in the publication process
- Discuss publication issues



A certificate will be awarded upon completion of the class. All other course materials will be provided including a morning reception. A writer's resource kit CD will be available for purchase for $7.

The writing class will take place at the Western Museum of Mining and Industry, 225 North Gate Blvd., Colorado Springs, CO 80921. You must register for this class at 719-488-0880. The course fee is $35 for adults and $7 for students (21 and under). WMMI members receive $5 off adult fee, and $2 off the student fee.

Class date: February 27, 2016. Class time: 9: 15 am to 1:15 pm.

Instructor bio: **Steven Veatch** Steven Veatch grew up in the Pikes Peak region and earned degrees at Pikes Peak Community College, Colorado State University at Pueblo, Webster University, and Emporia State University. He is a writer of short stories, poetry, essays, literary criticism, book reviews, science articles, and professional papers. He has published over 150 articles on nature and science. He has contributed chapters to these three books: ***Field Trips in the Southern Rocky Mountains, USA, Field Guide 5***; ***The Paleontology of the Upper Eocene Florissant Formation, Colorado***; and ***The World's Greatest Gold Camp: An Introduction to the History of the Cripple Creek and Victor Mining District.*** He is an associate editor of ***Leonardo***, a literary and art journal published by the English Department of Central New Mexico Community College. He is a regular at a writer's retreat held in the woods of northern Michigan at the Interlochen College of Creative Arts.

LAZARD CAHN AND CSMS

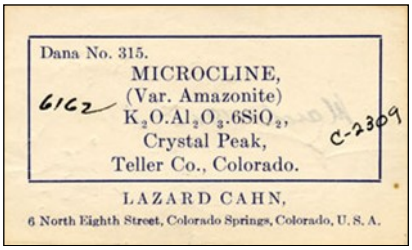
By Mike Nelson csrockguy@yahoo.com

Soon after I arrived in Colorado Springs in 2006 I joined the Colorado Springs Mineralogical Society (CSMS) and started to further explore the geology and history of Colorado. At that time the Society's publications always contained the phrase "Lazard Cahn, Honorary President." Of course I did not have the slightest idea about the career of Mr. Cahn. Someone pointed me to Ray Berry, the unofficial historian of the Society, and with a subsequent visit, I learned much. Later in life I was able to obtain a small booklet, *History of the Colorado Springs Mineralogical Society*, edited by Mr. Berry (2002) and much of the historical information in this posting comes from that source (and is not in quotes in this article).

CSMS can trace its origin to November 1936 when 13 individuals (11 males and two females) met for the purpose of organizing a local mineralogical society. Lazard Cahn was elected as the permanent honorary President; hence, the designation of such on all publications into the 21st century. I note with interest that at the initial meeting the new members spent their time examining micromounts under binocular microscopes. Evidently the new society was the outgrowth of interest by persons studying microscopic crystals under the instruction of Mr. Cahn (twice per week at his office). The Society was active early on and by 1939 mineral displays were exhibited in Colorado Springs through the Chamber of Commerce.

I love that microscope! Lazard Cahn, ~1930. Photo © courtesy of the Digital Collections at the Pikes Peak Library District.

At the time of the Society's organization Cahn was a well-known mineralogist with a world-wide reputation. He was born in New York (1865) to parents who could afford sending Lazard to school in Stuggart, Germany (1880). In 1885 he returned to the U.S. and moved, with his sister, to Colorado Springs where he remained till his death in 1940. His interest in chemistry initiated a study of minerals collected in the igneous rocks of the Pikes Peak granite exposed around St. Peter's Dome. His monetary inheritance also allowed him to study mineralogy at various American universities, and in Heidelberg, Germany, under the famous crystallographer Victor Goldschmidt. It was sometime during this time period (early 1890s) that he became a "full-time" mineral collector and begin to "deal" in minerals. In 1895 Cahn had an advertisement in *The Mineral Collector* wanting to buy or exchange for "very choice, well crystallized American minerals" and noted his sale of several Colorado specimens (Wilson, 2015). He became friends with Charles Palache at Harvard University and studied crystal drawing at the University in 1914-15. Cahn continued through the years, from offices in both Colorado Springs and New York City, to study, collect, exchange and sell minerals, especially micromounts.



Business card of Lazard Cahn dated (on reverse) March 1915. Card courtesy of Wilson, 2015.

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PEBBLE PUPS CORNER

Cripple Creek, looking west from Gold Hill. The Midget and Conundrum mines are in the foreground and Mount Pisgah is in the background. Teller County, Colorado. October 3, 1903, plate 4-A in U.S. Geological Survey. Professional paper 54. 1906. Photo public domain. Courtesy of the US Geological Survey.

A Cripple Creek Tribute
By Jenna Salvat

The soothing sky is blue as a robin's egg,
Awakened by the rising of the shining sun.
The vast and rolling hills are touched and warmed
By the feathery fingers of the morning's breath.

The air is saturated in the smell of fresh pine and morning dew,
Captivating one's senses in the fragrant aroma.
Budding wildflowers dapple the terrain
Like the splashes of color on an artist's canvas.

Patches of snow, scattered about like quartz crystals,
Slowly melt with the arrival of spring.
The serene silence is broken and melted like the ice
With glorious songs of birds, fresh from their night of rest.

Sunrise is nature's waking call from the dark, dangerous night.
In the distance lie houses, nestled in the valley of the hills,
The living place of miners; the place to rest their aching feet
The hills tower down upon an old miner,
Who just stumbled out of his cabin

Shovel and pick in hand, he trudges through the mud
And the water from the melting snow.
He hikes up a hill to look for telluride minerals,
And slashes the soil and rock with his shovel.
Sparks alight and fly about.

Deep underground lies a drift, lit by lanterns
The miners drill, a charge is set.
The miners rush about the tunnel.
A loud BANG echoes through the labyrinth
As the miners set off sticks of dynamite.

A glistening gold vein is exposed
Among the cold grey breccia.
Excited, some men rush out to spread the news.
Others stay by and start to mine the gold out.

Their hard work is synchronized
By the sound of iron hitting rock.
The rhythm accompanies the eternal heartbeat
Of the Earth's living drum.
The dark paths are like a puzzle,
A game the miners play.
Some strike it rich, others find no pay.
A shout is heard in the tunnel,
Joy spreads throughout the men.
A glistening gold vein is exposed
Among the cold grey breccia.
Excited, some men rush out to spread the news.
Others stay by and start to mine the gold out.

Dust and smoke fill these chambers,
The miners wheeze and cough.
A miner's job is tough work,
It is no walk through the park.

Evening starts to approach the town,
The miners walk home.
Their bodies ache, their sore legs shake,
As they rush to rest alone.

The birds quiet their songs.
The houses are illuminated by candles.
The day is done, the treasure won,
As the night starts to take over.

It is the crickets turn to sing out,
As dusk falls upon the landscape.
The moon starts to peek at the fields.
Its familiar glow casts down upon the mines.

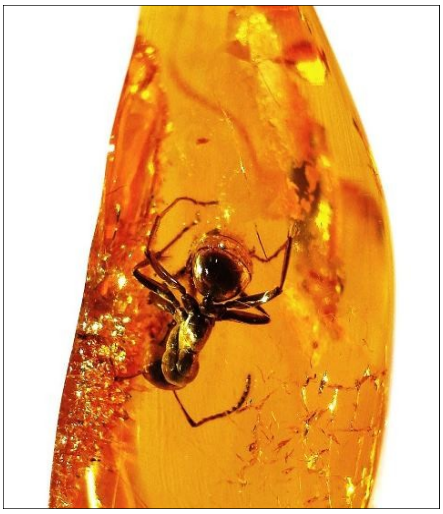
In the moonlight, a small crystal twinkles,
Atop the precipice of the hill.
Deep beneath here the gold still lies,
Waiting to be found.

Meet the author: Jenna Salvat is a member of the Pikes Peak Pebble Pups where she is an Earth Science Scholar and program leader. Jenna is deeply interested in the Earth sciences, archaeology, and poetry. She is in the 9th grade at Coronado High School.

A Historical Note on Amber

By Blake Reher

Throughout Roman times, Amber was considered the gold of the North. Amber was believed to have medicinal properties that cured arthritis, protected people from suffering mental illness, and healed sore throats. People thought amber had magical properties that gave the wearer bravery. Amber was also a symbol of God ' s presence. Workers harvested amber from the Baltic regions in Russia. Merchants transported amber along roads and rivers to the Mediterranean area in Italy, the center of the Roman Empire. The Romans used it in making jewelry. It was a luxury product that helped develop a trade network in Europe. Without this valuable product and the trading routes it used, Europe would not have developed as quickly. Amber is fossilized tree sap. The color of this sap is yellowish brown but can also be other colors. The sap sometimes entombs living things such as bugs and leaves and occasionally larger objects.



An ant inside Baltic amber.

Image used with permission. © Anders L. Damgaard, www.amber-inclusions.dk

About the author: Blake Reher is a member of the Pikes Peak Pebble Pups and the Colorado Springs Mineralogical Society. He is also a volunteer ranger at the Florissant Fossil Beds National Monument. He is 16 and attends Cheyenne Mountain High School.

Pebble Pups Help Host Family Exploration Day: GEOLOGY!

By Steven Wade Veatch

On January 2nd, 2016, from 10 am to 3 pm, the Pebble Pups worked at the "Family Exploration Day" event at the Western Museum of Mining and Industry. The museum is located in northern Colorado Springs. The Pebble Pups worked in shifts during the day where they lead the public on a geologic exploration of Colorado's mineral and mining heritage. Everyone gets to pan gold and met the two burro mascots Nugget and Chism.

The museum provided pizza for the Pebble Pups. Jenna Salvat, Jacob Janecek, Steven Marquez, Ben Eilick, and Sabrina Morin worked at the event. This includes setting up the displays, working with the public, and taking down the displays.

Large numbers of families attended this event and met the Pebble Pups, making this an excellent forum to recruit new Pebble Pups.

This boy, attending the event with his family, is reaching for a specimen to get a closer look

Roger Pittman, a long-time Pebble Pup leader, is busy working with the public. The Pebble Pups greeted over 200 families.

Steven Marquez, a teen Pebble Pup is working with two potential new members at the event. In the background Ben Eilick and Jenna Salvat are demonstrating the use of microscopes.

(CONTINUED FROM PAGE 6)

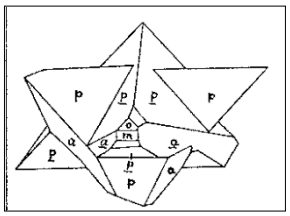
Palache noted in his memorial to Cahn (reprinted in the Berry booklet) that in 1937 the Colorado Springs mineralogist had, in his collection, over 3700 micromounts (many more by the time of his death; Wilson, 2015) representing 685 species! After his death Yale University received the bulk of his micromounts, his larger specimens were sold as part of estate liquidation, and smaller micromount collections went to Harvard University, the Paris School of Mines, Colorado School of Mines and Northwestern University (2400 specimens later dispersed to the public).

I remain uncertain if any/many of Cahn's specimens remain in Colorado Springs or even in Colorado. Perhaps a reader could offer me some information. I do know that a collection of micromounts belonging to Willet R. Willis III was donated to the Air Force Academy after his death in 1968. Mr. Willis was one of the original charter members of the CSMS and evidently acquired at least one micromount from Cahn. In 2013 the Denver Museum of Nature and Science acquired the Willis collection from the Air Force Academy and Lieberman and Hagadorn (2013) noted "by far the most spectacular specimen in the [Willis] collection is a piece of gold from Offenbanya, Transylvania (Romania). Collected by Cahn, it consists of gold wire adorned with different crystalline forms of gold, including ultrarare cube-shaped crystals of gold. Each bears step-sided indentations on its crystal faces."

After other inquiry visits with Ray Berry, I was told to examine Cahn's grave in Evergreen Cemetery since the marker stone was a granitic, enlarged replica of a twinned cahnite crystal. It was then I learned that Palache, in 1927, honored his friend by naming a very rare borate arsenate: cahnite $Ca_2[B(OH)_4](AsO_4)$}.

Marker stone for Lazard Cahn at Evergreen Cemetery, Colorado Springs. Cahn's students had the stone cut in the shape of a twinned cahnite crystal.

Cahnite is an extremely rare mineral and first found by Cahn at Franklin, Sussex County, New Jersey, named in 1921 by Palache (but not described until later—1927). Evidently Cahn was more interested in teaching students and collecting minerals than publishing descriptions—he only published one paper during his lifetime. Cahnite now has been identified at several other localities but remains quite rare.



Drawing of a twinned cahnite crystal (Palache, 1941).

Unless crystals are present, cahnite is a rather non-descript colorless to white to gray mass that is brittle and soft (3 Mohs). It has sort of a sub-vitreous to greasy luster and a white streak (if such can be obtained). It would be almost impossible for me to identify these very tiny masses unless someone told me that an XRD or a microprobe identified them as such.

Crystals are usually colorless to white but there are pale green-brown varieties. The crystals belong to the Tetragonal System and are often pseudo-tetrahedral in habit but most of the time are twinned and etched and appear in a cruciform shape (MinDat).

At the type locality at Franklin, cahnite was found associated with a metamorphosed zinc orebody. However, it is now been found in other geological settings such as pegmatites, vugs in basalt associated with zeolites and in boron deposits. Wherever cahnite is located it is a late stage mineral in association with boron.

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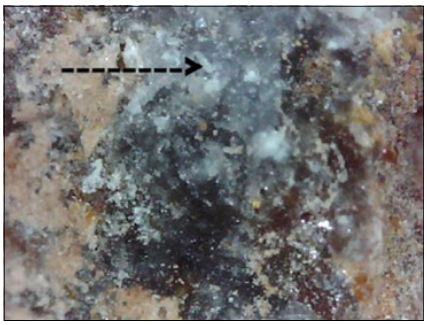

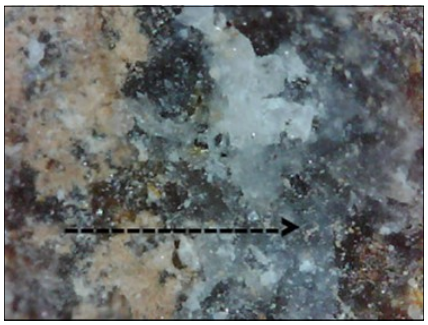

Photomicrographs massive cahnite in matrix from the Solongo Basin, Russia. Width FOV ~2 mm.

For the last several years I have been searching for a specimen of cahnite simply due to Cahn's association with CSMS. Most specimens offered "for sale" are of tiny crystals and are far out of my price range. However, earlier this fall I was able to purchase a small (pea size) specimen with tiny masses of cahnite collected from the Solongo Basin in Russia. I could find out very little about the Basin except that it contains borate minerals that are associated with boron-enriched skarn deposits related to intrusives and limestones (Kistler and Cahit, no date). The limestone would have provided the calcium while other primary borate minerals were the source of the boron. I don't have the slightest idea about the source of the arsenic but presume it is also secondary. Whatever, I now have a mineral named after perhaps the most famous mineralogist to call Colorado Springs "home" and the Permanent Honorary President of the Colorado Springs Mineralogical Society.

The words inscribed on the marker stone of Lazard Cahn perhaps best describe this true gentleman---*Scientist, Teacher, Friend*. We could all hope for such a dedication at our passing.

SOME TRIVIA

I found this little tidbit of information stuck away in the October 1, 2005 History Hounds of the Colorado Springs Gazette (written by Paul Asay). It adds a bit of "spice" to the geology aspect of this offering! *Rose Lorig, who said she is "90 plus-plus-plus" years old, doesn't have a history degree or a roster of scholarly works to her credit. But few know more about Colorado Springs' early Jewish community than she does. She knows that a man named Lazard Cahn traveled from Colorado Springs to New York City in 1893 to break up an affair between his sister and a Belgian duke — and that his sister nearly killed him… Isaac Cahn was the first Jew on record to move here, Lorig wrote, moving to what is now Old Colorado City from Rhemes, France, in 1860. He owned land north of Colorado Avenue, called the "Cahn Addition" on old maps. It was Cahn's son, Lazard, who went to New York and was promptly stabbed and then — when recuperating at his sister's house — poisoned. Lorig has no record of why Isaac Cahn moved here.*

Another tidbit from The Canadian Mineralogist, 1989, v. 27 : *In 1978 one of the authors (W.W.P.) purchased a portion of the Lazard Cahn mineral collection…One of the newly acquired specimens was labeled "magnolite with coloradoite, Keystone mine, Magnolia mining district, Colorado". A megascopic examination revealed some white fibers consistent with the physical description for magnolite… Approximately five to six magnolite-bearing specimens are known to exist in North American mineral collections.*

And, I do not have access to Matrix, v. 9, no. 4, Winter 2001-2002: *The Sale of a Lazard Cahn Collection*, Steven C. Chamberlain." Could anyone offer some help?

Evidently Cahn also collected a few larger specimens since a 1926 American Museum Novitates (No. 207) noted a specimen in the Meteorite Collection: "At an unknown date, a large iron meteorite, weighing 140.7 kilograms, was found near Ysleta, El Paso County, Texas. Mr. Arthur Curtiss James obtained it from Mr. Lazard Cahn and gave it to the Museum."

(Continued on Page 11)

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References Sited

Lieberman, M. and J.W. Hagadorn, 2013, The Museum adopts an orphaned treasure: Catalyst, Denver Museum of Nature and Science Magazine, Issue 20.

Kistler, R.B. and H. Cahit, date unknown, retrived September 2015, Boron and borates: www.kisi.deu.edu.tr/cahit.helvaci/Boron.pdf.

Palache, C., 1928, Mineralogical notes on Franklin and Sterling Hill, New Jersey: American Mineralogist, v. 13.

Palache, C., 1941, Crystallographic notes: cahnite, stolzite, zincite, ultrabasite: American Mineralogist, v. 26.

Wilson, Wendell E., 2015: Mineralogical Record Biographical Archive, www.mineralogicalrecord.com.

I love that microscope! Lazard Cahn, ~1930. Photo © courtesy of the Digital Collections at the Pikes Peak Library District.

Business card of Lazard Cahn dated (on reverse) March 1915. Card courtesy of Wilson, 2015.

Marker stone for Lazard Cahn at Evergreen Cemetery, Colorado Springs. Cahn's students had the stone cut in the shape of a cahnite crystal.

Drawing of a twinned cahnite crystal (Palache, 1941).

Photomicrographs massive cahnite in matrix from the Solongo Basin, Russia. Width FOV ~2 mm.

Inscription on marker stone of Lazard cahn

Lazard Cahn was inducted into the Micromounters' Hall of Fame in 1982.

2016 CSMS Officers

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Jackson Pierce, Webmaster

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

Feb. Micromount	Mar. Board	Apr. Crystal
May Faceting	June Fossil	July Jewelry
Aug. No Meeting	Sept. Lapidary	Oct. Micromount
Nov. Board	Dec. Christmas Party	

SECRETARY'S SPOT

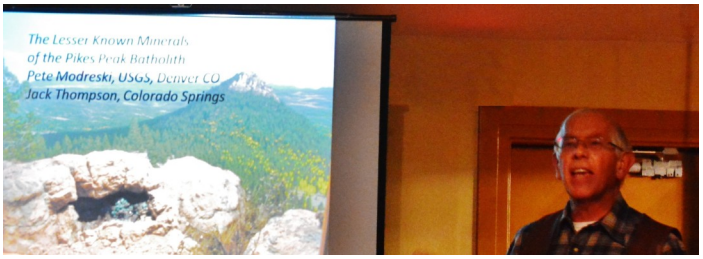
by Ronald "Yam" Yamiolkoski

No General Meeting Minutes for the Colorado Springs Mineralogical Society—January 21, 2016.

2016 CSMS Officers Installation Banquet

Photos submitted by Frank Rosenberg

2016 Officers top row (left to right): Mark Lemesany—Past President, Ronald "Yam" Yamiolkoski—Secretary, Ariel Dickens—Member at Large, Sharon Holte—Membership Secretary, Jean Luce—President, front row (left to right): Ann Proctor—Treasurer, Norma Rhodes—Editor, Doreen Schmidt—Member at Large. **Not pictured Due to Birth of Grandchild!! : Lisa Kinder—Vice President**



CSMS member, Dr Pete Modreski of USGS gave the presentation on Lesser Known Minerals of the Pikes Peak Batholith

FAMOUS LOCALITIES

BLUE BARITE - WELD COUNTY, COLORADO

FOUND BY: CLARENCE G. COIL AND O. A. REESE SUMMER OF 1953

Clarence G. Coil

Since Jack Murphy and Florian Cajori have given a resume of the geological history of the Blue Barite area, I'll continue with my version of the discovery of the largest pocket of Blue Barite found to date, so far as I know at Stoneham in Weld County, Colorado.

My partner, O. A. Reese, and myself have been making trips to South Dakota for Golden Barite several times. In 1953, we decided to make one more trip. This we did, but were only able to get in a few days collection when we were rained out and since the weather reports for the future didn't appear favorable, we packed up on a Saturday and drove to Sterling, Colorado, where we spent the night.

The next morning we were up early and had the whole Sunday ahead of us. We decided to spend the day at the Barite locality where we had been many times before with only moderate success. The early photos show the view from the bluff where we park, the hole where Reese and I were digging and the trail coming up to the car.

On this earlier trip, Reese and I dug down about nine feet before we quit. I noticed that the bottom was a little softer. I managed to find a stick which I used as a probe. I pushed down and much to my surprise the stick went on down and I was able to move it around. Since it was getting late and we had a long drive to Colorado Springs, we pulled down the bank to eliminate a cattle hazard and made our way up the trail as seen in the photos. That is why on that Sunday morning I wanted to try out a theory I had. We arrived and parked and went down the top of the ridge instead of the trail.

My partner Reese left me and headed south to prospect while I stayed on the ridge where I made a rough sighting from the old hole on the north side in a southeasterly direction. The slope was nothing but cactus and rocks and no previous digging whatsoever, as seen in a couple of later photos I made.

I went down to a place that appeared to be well below the hole I had previously probed. I cleared out the cactus and rocks and made a smooth area about three by five feet. I dug in the center of that area and after a few inches I hit a thin blue line of Barite.

I am stopping now to remark on the discovery. I had some knowledge of what I was doing, combined with a lot of luck,/but when this has occurred many times in the past and future discoveries it gets to be a little eerie. Just as if some higher power was doing a little directing, but it was so funny to hit that blue line dead center.

I continued digging in the middle of that area. I widened it out and still the blue showed. I went deeper and it became about two inches thick. By that time I got up and yelled for Reese, who was somewhere over the hill, he finally answered. I kept on digging until he arrived. You should have seen his face. Needless to say, the dirt really flew. In no time we were down where we broke into a cavity, ceiling high. The seam had dipped at about a 45 degree angle. We went down *the* hill and drifted in until we came to the opening, as seen in a later photo I made. We didn't feel like taking the bottom off any more as we had easy access to the entrance, even if it did not slope down.

After a period of time, to allow a change of air, I cautiously made my way to the floor and appeared to be in a tunnel that extended into the distance. I made my way for about ten foot. I was stopped over, but returned because the ceiling appeared unstable and there were a lot of Barite crystals on the floor. I cleaned out as much Barite as I could and also as much of the rock. Finally it was time to leave for Colorado Springs. We carried all the equipment and several boxes of Barite up to the car where we reluctantly left for home.

I might say at this time that the excavation stayed open and untouched for two more weekends, also we had about a 170 mile trip to Colorado Springs. The following week we made up some mine props and procured a big dish pan to which we fastened two long ropes. The second weekend we left Friday evening and drove to Fort Morgan where we spent the night.

Early Saturday morning we were up and on our way to New Raymor then early to Stoneham where we turned north about four miles to the Bluffs where we always parked our cars. We loaded up all the equipment and made two trips to bring the mine props down. We found that no one had been there that week. After cleaning out the entrance some more, I went down to the floor and examined the ceiling which was loose and about six to ten inches thick. Much to my surprise, after I had pried off some of the ceiling, I found a smooth hard dome. The work went rapidly. I would load the big pan, Reese would pull it out, dump it and I would pull it back. Good progress was made and we had good light for a way, but had to resort to carbide light as well as a big flash light, forever along.

I might state here before proceeding that the floor dipped down to the right and six and seven inch crystals were appearing. However, we decided to cover up the seam with floor and ceiling material and come some other day and follow that seam, but we never did know later why we didn't.

That weekend we made it back about thirty some feet where the tunnel made a slight turn to the right into a large shallow bowl that had a huge piece of the ceiling hanging down over the center, but still allowed one to take out material. We had erected mine props all the way but they weren't needed. However, the rock over the bowl couldn't be dislodged so we had to settle on taking out the crystals which Reese pulled out and packed. I did fish out what I thought at the time was a large part of the ceiling. It was quite heavy, I didn't give it much thought and put it in the dump. More about that later.

As it was getting late and we had a long drive, we decided to call it a day. We had to make two trips to carry the Barite singles and groups up to the car. We then left for home, however, we did lay some mine props across the entrance so as to eliminate any hazards.

The third weekend and the last found us again at the diggings and saw that no one had been there. However, we found that it had rained that week and prowling the dump saw a rock that was all yellow calcite. Nothing else was showing so we proceeded to work the back of the tunnel, but couldn't do much but rake out more crystals in the bowl. I was able to crawl under the big ceiling boulder, with my heart in my mouth. I was able to acquire more large singles, but got out of that danger zone in *a* hurry. We did have a hundred foot tape measure which we used and found that from the entrance to the far tip of the bowl it was approximately forty-five feet. Also, I noticed while down at the turn thirty some feet that the shelving and ledges were going up at a steep angle in a northerly direction. We used our big flash light and was unable to see far enough, but to this day I am sure that we were almost under that nine foot hole which I probed earlier. I don't know how much Barite we took out, for it was all there for the taking.

What a pleasure it was to reach back on some of the shelves and pick up a beautiful group all solid Barite including the matrix. We left a lot too for the next collection. We pulled down as much rock, soil and waste materials as we could to cover the entrance so it wouldn't be a hazard to cattle. However, we heard later that someone came in with a bulldozer and really ripped that ridge and area apart.

We never did go back again as I had become heavily involved in photographing the building of the United States Air Force Academy, being a commercial photographer.

Now to summarize the discovery and make a few additional remarks. I'll start with the big lump of yellow calcite. We placed it in a big crock and dissolved it down with muriatic acid. You should have seen the beautiful Barite appear, some as wide as two inches. We continued until we had left a good matrix. It was a remarkable specimen and is now in Harvard Museum after dealing with Clifford Frondel, a hundred and eighteen crystals were exposed.

I might say at that time you could hardly give the Barite away - fifty cents on a dollar would give you a good specimen. After the news got out, the price increased and today if anyone has a specimen from that pocket put a good price on it.

A friend showed me a specimen the other day he had and remarked that he another one or two and the price was $35 and up for a two or three inch single. Ed Over and Arthur Montgomery also collected there. My late friend, Ed McDole, who spent a lot of time here at my house took several for his miniature collection and a quantity of other single and groups. Where is Ed's miniature collection today? Does anybody know?

Finally I wish to emphasize very strongly that the area is closed indefinitely, so I am told by others that the holes weren't filled in thus promoting a hazard to stock and also that cattle were found molested. I quote the above from others who have gone in, but were turned back and the above explanation was given to them, so don't attempt to go in whatsoever.

The Federation Code of Ethics should always be the guideline of conduct where ever collecting is done.

One final word, I regret that we didn't have photos of the interior of the tunnel.

Original photos Relating to the blue barite discovery

1. O. A. Reese pointing to the ridge and approximate spot where we dug many times in the 1940's. I am seated.

2. This photo shows the area and the hole we dug that reached 9 feet where I probed the bottom. Left to Right: Coil and Reese.

3. Photo shows Reese, foreground and Coil in the rear. Returning to the car.

4. This photo shows O. A. Reese and the diggings. The bluff to the west and at the extreme right was where Photo No. 1 was made. Note the barren terrain. Rocks and cactus on the south side of the ridge.

5. O. A. Reese sorting Barite crystals.

6. The entrance to the 45 foot tunnel. Note geological structure of the ceiling which became a solid dome. Barite crystals on left bank.

7. Photo of solid Barite including Matrix.

8. Barite group with yellow calcite taken out at extreme end of tunnel.

9. The group that went to Harvard.

The above article was written circa 1977 by Clarence Coil. He had sent a copy to Jack Mruphy who had preserved the manuscript in the Denver Museum of Nature and Science archives, Coil donor files.

Above Article submitted by Mark Jacobson

Cripple Creek's Most Important Rock Collection

By Steven Wade Veatch

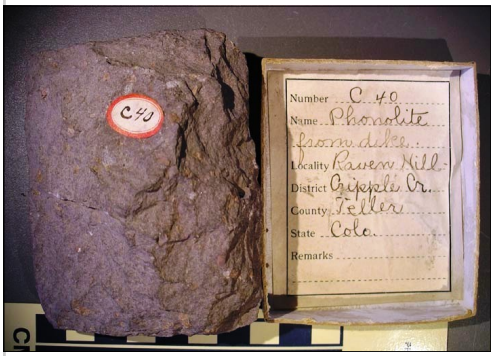
Cripple Creek was a brawling mining camp when Whitman Cross and Richard Penrose, two U.S.G.S. geologists, arrived to survey the mining district and conduct geological investigations in 1894. It is most likely the specimens were collected by horseback when Cross and Penrose did their field work, September-November 1894. During their work, these field geologists created a collection of the district's representative rocks. Part of the rock collection (59 specimens) still exists in the Cripple Creek District Museum.

This rock collection, mostly ignored today, played a crucial role in the early scientific work on the district. These rock specimens were used to produce the early geologic maps of the area and served as the basis for a U.S.G.S report that brought an increased interest in the gold camp and additional capital to develop and expand the mines. The rock collection, on which their report was based, directly contributed to the fortunes of some mine owners and the success of the "World's Greatest Gold Camp."

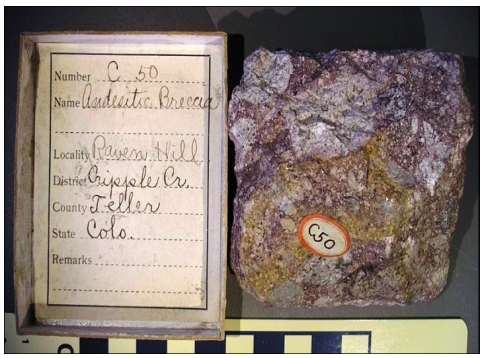
(Continued on page 14)

(CONTINUED FROM PAGE 13)

The Cripple Creek & Victor Gold Mining Company funded the ongoing work at the Cripple Creek District Museum to conserve not only this historic collection but all of the rocks and minerals located at the museum. This is a world-class collection that is being saved for future generations and scientific work. Steven Veatch, John Rakowski, and Bob Carnein of the Lake George Gem and Mineral Club are doing the conservation work as volunteers. The specimens are cleaned, identified, photographed, and assigned a unique collection number for the museum database. This work has been ongoing since 2012. The youth of the Pikes Peak Pebble Pups also contributes time to this project.

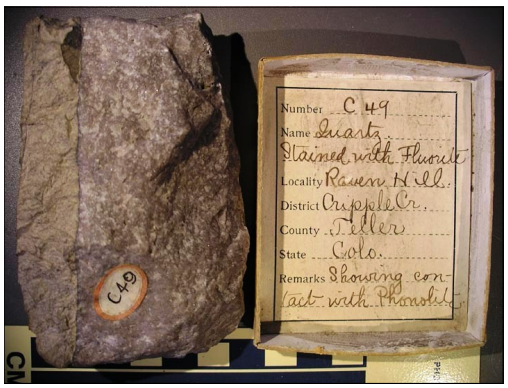


Each specimen of the Cross and Penrose collection was meticulously and beautifully trimmed, prepared in a standard size (approximately 7x8 cm each), and placed in boxes with a label. This specimen is phonolite.



This breccia shows the clasts or broken bits of rock that make up the breccia. Gold telluride minerals commonly formed around the edges of the clasts.

A specimen of breccia from the Moose Mine.



Fluorite is seen in contact with phonolite.

This plaque commemorates CC&V's involvement in this important project that will conserve Cripple Creek' rock and mineral collection.

The Gravel Pit

- In Case You Missed It! http://www.pbs.org/video/2365643312/ NOVA-The Minerals Behind Modern Life 2:04 Aired: 01/12/16Rating: TV-G Minerals are essential in making everything from skyscrapers tall, to mobile phones small.

- **Western Museum of Mining & Industry, Colorado Springs: Heritage Lecture and Exhibit Opening,** Thursday, February 11, 6:00 p.m. – "Cheyenne Mountain at 50: Military Icon, Engineering Marvel". "Join WMMI and officials from NORAD on Thursday February 11th for a new exhibit opening and lecture series about the construction of the North American Aerospace Defense Command center in Cheyenne Mountain. Lecture details will be announced

Classifieds

PICK&PACK

Our Staff...
Norma Rhodes—Editor

We encourage everyone to submit articles, photos, illustrations or observations.

Share your experiences, your new finds, or simply your experience at our last field trip.

Handwrite it, type it, or email it. Format does not matter. All submissions are welcomed. The DEADLINE for items to be included in the next Pick & Pack, is the **21st of the month**

To submit an item:
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CSMS is an incorporated nonprofit organization with these goals:

To promote and disseminate knowledge of the earth sciences, especially as they relate to mineralogy, lapidary, and fossils.

To encourage study, collection, and fashioning of minerals.

To accomplish the same through social meetings, lectures, programs, displays, shows, and field trips.

The Pick & Pack 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 p.m.** at the Colorado Springs Senior Center, 1514 North Hancock Ave., Colorado Springs, CO. **Visitors are always welcome**. 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, Jewelry Group, Lapidary Group, Micromounts Group, and Pebble Pups/Juniors. For details on Satellite Group meetings, check out the calendars on page 2 and the web site.

Yearly dues include 10 issues of the *PICK&PACK*, all field trips (additional fees may be required on some field trips, and members are responsible for all transportation to and from), participation in all Satellite Groups (some groups may request additional fees to help cover resource costs), free admission to the *Western Museum of Mining & Industry*, a year of learning and enjoyment, plus a lifetime of memories.

Individuals—$30, Family—$40, Juniors—$15, Corporate—$100, ******Application is on the web site.

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: www.csms.us.

CSMS is a Member of the following organizations:

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