

**CSMS General Meeting
Thurs. October 17, 2013 7PM
"Photographing Minerals"**

By Dr. Richard J. Cook, Professor of Physics, at the United States Air Force Academy.

In recent years the field of macrophotography (photographing small things) has undergone a revolution with the introduction of a technique called "focus stacking." Previously, photography of small objects was plagued by depth-of-field problems -- only a small portion of the object could be in sharp focus when shooting at moderate to high magnification. In this talk, Dr. Cook describe how focus stacking can produce images of even very small objects, such as micromount minerals, that are in sharp focus everywhere. He will also demonstrate focus-stacking photography using a digital camera, a laptop computer, and some focus-stacking equipment.

Treats for October to be provided by the Crystal Group

The Willet Raney Willis Micro-Mineral Collection

By Kay Thompson

Willet Willis was one of the founding members of the Colorado Springs Mineralogical Society. His micro-mineral collection was given on his death in 1968 by his family to the Air Force Academy. The Willis collection has been listed in the "Who's Who" of Micro-Mineral Collection. The Collection was housed in the Department of Economics and Geography for many years. After the closing of the Department, the collection was placed in storage. Upon hearing of this, James Hurlbut, at the Denver Museum of Nature and Science, went into action. After several years of negotiation, he



enlisted the aid of

Whitey Hagadorn, the new Mineral/Paleo Curator at DMNS, and Dr. Richard Cook, a professor at the Air Force Academy, to acquire the collection for the Denver Museum of Nature and Science. They were successful. On December 27, 2012, the family of Willet Willis came to DMNS to see the collection of their Grandfather in its new home.

The collection can be seen by contacting James Hurlbut, Larry Haven, or Markus Lieberman at the DMNS Geology Lab.

More Pictures on Page 3

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CSMS Calendar

October 2013

Tue., Oct 1—Fossil Group, 7 p.m., Senior Center.

Thu., Oct 3—Board Meeting, 7 p.m., Senior Center.

Sat., Oct 5—Lapidary, 10-2 p.m., Sharon Holte 217.5683.

Tue., Oct 8—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719.495.8720

Thu., Oct 17—General Assembly, 7 p.m., Senior Center.

Pebble Pups & Juniors. 5:30 to 6:15 p.m., Steven Veatch, 719.748.5010

Thu., Oct 24—Crystal Group, 7 p.m., Senior Center. Kevin Witte, 719 638-7919

Faceting Group, 7 p.m., Senior Center. Paul Berry, 719.578.5466

Oct, Jewelry Group, By appointment. Call, Bill Arnson, 719.337.8070. 15610 Alta Plaza Cir., Peyton

November 2013

Sat., Nov 2—Lapidary, 10-2 p.m., Sharon Holte 217.5683.

Tue., Nov 5—Fossil Group, 7 p.m., Senior Center.

Thu., Nov 7—Board Meeting, 7 p.m., Senior Center.

Tue., Nov 12—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719.495.8720

Thu., Nov 21—General Assembly, 7 p.m., Senior Center.

Pebble Pups & Juniors. 5:30 to 6:15 p.m., Steven Veatch, 719.748.5010

Thu., Nov 28—Crystal Group, 7 p.m., Senior Center. Kevin Witte, 719 638-7919

Faceting Group, 7 p.m., Senior Center. Paul Berry, 719.578.5466

Nov, Jewelry Group, By appointment. Call, Bill Arnson, 719.337.8070. 15610 Alta Plaza Cir., Peyton

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.us

Other Events of Interest to CSMS Members

Fri-Sun, Oct 4-6, The Grand Junction Gem and Mineral Club is hosting a petrified wood seminar featuring Mr. Walt Wright of Brea, California. Walt is a Botanist/Ecologist/Geologist and Paleobotanist. The class will be followed with 2 days of field trips. Contact Jim Schultz, 970-242-0428 or js@jimsschultz.net. Fee \$80 per person.

Fri-Sun, Oct 4-6, Albuquerque Gem & Mineral Show, New Mexico State Fairgrounds

Fri., Oct. 11, 7:30 p.m., Silent Auction of minerals, rocks, gems, etc., at the October meeting of the Denver Gem and Mineral Guild; at the Colorado School of Mines Geology Museum, Conference Room (13th and Maple Streets, Golden CO); all are welcome to attend; for more information please contact Gideon Breithaupt, gideonb@hotmail.com, 303-239-7290

Sat., Oct. 12, 10-2:00 p.m., Dinosaur Discovery Day public tour day at Dinosaur Ridge, Morrison CO, Last one for the year. Tour guides are stationed at each fossil and geologic stop to explain what you see in the Cretaceous and Jurassic rock formations. One can walk up and down the road to see the sights (no charge), or ride a shuttle bus (\$4). "Mr. Bones" (a "live" walking dinosaur skeleton) will be present See www.dinoridge.org for more info.

Oct. 13-19 is Earth Science Week 2013. "Fremont County Stones and Bones" and Canon City Geology Club have planned a full week of activities and field trips around Canon City during this week and before.

9/28 = Geology tour of Shelf Road

10/4 = Holcim Limestone Quarry tour

10/4 = Downtown Canon City historic building tour, and the stones that made them

10/5 = Skyline Drive geology tour

10/5 = Tunnel Drive geology tour

10/6 = Temple Canyon geology Jeep tour

10/12 = DeWeese Diplodocus presentation

10/12 = The Historic Airlift of a Stegosaurus presentation

10/12 = Charles Walcott on the Royal Gorge Trail

Other Events of Interest to CSMS Members continued

- 10/13 = Gold Belt Byway Jeep tour
- 10/14 = Dr. Martin Lockley, dinosaur trackway expert
- 10/16 = BLM National Natural Landmark at Garden Park
- 10/19 = Indian Springs paleontology tour
- 10/25-26 and 10/28-29 = Canon City Meteorite welcomed home

For more info, see <http://www.parks.state.co.us/parks/arkansasheadwaters/Pages/ArkansasHeadwatersHome.aspx> or contact Cindy Smith, cindysmithrocks@me.com.

Sat-Sun., Oct. 19–20 Grand Junction, CO. The 66th Annual Gem, Mineral, & Jewelry Show, Two Rivers Convention Cntr., Downtown 1st and Main. Info.—Chuck Duncan, 970/270-8068.

Sun., Oct. 20, Florissant Scientific Society field trip, **Deer Creek and South Valley Open Space Parks (Jefferson County)**, structural geology and oil geology, led by Ned Sterne. All interested are welcome to join us; for more info contact Beth Simmons, cloverknoll@comcast.net.

Sun-Wed., Oct. 27–30, the annual meeting of the **Geological Society of America** takes place in Denver. There will be a number of **Short Courses and Field Trips** specifically for **Educators** taking place as part of the meeting, mostly on Oct. 26 and 27, as well as an Educators' Reception and opportunities to visit the Exhibit Hall and Poster Sessions at the meeting. For more info see: <http://community.geosociety.org/2013AnnualMeeting/Conference/Educators>

Thurs., Nov. 14, 7:30 p.m., **Friends of Mineralogy, Colorado Chapter**, bimonthly meeting; **The Alkaline Pegmatite Minerals of the Golden Horn Batholith, Washington Pass, Northern Cascade Mountains, Washington**; by Dr. Markus Raschke, University of Colorado, Physics and Chemistry Depts. "The unusual minerals at Washington Pass include zektzerite, sogdianite, brannockite, and a newly identified mineral that is the world's second known occurrence." Meeting in the VIP Room, Denver Museum of Nature and Science; all are welcome to attend.

"Closeout sale" at the USGS Map Store, run by the Rocky Mountain Nature Association, continues--45% discount on all remaining maps & items; Building 810, Denver Federal Center, Lakewood, 9 a.m. - 4 p.m. weekdays. Many free maps are also available! And, for educators (or others interested), **Earth Science Week 2013 Educators' Packets** are now available, no charge, at the Map Store; their theme this year is "Mapping Our World", and they contain an assortment of posters, charts, free field notebook, and a copy of the DVD "Switch, Discover the Future of Energy".

The Willet Raney Willis Micro-Mineral Collection continued



Marcus Lieberman showing family the collection



Jim Hurlbut with Wills family

ZUNTITE AND LAIHUNITE: TWO UNFAMILAR COLORADO MINERALS

Mike Nelson
csrockguy@yahoo.com

I love the world of minerals, and as John Lennon sang: *Let me count the ways...* beautiful, colorful, and exciting to collect (and even purchase). However, what I really like about minerals is the element of surprise. I suppose the “average” layperson might be able to name 10 different minerals, maybe the “average” geologist a hundred on any given day. But to me almost every week brings out a serendipitous moment when a mineral name that is totally unfamiliar pops out from somewhere! So, that is the story for this month---two Colorado minerals that were not in my vocabulary: Zunyite and Laihunite.

Recently I was down visiting my favorite mineral store in Colorado Springs, Ackleys on Stone Avenue (is that a good location for a rock store?). I noted a small sample in a box labeled “Zunyite from Zuni Mine, San Juan Mountains, Colorado” (Fig. 1). That was new one for me so I shelled out the two bucks and went home to explore the references—actually I thought it might be mislabeled or misidentified or a substitute name. But then I found a reference in *Minerals of Colorado* (Eckel and others,



Fig. 1. Rock containing zunyite crystals, noted by arrows, collected from Zuni Mine, San Juan Mountains, Colorado. Length of specimen ~3.8 cm.

1997) explaining that the Zuni Mine near Silverton is the type locality for the mineral and that it is relatively rare in the record. OK, so back to the store to check on other specimens and I found one additional one to take home.

The type locality for Zunyite is located northwest of Silverton, perhaps three miles and at an altitude approaching 12,000 feet on Anvil Mountain. The Zuni was originally a silver mine and zunyite was first described way back in 1884 (Hillebrand). How he determined the chemical composition of a chlorinated silicate, I don't have the slightest idea! Some (many) of those early workers were just pretty darn “smart”. Guitermanite ($\text{Pb}_{10}\text{As}_6\text{S}_{19}(\text{?})$) was also described, with zunyite, from the mine; however, Eckel and others (1997) noted this mineral (guitermanite) from the mine is actually jordanite ($\text{Pb}_{14}(\text{As},\text{Sb})_6\text{S}_{23}$).

Zunyite is an aluminum sorosilicate $[\text{Al}_{13}\text{Si}_5\text{O}_{20}(\text{OH},\text{F})_{18}\text{Cl}]$ and is generally found in hydrothermally

ZUNTITE AND LAIHUNITE: TWO UNFAMILAR COLORADO MINERALS *continued.*

altered rocks (Eckel, 1997), especially volcanic rocks. The Zuni mine is located in the San Juan Mountains, an area known to most geologists as a volcanic terrane since there is a tremendous amount of evidence pointing to numerous volcanic eruptions in the Tertiary (last 66 million years or so). The San Juans are also home to perhaps 60 volcanic calderas, usually circular or oblong collapse

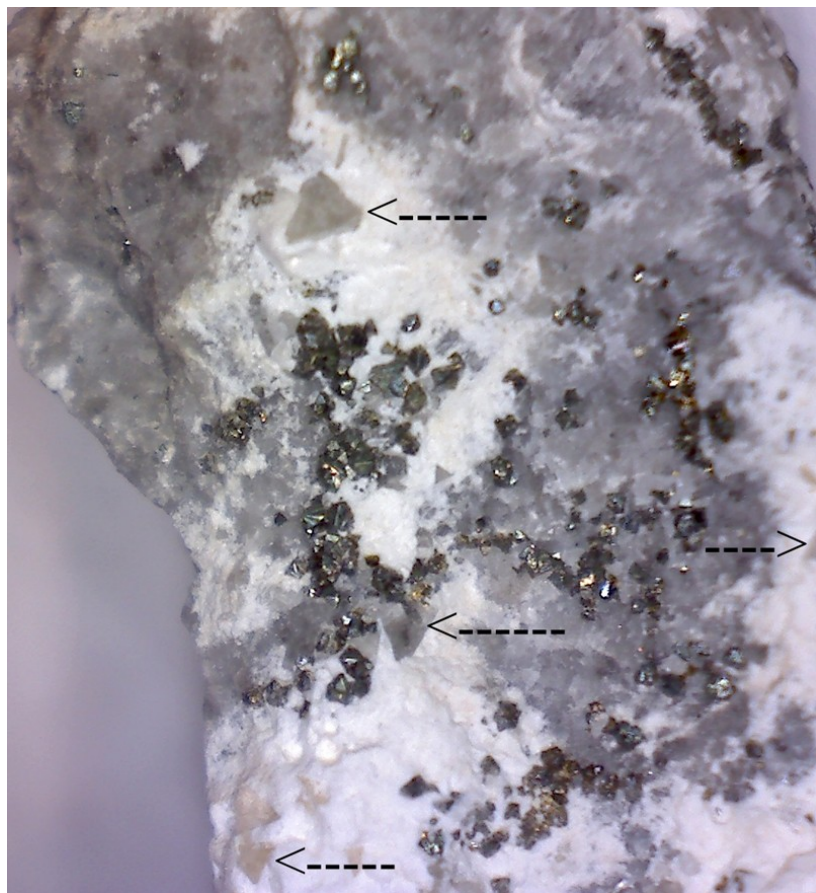


Fig. 2. Photomicrograph showing triangular zunyite crystals, each about 2.5 mm along sides.



Fig. 3. Photomicrograph of Arizona zunyite. Length largest crystal ~1.8 mm, far right crystal ~1 mm.

features indicating ancient volcanoes that “blew their stack” (see June 2011 Pick & Pack). Associated with the volcanics are igneous intrusions, including the Oligocene Sultan Mountain Stock along the edge of the Silverton Caldera (Hon and Lipman, 1989). Molenaar and others (1968) believed the altering hydrothermal solutions at the Zuni Mine came up along the faults associated with the intrusion.

The crystals of zunyite (Fig. 2) are generally quite small, on the order of 2-3 mm and less than one cm., usually tetrahedrons and in cross section appear as tiny equilateral triangles, sort of a grayish-white to “transparent” color (I know that is not a real color), have a vitreous luster and are about the hardness of quartz (~7 Mohs). Evidently a few localities (and there are not many localities producing specimens of the mineral) sometimes produce reddish crystals. www.MinDat.org has some wonderful photos with a good depth of field achieved with *CombineZM*. Hlava and others (1994) have produced a number of very nice drawings of zunyite crystals, and have a list (quite extensive) of associated minerals at the Zuni Mine.

I recently obtained a small specimen of pyrophyllite $[\text{Al}_2(\text{Si}_4\text{O}_{10})(\text{OH})_2]$ that contained tiny crystals of light brown zunyite crystals (Fig. 3). The specimen was collected at the Big Bertha Mine, Middle Camp-Oro Fino District, Dome Rock Mountains, La Paz County, Arizona.

So, after locating the zunyite I became somewhat obsessed with locating other “different” minerals for my modest collection, and was constantly on the lookout for elpasolite (still looking). It is hard to define “different” other than to state *a mineral that others might overlook* or *a mineral I do not recognize* (not really that hard) or *a mineral that just seems weird to me!* So, it was no surprise (at least to me) that after observing a small specimen of laihunite, I nabbed it right off the shelf for a couple of bucks. It had sort of a South Pacific ring to the name. But then, it turned out to be sort of a double serendipitous moment as the

ZUNTITE AND LAIHUNITE: TWO UNFAMILIAR COLORADO MINERALS *continued.*

specimen was collected from El Paso County, Colorado, at Crystal Park. That locality is only a few miles from my home in Colorado Springs. Unfortunately, Crystal Park is on private land and generally inaccessible to the average roaming rockhound. So, I was happy to acquire a specimen from an older collection.

In introductory geology classes instructors always talk about the “mineral” olivine—for many reasons. Olivine is a magnesium-iron silicate [$(\text{MgFe})_2\text{SiO}_4$] and may be the most common mineral in the earth’s mantle. It usually is associated with basalt, or a few metamorphic rocks, or ultramafic rocks such as dunite or peridotite. However, the kicker is that olivine is not really a mineral but simply gives its name to a solid solution group or series—the Olivine Group. Forsterite is the magnesium-rich end member while fayalite is the iron-rich other member. Olivine is a general term (in introductory geology and in the vocabulary of most rockhounds) indicating a composition somewhere in the middle between these two end members. But that is OK as most rockhounds are more interested in the gemstone segment of olivine, peridot.

Although fairly rare in the mineral world, laihunite (Fig. 4) is now known to be an iron silicate probably derived from the weathering of fayalite (the iron-rich olivine). In addition, some of the iron in the mineral is ferrous iron while another portion is ferric iron. Eckel and others (1997) noted that laihunite is iron deficient in that it contains only 1.5 atoms of Fe for each Si atom. The formula is written as $[(\text{Fe}^{2+}\text{Fe}^{3+})_2(\text{SiO}_4)_2]$.

As best that I can determine from www.MinDat.org, laihunite is only found at two general localities in the U.S.: the Crystal Park/St. Peters Dome area of Colorado (Pikes Peak), and the Obsidian Cliffs area of Oregon (North Sister Mountain). In addition, there are a few other areas yielding the mineral in scattered parts of the world—but not many. At Crystal Park Eckel and others (1997) reported the laihunite occurs in a quartz-microcline-biotite pegmatite (part of the Precambrian Pikes Peak Batholith). By the way, the name laihunite has nothing to do with the South Pacific but was named for the Laihe iron deposit in Manchuria, China. But, I suppose that not many rockhounds have a sample of this mineral in their collection!

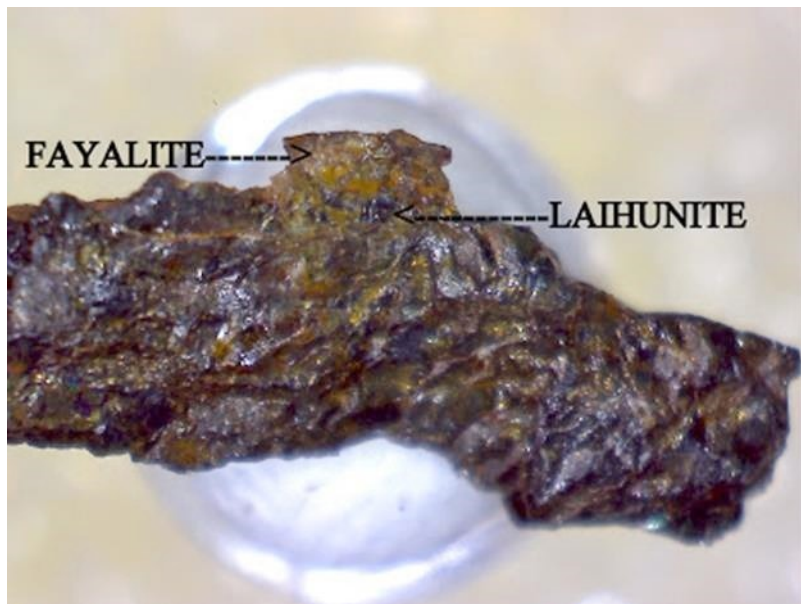


Fig. 4. Photomicrograph of olive-colored fayalite with black laihunite, the weathering product. Width of fayalite crystal is ~2.2 mm. The additional “black” material is probably a mixture of magnetite and laihunite as the specimen is partially magnetic.

REFERENCES CITED

- Eckel, E. B. (and others), 1997, *Minerals of Colorado: Friends of Colorado—Colorado Chapter and Denver Museum of Natural History*, Denver.
- Hlava, P. F., A. G. Hampson, and W. P. Moats, 1994, Zunyite and other Minerals of the Zuni Mine, San Juan County, Colorado: *Proceedings of the 5th Annual New Mexico Mineral Symposium*.
- Hillebrand, W. F., 1884, On Zunyite and Guitermanite, Two New Minerals from Colorado: *Colorado Scientific Society Proceedings*, v. 1.
- Hon, K., and P. W. Lipman, 1989, Western San Juan Caldera Complex: in Chapin, C. E., and J. Zidek, (eds.), *Field Excursions to Volcanic Terranes in the Western United States*, Vol. I: Southern Rocky Mountain Region: New Mexico Bureau of Mines and Mineral Resources, Memoir 46.
- Molenaar, C. M., D. L. Baars, J. Mayor, and V. C. Kelly, 1968, Road Log from Ouray, Colorado to Farmington, New Mexico via Silverton, Eureka, Durango, and Aztec: San Juan-San Miguel-La Plata Region: New Mexico Geological Society, Guidebook to 19th Field Conference.

PEBBLE PUPS CORNER



Pebble Pups in the News

Gavin Noller's article entitled "A Ute arrow straightener is made of Jurassic dinosaur bone" will be published in *Deposits* magazine, which is published in the United Kingdom and circulated world-wide.

Zach Sepulveda will present a paper at the Geological Society of America in Denver this fall. The GSA is the premier professional geosciences society in North America. Zach is presenting the paper and submitted the paper. Steve Veatch, the exploration manager of the gold mine in Cripple Creek and Ian Miller from DMNS are co-authors. This is a pure science paper that will be entered into the paleontology division. Since the phenomenon occurs in the gold mine and crystalline rocks, Zach's paper will attract many geologists and paleontologists.

Remarkable Trace Fossil Found Near Woodland Park May Hold Clues to an Ancient Sandstone

By Steven Wade Veatch and Zachary Sepulveda

Winding into the mountains, U.S. highway 24 closely follows the Ute Pass fault, a major fault that separates the Rampart Range from the Pikes Peak massif and the rest of the Front Range. Starting southeast of Cheyenne Mountain, the Ute Pass fault can be traced for about 60 miles, and heads north along state highway 67 beyond Woodland Park. The fault zone is relatively wide and filled with broken and fractured rocks that create the course of Fountain Creek in Ute Pass.

There are at least three resistant ridges made up of sandstone exposed along Ute Pass and in the Woodland Park area. These can be thought of as "fault slices" of a sandstone rock unit "jammed" in Pikes Peak Granite during past movements of the Ute Pass fault. The sandstone rocks are called "injectites" by a number of geologists to describe this remarkable formation. Generally, the color of the injectites is reddish or maroon, but some of the weathered injectites have a buff discoloration on weathered surfaces that is related to the iron oxide cement present in the sandstone.



Today the injectites remain a source of much scientific debate. This was thought to be a sandstone unit called the Sawatch Sandstone that was deposited during the Paleozoic Era in the Cambrian Period—when there was an explosion of multicellular life. Geologists give names to units of rock that were formed generally in the same way at the same time so they can talk about them and map them. Upon closer examination, it is clear this is probably not Sawatch Sandstone. During a recent field trip attended by seven geologists studying these features in Woodland Park, the scientists began to consider this sandstone was perhaps pre-Cambrian, formed at a time before there was multicellular life on Earth. During the intense and concentrated discussion during this field trip, the scientists considered it a distinct possibility this sandstone was laid down before larger life forms were present; Steve Spence, a geology student at Pikes Peak Community College, climbed a steep slope of this enigmatic sandstone while the geologists were fervently debating. He came back down with an object he had never seen before and brought it to one of the authors (Veatch) and said, "What is this unusual looking thing?"

Veatch knew exactly what it was—it was a trace fossil of a larger, multicellular creature that once crawled its way through the wet and moist sand millions of years ago. This large trace fossil put the primordial sandstone back in the Paleozoic when there were large, multicellular organisms. Trace fossils, also known as ichnofossils, are a very important kind of fossil, they

Steve Spence, a Pikes Peak Community College Student with the trace fossil he found. Photo © by S.W. Veatch



The tube-like structure or the trace fossil was formed by the creature crawling through this ancient sand and can be clearly seen from this side view. Steven Spence specimen. Photo © S. W. Veatch.

record *behavior* exhibited by prehistoric creatures. They are formed by animals performing actions, rather than animals dying and being preserved in sediment. For instance, a trace fossil might be formed by a worm burrowing its way through the sand, leaving a trail that gets preserved for all of eternity; or a dinosaur traveling to its nesting site and leaving a trail of footprints in deep mud. The term trace fossil may also include other things like remnants of organisms left behind, for example, egg shells or coprolites (scat or droppings). Trace fossils leave us with indirect evidence of how past animals lived their lives and how they may have behaved.

Footprint fossils can give us insight not only into the behavior of prehistoric animals, but also into their physical attributes. By looking at footprints we can determine the size, speed, and weight of the animal creating the print. Trace fossils are a valuable source of information on prehistoric animals' behavior and biology.

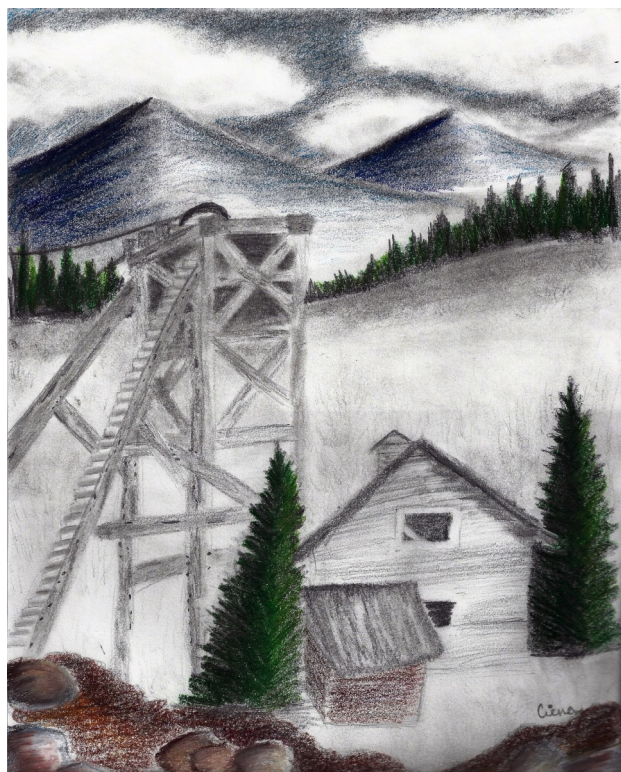
This is a good example of how science works, and how something can change like the name and age of a sandstone unit. Geologists for decades thought it was the Sawatch Sandstone, and now geologists do not know what the name of the sandstone is or the age of it. Now science has a trace fossil from Woodland Park to add to the understanding of this puzzling sandstone. Scientists will soon probe the mysteries of this ancient sandstone embedded in Pikes Peak Granite and hopefully assign a name and age to it.

Victor, Colorado: The City of Mines

By: Ciena Higginbotham

Victor is the place to be
If it's gold you want to see
In this quaint and little town
Gold is buried underground
As you travel up that hill
Everything seems to just stand still





Victor, Colorado: The City of Mines continued

The place is so unique,
 It's something different you'll want to seek
 Where miners once walked each street
 And friendly people you will meet
 Visit the American Eagle Mine
 And you will be taken back in time
 Just like the legends of old
 All these storied are still to be told
 So, bring a stout heart if you dare
 Phantom Canyon Road will give you a scare

2013 CSMS Officers

Mark Lemesany, President
 Jean Miller, Vice President
 Renee Swanson, Secretary
 Ann Proctor, Treasurer
 Ellie Rosenberg, Editor
 Susan Freeman, Membership Secretary
 Sharon Holte, Member-at-Large
 Frank Rosenberg, Member-at-Large
 Roger Pittman, Past President

2013 CSMS Chair Persons

Kim & Bodie Packham, Annual Show Chairperson
 Ron Yamiolkoski, Field Trip Director
 Ron Yamiolkoski, Science Fair Chair
 Frank & Ellie Rosenberg, Librarians
 Camera Club Chair is Vacant
 Georgia Woodworth, Social Committee Chair
 Ann Proctor, Store Keeper
 Gary del Valle, Webmaster

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

Feb. Crystal	Mar. Faceting	Apr. Fossil
May Jewelry	June Lapidary	July Micromount
Aug. Picnic	Sept. Board	Oct. Crystal
Nov. Faceting	Dec. Christmas Party	

SECRETARY'S SPOT by Renee Swanson

MINUTES OF COLORADO SPRINGS MINERALOGICAL SOCIETY GENERAL MEETING SEPTEMBER 19, 2013

Called to order by Mark Lemesany. At 7PM.

Richard Sauers, Executive Director of the Western Museum of Mining and Industry, gave an informative talk of all aspects of the WMMI and its many programs in the community. The museum has great plans to expand and set up some of the mining equipment it has in storage.

Steve Veach brought copies of the Pebble Pups Poetry Book for sale to CSMS members. He also gave some to Richard Sauers to be sold at the WMMI.

Visitors, guests and new members were introduced. There was a break for "goodies"

Minutes were approved for the July 18 meeting. All sub-groups are now back in session. Check the calendar printed in the Pick & Pack for dates and times.

Old Business: The picnic has not been well attended for a number of years. It usually conflicts with several Mineral shows and also fieldtrips. It was decided to combine the picnic with the CSMS Show potluck in June.

Kay and Marge gave an update on member Moira Lyne. Mark asked for volunteers for next year's show.

Door prize drawing held. Thank you Marge Regel for your door prize donations. Adjourned 8:30.

Respectfully submitted, Renee Swanson

INTRODUCTION TO MINERAL IDENTIFICATION

A hands-on lab of basic mineral-identification techniques

presented by

Dr. Bob Carnein

Saturday, October 26

Pueblo Community College, Fremont Campus

51320 W. Highway 50, Canon City



Dr. Bob Carnein of Florissant has taught mineralogy to students for over 37 years. He will introduce the major properties that are useful for beginners to identify 9 common minerals using the Mohs Hardness Scale. Each student will use a set of the first 9 minerals of the hardness scale to practice on.

This free lab is being offered as a part of Earth Science Week by Fremont County Stones 'n Bones and PCC, and is appropriate for all ages 8 through adult; children are encouraged to bring their parents.

To register for either the **9:00 - 10:30 am** or the **11:00 - 12:30 pm** lab, please call Cindy Smith (719-275-9781 or cindysmithrocks@me.com).

PCC is welcoming home the **1973 Canon City Meteorite**, on display October 25-26 and 28-29. Please join us at 1:00 pm 10/26 for a reception, anniversary cake, and speakers, including those first on the scene that fateful night 40 years ago!

**** Each participant will need to supply his/her own 'test kit', consisting of these items:**

- a small magnet (a refrigerator magnet will work)
- a penny or a nickel
- a pocket knife or steel nail
- a small glass jar or bottle
- a transparent container (jar or bottle) containing vinegar
- a pen or pencil
- a list of minerals of the Mohs hardness scale (just Google it!)



Our Staff...

Ellie Rosenberg—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

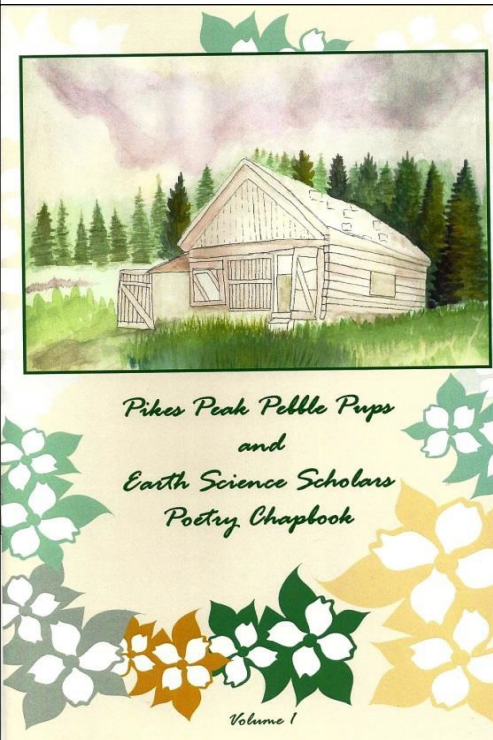
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Colorado Springs, CO 80901

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Classifieds

Pikes Peak Pebble Pups and Earth Science Scholars Publish First Poetry Chapbook



The Colorado Springs Mineralogical Society and the Lake George Gem and Mineral Club both host a junior program. The first volume of their collected poems about Earth science has been published and may be purchased for \$4.00. Shipping and handling is \$1.00. These chapbooks are limited in number and if you plan on buying one you should do it soon. Each book sold will provide each club with \$4. These will be for sale at the Denver Gem and Mineral Show in September. A second volume is being planned now and will be available later this year. To order, please send \$5 to:

Steven Veatch

1823 South Mountain Estates Road

Florissant, CO 80816

In the memo section of the check put the club you belong to so that the club will receive the \$4. Make your check payable to: Veatch GeoScience, LLC. Be sure and act quickly as these books will soon be gone. This also helps the two clubs support the work of the Pebble Pups and Earth Science Scholars. Each month Veatch GeoScience, LLC. will issue a check to each club for the sales of the chapbooks.

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CSMS

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

**If you celebrated a CSMS anniversary
in 2011 or 2012, your year pin award
See Storekeeper, Ann Proctor**

Sangre de Cristo

Gallery & Rockshop

Steve & Peggy Wilman

114 Main Street, Westcliffe, Colorado 81252

(719) 783-9459

gallery@ris.net



Joe & Marylee Swanson Colorado Springs, CO
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Time Value
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Delay



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:

American Federation of Mineralogical Societies (AFMS) www.amfed.org

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