

PICK&PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Colorado Springs
Mineralogical Society
Founded in 1936
May 2016
PICK&PACK
Vol 56 Number 4

CSMS General Meeting
Thursday, May 19 7:00 PM

Guest Speaker: Bob Carnein

Topic- Pyrite: It's more than just "Fools' Gold"

Refreshments provided by the Faceting Group

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Bob Carnein received a B.S. in Geology in 1964, an M.S. in Glaciology in 1967 (**Carnein Glacier** in Antarctica was later named in his honor), and a Ph.D. in Geology in 1976. He began his teaching career at Waynesburg



College (in Pennsylvania) in 1970, teaching mineralogy, petrology, economic geology, structural geology, tectonics, geophysics and invertebrate paleontology, in addition to field geology (at Waynesburg's field station in Florissant, Colorado). He and his wife Nell moved to Lock Haven, Pennsylvania in 1989, where he taught most of the above courses, plus hydrogeology at Lock Haven University until retiring in 2007.

Bob's collecting interests focus on crystallography (especially twins) and on the minerals of the Franklin, New Jersey and Cripple Creek, Colorado districts; his collection currently numbers around 1800 specimens. He has written one article for the *Mineralogical Record* (with Paul J. Bartos): "Famous mineral localities: The Cripple Creek Mining District, Colorado" (2005).

After retiring Bob and Nell moved to Florissant, Colorado, where they currently live. He belongs to the Lake George club where he serves as newsletter editor, and also belongs to Florissant Scientific Society.

Many Thanks to Mike Nelson and Marilynn Hanlon for attending this year's RMFMS Convention as delegates on behalf of our club! Below is an excerpt from Mike Nelson's report which will appear in next months newsletter. Congratulations to all winners for their submissions in 2015 Pick and Pack and to Lisa Kinder as editor for making them "shine".

"Under the leadership of Pick & Pack 2015 Editor Lisa Kinder, members of the CSMS garnered a number of awards led by Jack Shimon and his First Place in Junior Articles Under 12 for *Radio Waves Powered Radio*. Other awardees were: Steven Marquez, 3rd Place Junior Articles 12-17, *Guide to Amazonite*; Kevin Witte, 2nd Place, Adult Articles- *Summer's Swan Song Pocket and the Big Kahuna*; Mike Nelson, 3rd Place, Written Features- *Field Trip Report: Trout Creek Pegmatite*; Mike Nelson, 2nd Place, Special Publications- *Paleontological Resources Preservation*."

CSMS Calendar

April & May 2016

- Tue., **May 3 & June 7**—**Fossil Group**, 7 p.m., Senior Center. Jerry Suchan 303 648-3410
Thu., **May 5 & June 9**—**Board Meeting**, 7 p.m., Senior Center.
Tue., **May 10 & June 14**—**Micromounts**, 7 p.m., Senior Center. Dave Olsen, 719 495-8720
Thu., **May 19 & June 16**—**Pebble Pups & Juniors**, 5:30- 6:15 p.m., Senior Center. Steven Veatch, 719 748-5010
Thu., **May 19 & June 16**—**General Assembly**, 7 p.m., Senior Center
Thu., **May 26 & June 23**—**Crystal Group**, 7 p.m., Senior Center. Kevin Witte, 719 638-7919
Thu., **May 26 & June 23**—**Faceting Group**, 7 p.m., Senior Center. Paul Berry, 719 578-5466
Appointment Only—**Jewelry Group**, Bill Arnsen, 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, csms-web.org

In Memoriam

WANDA J. WULFF ELLSWORTH November 27, 1939 - April 26, 2016

We regret to announce the passing of our long-time member, Wanda Wulff Ellsworth. Wanda is the daughter of one of CSMS's founders and charter member, Willard Wulff, whose autobiography appeared in the March 2016 Pick & Pack.

There will be a viewing from 10:00 a.m. - 11:00 a.m. at Swan-Law Funeral Home, 501 N. Cascade Ave., Colorado Springs, on Saturday, May 7, 2016. Funeral service will immediately follow at 11:00 a.m., and a celebration of life reception will follow the service, both at Swan-Law.

Other Events of Interest to CSMS Members

Submitted by Pete Madreski

Sat.-Sun., Apr. 30-May 1, Colorado School of Mines Geology Museum, Rock, Mineral, Book, and Map "Garage Sale", 9 a.m. – 4 p.m. each day, at the CSM Geology Museum, 13th and Maple Streets, Golden CO.

Sat., May 7, Colorado Mineral Society Silent and Verbal Auction, Holy Shepherd Lutheran Church, 920 Kipling Street, Lakewood, 11am-2:45pm (setup begins at 9am). Non-CMS members welcome to participate as buyers and/or sellers. More information at www.coloradomineralsociety.org.

Sat.-Sun May 7-8, Grand Junction Gem & Mineral Club, Two Rivers Convention Center; Grand Junction, Colorado; <http://www.grandjunctionrockclub.org/>

Sat., May 14, Friends of Mineralogy, Colorado Chapter, Silent Auction. Clements Community Center, 1580 Yarrow St., Lakewood CO, 12:00-3:00 (setup begins at 10:30 a.m., auction begins at 12:00, verbal auction 1:00, all tables closed by 3:00 p.m.).

Fri.-Sun., June 3-5, 53rd annual Pikes Peak Gem, Mineral, and Jewelry Show, sponsored by the Colorado Springs Mineralogical Society; at a new (indoor!) location, the Mortgage Solutions Financial Expo Center, "a community partnership between the University of Colorado—Colorado Springs (UCCS) and the Housing & Building Association of Colorado Springs (HBA)", 3650 N. Nevada Ave., Colorado Springs. 10 a.m. – 5 p.m. Fri. & Sat., 10 – 4 Sun. See www.csms-web.org, email runningboar@hotmail.com

Sat., June 18, GEOdyssey's annual home rock sale, 9 a.m. – 3 p.m., 15339 West Ellsworth Drive, Golden, CO 80401 (ph: 303-279-5504). "Help us reduce our inventory at our annual mineral and fossil "garage sale". Lots of new mineral and fossil specimens from around the world, including some from Namibia, China, Mexico, a selection of vertebrate fossils, and large fossil fish. Bigger price reductions this year, so all specimens are a minimum of 20% off, with larger discounts for volume purchases. We'll have many new specimens priced at 50% off. Drinks and snacks provided while you relax on our shaded patio. You can check out some representative specimens on our web site, www.geodyssey-rocks.com. Directions: from West 6th Avenue, exit onto Indiana Street and go south on Indiana. Drive into Mesa View Estates. Turn right at the first street (McIntyre Circle) and right at the next street (Ellsworth Drive). We are about midway down the street on the left."

Show Report and Update

Pikes Peak Gem Mineral & Jewelry Show June 3-5 2016

Volunteers needed!!! Please contact Kim Packham - runninboar@hotmail.com

Volunteers will be needed for set up on Thursday June 2nd at 9AM, ticket booth sales & ticket collection needs 2 people per shift, 2 shifts per day (contact Kim for vacant shifts) , and final tear down Sunday around 4pm.

Also, there will be a vendor & members potluck dinner Saturday evening around 5:30. Roast beef provided by Arby's (Thank you Brenda Perkins!!!) All members please bring side dishes or make arrangements with Norma to pick them up. Norma Rhodes is coordinating the dinner. Please email csmseeditor@hotmail.com or call 719-229-5379 with questions. Any help with set up or clean up greatly appreciated!

Club member displays– Bob Landgraf 719-685-1364 rmlwp74@aol.com is coordinating the displays.

Forms were sent out last month via email and will be available at the meeting. There is also an insert on Page 10 of this newsletter. ***"We are depending on our club members to present to the visiting public a display of the beauty of the minerals, gems and fossils that we collect and study. The annual show is our greatest exposure to the public which helps us find new members to keep our club a healthy and growing club in our community"*** — Bob Landgraf

Finally, there will be an informational meeting regarding the final details, and volunteer status, May 19th at 6:00pm at the Senior Center (right before General Assembly meeting at 7pm). Please come!

53rd ANNUAL PIKES PEAK GEM
MINERAL & JEWELRY SHOW

FRI.- SUN. JUNE 3rd-5th, 2016. FRI & SAT 10-5, SUN 10-4

WE HAVE MOVED INSIDE!

ADULTS \$5.00

KIDS 12 AND UNDER FREE

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IT IS ALWAYS IN SEASON FOR OLD MEN TO LEARN (Aeschylus)

Mike Nelson csrockguy@yahoo.com

The last five years have provided an amazing learning experience for me since the Civil War Sesquicentennial has provided a wealth of written information for amateurs to digest. I have thoroughly enjoyed the opportunities provided by some very good authors and writers, and dream that my enjoyment will continue for several years.

Dreams in old guys are part of our personal time machines. Sometimes the machine takes us back and we experience memories. At other times we go forward and dream (apologies to Jeremy Irons). One reoccurring dream in my life, other than forgetting to study for the calculus test, is the first experience in Salt Lake City. I have written about Utah in numerous other articles since the state played such an important part in my early adult life. I attended the University of Utah (1967-1970), spent the 1971-1973 summers as a seasonal Park Ranger Naturalist (Dinosaur National Monument), researched my way through two sabbatical leaves (1978 and 1985), completed about 20 consulting projects in the 1980s (Environmental Impact Studies—Paleontology), supervised several MS theses on Utah rocks and fossils, and conducted stratigraphic research for two decades. So, it seems only normal that I often dream about popping over the Wasatch Mountains, seeing the Salt Lake Valley with the Lake in the distance, and wondering if this was the best idea for a small town kid with a new small town bride.

At any rate, one of the first trips to explore the valley was an outing to the Great Salt Lake on the western edge of the City. Like most other tourists to the Lake we were curious to see if our bodies could really float in the salty water. So off we went on an early free weekend, and to put it mildly, the lake was sort of a disappointment. First of all, the shoreline of the Lake had a terrible smell. I later found out that cyanobacteria and algae live in this hypersaline environment and their decaying products produce hydrogen sulfide. In addition, brine flies and brine shrimp (including their pupae) die and also decay in this low-oxygen shallow water—and smell. Adding to that, potential swimmers must plod through the smelly mud and active brine flies to reach the water. Yes, you can float in the water but immediately after leaving the Lake, floaters (you really cannot swim) must find a shower and rid oneself of the salty effluent crusting on your body (Fig. 1).

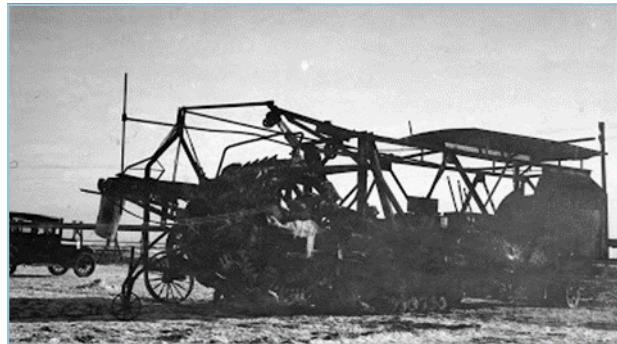


Fig. 1. Salt harvesting machine, Solvay Process Company, Salduro, Great Salt Lake Desert. Utah. July 26, 1925. Photo US Geological Survey, Dept. of Interior.

The Great Salt Lake is sort of a leftover of Pleistocene Lake Bonneville. The history of this large (size of ~20,000+ square miles) Pleistocene pluvial lake is quite complex. Although the “modern” Lake Bonneville seemed to be present from ~32 ka until ~14.5 ka, pre-Bonneville lakes occupied the basin as far back as maybe 700 ka. The “modern” Lake Bonneville began to disappear as it flooded through an area called Red Rock Pass in southern Idaho somewhere near 14.5 ka. Great Salt Lake, Utah Lake near Provo (which is connected to the Great Salt Lake by the Jordan River, and Sevier Lake (near Delta) are then remnants of this mighty Pleistocene lake.

Lake Bonneville was a fresh water lake as evidenced by fossils of fish discovered in the sediments associated with the lake. And, large mammals inhabited the shoreline environments. For several years I was fascinated by fossils associated with Lake Bonneville and preserved in shoreline sediments (mostly turning up in sand and gravel quarries). I suppose these sediments have preserved the greatest concentration of Pleistocene musk oxen of any locality in the world (Fig. 2). These oxen were not specimens of the living species (*Ovibos*) but an extinct form called *Bootherium*.



Fig. 2. Pleistocene Musk Oxen *Bootherium bombifrons* in Utah Museum Natural History. Collected from shoreline sand and gravels of Lake Bonneville. For a discussion of the Pleistocene mammalian fauna see Nelson and Madsen (1987). White strip ~52 mm.

The Great Salt Lake is an endoheic lake since it has inlet streams and rivers but does not have an outlet. Therefore, the Lake has a very high salinity, perhaps up to ~27%, a figure much larger than the oceans ~3.5%. So, human bodies (and other things) are quite buoyant and float in the water in the Great Salt Lake. In addition, the inlet streams are depositing several tons of new minerals into the lake each year.

Great Salt Lake sits in a very shallow pan (maybe 30-40 feet at its deepest point compared to Lake Bonneville at near a thousand feet) and varies considerably in surface size due to rain and snow in the nearby mountains (input), and in the amount of evaporation (output). Most geologists talk about an average size of perhaps 1700 square miles. When I arrived in Salt Lake City (1967) the University geologists were still talking and teaching about 1963 when the Lake recorded its lowest modern level and occupied ~950 square miles. During my 1985 sabbatical leave, city planners were pressing geologists to examine the stratigraphic record and guesstimate how much larger the expanding Lake would reach. It seems that the city and county building "experts" were trying to "fool mother nature" and had allowed buildings on flood plains and low lying shore deposits. In 1988 the Lake reached a recorded high of ~3300 square miles and cost "someone" millions and millions of dollars (Fig. 3). It is tough to fool the lady.

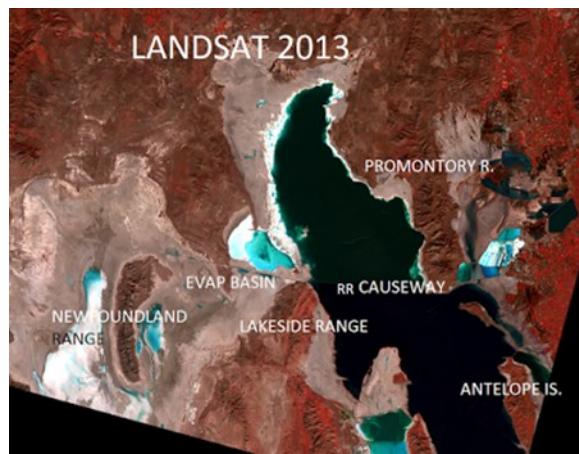


Fig. 3. Satellite images of northern Great Salt Lake supplied by the US Geological Survey showing recent (1987) high water level and water level in 2013. The evaporation basin to the west of the lake contains water in 1987 pumped to the West Desert by pumps installed by the State of Utah. The "RR Causeway" is part of the Lucin Cutoff (including about a 12 mile lake trestle) built in the early 1900s that bypassed the Central Pacific Railroad (part of the "Transcontinental Railroad") that originally skirted the lake to the north (Promontory Point).

I find it fascinating that DeRose and others (2014) have been able to link elevations during the last 600 years of Great Salt Lake to broader climate change frequencies in the Great Basin: *The modern instrumental record of the GSL-level (i.e. elevation) change is strongly modulated by Pacific Ocean coupled ocean/atmospheric oscillations at low frequency, and therefore reflects the decadal-scale wet/dry cycles that characterize the region.*

Since Great Salt Lake is situated in an evaporitic basin, minerals associated with the Lake, and those deposited in the shoreline environments (that fluctuate in width with the rise and fall of Lake waters), are evaporitic minerals, especially halite, sodium chloride. However, gypsum (hydrated calcium sulfate, $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) precipitated from Lake Bonneville in the geologic past and numerous gypsum dunes were left behind in the surrounding desert. In addition, gypsum currently precipitates from waters of the Great Salt Lake mostly as small flakes of selenite (I think) and not in abundance like halite. However, at times in some locations the selenite precipitates out in the form of elongated blobs termed stalagmites and ever rarer cactus shapes (Figs.4 &5).

(Continued on page 6)

I purchased my cactus selenite specimen several years ago during a trip to Utah since something about the mineral just caught my eye. It was cheap since the seller seemed to be liquidating his/her collection. Evidently it was collected, according to the label, by Lehigh Minerals out of Bountiful, Utah. A couple of years ago I looked on their web site (www.lehighminerals.com) and found the following information: *CACTUS SELENITE, NEW FIND, Great Salt Lake, Tooele County, Utah, 14 x 12.5 x 6.5 cm, Large Cabinet, New Find, Selenite Crystals with the individual crystals pointed out with pointed terminations forming a rounded mound of crystals. The Selenite is Fluorescent and Phosflorescent with a creamy white color. It is the first time specimens like this have been found in the Great Salt Lake. These are white to cream and not any brown.*

That made it kind of exciting—a five buck specimen that represents a new find. Even more exciting is information from www.findingrocks.com: *Cactus' Selenite - Location: West Side of Great Salt Lake, Utah. Large Cabinet. Here we have another new and in my opinion spectacular discovery from Utah's Great Salt Lake. It should be noted that we returned to this locality in October 2008 and to our dismay the area had completely changed and these unusual specimens were all gone!!! In all likelihood our find from 2007 was merely a one time 'fluke' and it would seem that there is little likelihood of ever finding more!! There are not many of these unique specimens still available.*

REFERENCES CITED

DeRose, R.J., S.Y. Wang, B.M. Buckley and M.F. Bekker, 2014, Tree-ring reconstruction of the level of Great Salt Lake, USA: *The Holocene*, v. 24, no. 7.

Nelson, M.E., and J.H. Madsen Jr., 1987, A review of Lake Bonneville shoreline faunas (Late Pleistocene) of Northern Utah in *Cenozoic Geology of Western Utah*, eds. R.S. Kopp and R. E. Cohenour: Utah Geological Association Publication 16.

Unlike most large lakes the Great Salt Lake is named for what it truly is -- it is great and salty. It is also notable for other reasons. Viewed from space it is an unmistakable landmark in the midst of the Rocky Mountains. To geographers it is America's Dead Sea. To geologists it is the shrunken remnant of a great Ice Age predecessor. To engineers it is an obstacle to travel and a menace to the works of man. Those who would profit from it regard it as a rich liquid mineral deposit. To tourists it is a natural wonder like the Grand Canyon and Yellowstone Park to be viewed and experienced at least once.

William Lee Stokes, my dissertation advisor at Utah



Fig. 4. Cactus Selenite collected in Tooele County on the west side of the lake. Width ~12 cm.



Fig.5. Close-up photo of selenite crystals protruding from the mass giving rise to the "appearance" of cactus spines. Individual crystals average ~6 mm.

PEBBLE PUPS CORNER



CSMS Student Wins Big at State Science Fair By Steven Wade Veatch

Jenna Salvat, a ninth grade student at Coronado High School, brought home several awards from the recent Colorado Science and Engineering Fair held at the College of Natural Sciences Education and Outreach Center at Colorado State University in Fort Collins on April 9, 2016.

Her entry, "Sandstone Injectites in Fault Zone Areas: Sedimentological Characteristics Using Analog Models," won second place in the Senior Division Earth and Space Sciences at the Colorado Science and Engineering Fair. Jenna's work was honored by other organizations, including the Colorado Mineral Society, the Rocky Mountain Association of Geologists, and the Colorado Section of the American Institute of Professional Geologists. Jenna also received the Naval Science Award

and the NASA Earth Science System Award. Her hard work has paid off in spades.

Before moving to the state finals, her project won first place in the regional Science Fair held at the University of Colorado at Colorado Springs on February 27, 2016. Jenna will now travel with her project to the Intel International Science and Engineering Fair (ISEF) to be held in Phoenix, May 8-13, 2016. The ISEF is the leading pre-college scientific and engineering research event that is held each May. In Phoenix more than 1500 students from 70 countries will compete for scholarships, tuition grants, internships, and other prizes.

Jenna began her work last summer with two sponsors: Christine Siddoway, a professor of geology at Colorado College and geoscience researcher Steven Wade Veatch. Jenna's project centered on analyzing sandstone injected into Pikes Peak Granite. Jenna looked at the simulated rate of injection of liquefied sediment into igneous rock under variable densities and how that would impact the formation of sedimentary structures.

"My project helps to understand the numerous and complex sedimentary structures at exposure sites in the Pikes Peak region that were created in response to the agitation caused by fault zone earthquakes," Jenna said.

The science fair teaches students how to explore a topic of their own interest, using real scientific inquiry, and then learn how to present their findings. Jenna's science fair project began on a field trip to the sandstone she is investigating through the Pebble Pups, a special program for youth in the Pikes Peak region to learn about the geosciences. Since then Jenna has put in countless of hours into the project. She would like to be a geoscientist. "I enjoy the process of science and working at the frontier of discovery," she said.

Jenna is a member of the Pikes Peak Pebble Pups and is an Earth Science Scholar in that program. The Pebble Pup program operates under the Colorado Springs Mineralogical Society. Jenna is also a member of the Colorado Scientific Society.

Geodes by Jacob Janecek

Today at pebble pups we learned about Geodes. The geode I was given was found in Dugway Utah. I saw it get cut in half by a diamond tipped blade! It glowed blackish and green under black light. It has formed an eye shape on the end of the broken geode. The mineral found in it is calcite.

The End

Jacob Janecek is a member of the Pikes Peak Pebble Pups and is 7 years old.



Jenna Salvat at the regional science fair. Photo by Steven Wade Veatch.



Image of a Dugway Geode.

2016 CSMS Officers

	At Meeting
Jean Luce, President	X
Lisa Kinder, Vice President	X
Ronald "Yam" Yamiolkoski, Secretary	X
Ann Proctor, Treasurer	X
Norma Rhodes, Editor	X
Sharon Holte, Membership Secretary	X
Doreen Schmidt, Member-at-Large	
Ariel Dickens, Member-at-Large	X
Mark Lemesany, Past President	X

2016 CSMS Chairpersons

Kim & Bodie Packham, Show Chairs
Sharon Holte, Field Trip Director
TBD, Science Fair Chair
Frank & Ellie Rosenberg, Librarians
TBD, Social Committee Chair
Ann Proctor, Store Keeper
Jackson Peirce, Webmaster

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

May Faceting	June Fossil	July Jewelry
Aug. No Meeting	Sept. Lapidary	Oct. Micromount
Nov. Board	December Christmas Party	

SECRETARY'S SPOT

by Ronald "Yam" Yamiolkoski

General Meeting Minutes of the Colorado

Springs Mineralogical Society

May 19, 2016

1. The meeting was officially called to order by Jean Luce, president at 7:09 PM. Eight of the nine officers were present.
2. Jean Luce asked if anyone wished to make any announcements. None were forthcoming.
3. Jean Luce introduced **Steven Veatch**, Life Time Member and the person in charge of the CSMS Pebble Pups and Earth Science Scholars Program, who took several minutes to tell members of the many things our young members are doing and the accomplishments that they have achieved including awards and published articles. One thing that Steve and his PP/ESS's are particularly proud of is the second volume of the Pikes Peak Pebble Pups and Earth Science Scholars Chapbook. Steve mentioned it several times stating that it was available for all who wanted it for a mere \$10 per copy. Steve then went on to introduce our three young speakers for the evening. They were Casey Martin a seventh grader, Blake Reher a high school student, and Jenna Salvat a ninth grader.

Casey Martin spoke about radioactivity in Colorado dinosaur fossils explaining that because of the calcium in bones and that uranium can replace calcium, there is a higher presence of radioactive material in dinosaur bone. He exhibited the presence of radioactivity by use of a Geiger counter that he had rebuilt.

Blake Reher spoke about a new find at the Florissant Fossil Beds National Monument, where he has served as a junior park ranger. A fossilized bird specimen was discovered that is estimated to be approximately 34 million years old. Amazingly enough, Blake said that this species of bird still exists in the wild today. The condition of the specimen was exceptional and is the first of this species to be discovered at the Monument.

Jenna Salvat spoke about her research work dealing with the intrusion of a sandstone (a sedimentary rock) into portions of the Pikes Peak granite an igneous rock). Based on her research, she believes that the Pikes Peak granite fractured as a result of ancient faulting in the area and the sandstone material was immediately forced into the cracks under great pressure. She has been conducting her research under the guidance of Steve Veatch and with the assistance of the Colorado College Geology department. This was the subject of her science project for which she recently received several awards.

After the presentations, Jean Luce presented a check for \$250 to Jenna Salvat to help cover the costs of her going to Phoenix for a national science fair competition. Good luck to Jenna!

4. Jean Luce, our President, took time to recognize new member and guests who introduced themselves.

5. The minutes of the March meeting as they appeared in the April Pick & Pack were approved.

6. Because of time constraints, Jean Luce did not introduce the Group Leaders present. **SEE PICK & PACK FOR MORE INFORMATION ON CSMS GROUPS.**

7. Jean Luce introduced Kim Bodie, Show Chair who provided an update on our upcoming show in June. She reported that we had 51 dealers. General setup will be at 9:00AM on Thursday, June 2nd at the Mortgage Solutions Finance Center on N. Academy. Volunteers are needed for the setup of tables and chairs, club activity areas, signage and security during setup. This is also the time when cases and displays will be setup. She stressed the need for cases exhibiting our hobby. (Contact Bob Landgraf for more information on cases.) At 12:00 the dealers will be allowed in to setup their booths. Because we will have more high-end material and some valuable displays, we will have 24 hour armed security for the show. The Gold Prospectors of Colorado will not be with us this year because of the date of the show. Kim asked if anyone knew of another group that could demonstrate gold panning. We may have an update on this in the future. She is also working on getting a black light display for florescent minerals. Ronald "Yam" Yamiolkoski will handle the Silent Auction again this year and is looking for material to auction as well as volunteers to identify, label and assist in the auction. Finally, Kim asked everyone to get the word out by passing out postcards. Flyers will be available next month to further get the word out.

8. Sharon Holte, our Field Trip Chair, gave a quick report. She desperately needs field trip leaders for some of the field trips that she has arranged, particularly a field trip to the Canon City Club's New Hope Amethyst Claim on May 15th. Other trips are planned to the Salida area, the Hartsel area, and Yam will look into a possible field trip to our old peridot claim. Yam also said there would be at least two field trips to the April Fool's Claim. More leaders and field trips are needed. Please get back to Sharon as soon as possible.

9. Jean Luce drew some names for the door prizes that were available until time got in the way.

10. The meeting was adjourned at 9:07 PM.

Barite

By: Ben Elick

Physical Properties

Chemistry: BaSO₄

Composition: Barium sulfate

Group: Barite

Crystal system: Orthorhombic

Crystal Structure: Tabular crystals

Fracture: Uneven

Hardness: 3 to 3.5

Specific gravity: 4.3-5

Streak: White

Color: Clear, bluish, yellow, brown, reddish

Luster: Vitreous

Cleavage: Perfect basal and prismatic



This piece of blue barite has small interweaving crystals and was collected on the plains near Hartsel Colorado USA. A Ben Elick specimen, photo by Ben Elick.

A Barite Haiku

Being somewhat soft

Varieties can fluoresce

It's orthorhombic

Barite, which is the acceptable spelling of this mineral in the United States, but spelled "baryte" in the UK, is an interesting mineral. It is appealing to the eye and is featured in rock shops and museums. Barite is the ore of barium metal.

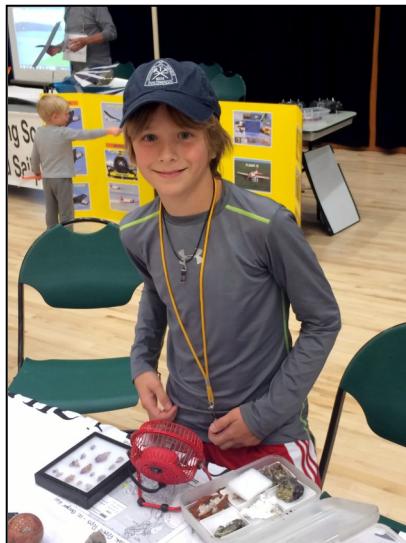
Barite has several practical uses. In the petroleum industry, it is crushed and used as an additive to mud that is poured into wells to support the weight of drilling tools and to flush away rock chips from the drill head and bring them to the surface for geologists to inspect. Barite's high specific gravity also helps by increasing the pressure when drilling through high-pressure zones of rock. Barium is used in aggregates to make a strong cement. Barite is commonly ground up and used as a filler in paper, paint, cosmetics, linoleum, and other industrial products. Barite increases the brilliance of glass. Barium also used a medical application with X-rays and diagnosing certain medical conditions.

This mineral can occur in a broad range of colors. These include colorless, blue, yellow, red, and green. Black barite, which is colored by inclusions, is uncommon. Some varieties even fluoresce under ultraviolet light. Another property is that barite is mostly insoluble in all acids. It is slightly soluble in sulfuric acid.

Barite can occur with lead, silver, and antimony sulfides in hydrothermal veins ranging from medium to low temperatures.



This chunk of yellow barite's crystals are connected by the bond of the crystals plus some white calcite. This specimen was collected on the plains near Hartsel Colorado USA. A Ben Elick specimen, photo by Ben Elick.



About the author: Ben Elick is in the 6th grade and has been a member of the Pikes Peak Pebble Pups for several years.

**The Colorado Springs Mineralogical Society
Pike's Peak Gem & Mineral Show
June 3rd, 4th and 5th, 2016**

**Mortgage Solutions Financial Expo Center, 3650 N. Nevada Ave.,
Colorado Springs, CO.**

Request for NON-COMPETITIVE Display Space

Name: _____ **Society:** _____

Address:		
Phone:	Email:	
City:	State:	Zip:

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

Describe Display or Displays:

For more information about the study, please contact the study team at 1-800-258-4238 or visit www.cancer.gov.

I will bring my own display	Your case length	#of cases
I will need a case*	Case size desired	#of cases

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

Setup is from 2 PM to 7 PM on Thursday June 2 or 9 AM to 10 AM on Friday. Tear down is 4 PM to 9 PM on Sunday.

Signature of Non-Competitive Exhibitor:

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

**Please return by mail or email by:
May 25th to reserve a case and exhibit space.
After May 25th exhibitors are still welcome
based upon availability of cases and space.**

RETURN TO: Bob Landgraf
304 Palmer Trail
Manitou Springs, CO 80829
719-685-1364
rmlwp74@aol.com



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:
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 should be submitted at resolutions above 200 dpi in TIF, BMP, JPG, or PIC format. Articles are preferred in word. Editors will correct font.

E-Mail to:
csmseditor@hotmail.com

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

The PICK&PACK is published ten (10) times per year (no issues in January or August). Unless otherwise marked, materials from this publication may be reprinted. Please give credit to the author and CSMS PICK&PACK.



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are available for sale.
If you celebrated a CSMS anniversary in 2014 or 2015, you are eligible for your one year pin award

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**Friends of Mineralogy,
Colorado Chapter--
Silent Auction**

Saturday, May 14, 2016

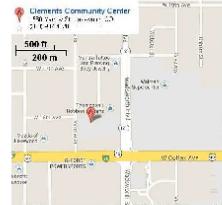
**Setup begins 10:30 a.m., Auction begins at 12 noon
Clements Community Center, 1580 Yarrow St., Lakewood CO**

All are invited to come & bring material to sell, and to bid on items

Friends of Mineralogy, Colorado Chapter is having its silent auction of mineral specimens, rocks, fossils, books, faceted stones, jewelry, lapidary pieces and mining memorabilia. Please bring your auction materials for setup beginning at 10:30 AM. All (members or not) are invited to bring specimens to sell, and to participate as bidders/buyers. Items brought to the auction may be designated as a 20%, 50%, or 100% donation to FMCC.

Time: Our auction will be on Saturday, May 14; setup will begin at 10:30 a.m., auction to begin at 12 noon, a live auction of special items will begin at 1 p.m., all tables will be closed by 3:00 p.m., and checkout should be completed by 4:00 p.m.

Location: Clements Community Center, 1580 Yarrow St., Lakewood, located one block northwest of the intersection of West Colfax Ave. and Wadsworth Blvd. The entrance and parking lot are on the south side, facing Colfax. Go north on Yarrow Street from Colfax.



Auction bid slips are attached on a separate page, and will also be available at the auction during setup. Sellers can also get copies of our bidding slips at our website:

www.friendsofmineralogycolorado.org
Note to sellers: PLEASE use our current bidding slips, not old ones which may differ from previous years. Thank you!

Any questions about the auction should be directed to Mark Jacobson, markvianjacobsen@gmail.com, 1-337-255-0627, or to Pete Modreski, pmodreski@aol.com, 720-205-2553.

Please tell all your friends about the auction, bring some specimens, and come see the good selection of specimens and enjoy our complimentary refreshments. A selection of special items, donated by local dealers, will be included in the "live" auction.

THE GRAND JUNCTION GEM & MINERAL CLUB PRESENTS THE 69TH GEM, MINERAL, & JEWELRY SHOW

Rocks and Minerals of the Colorado Plateau

May 7th and May 8th, 2016
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For more information, Contact: Chuck Duncan 970-270-8068 dcchuck3u@yahoo.com
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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:

- | | |
|--|--|
| American Federation of Mineralogical Societies (AFMS) | www.amfed.org |
| Rocky Mountain Federation of Mineralogical Societies (RMFMS) | www.rmfms.org |