

# PICK&PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Colorado Springs  
Mineralogical Society  
Founded in 1936

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PICK&PACK

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## CSMS General Meeting

Thurs. September 18, 2014 7PM

Dennis Beals will be the speaker.

Dennis has traveled extensively in Mexico and  
is a dealer of Mexican minerals

Treats provided by the Faceting Group.

### Inside this Issue:

CSMS Calendar	Pg 2
Wollastonite	Pg 4
A Rockhounds Tools	Pg 5
A Rockhounding Trip to California	Pg 6
Pebble Pups Corner	Pg 7
Pebble Pups Conserve Cripple Creek	Pg 7
Earth Science Scholars serve as Rangers	Pg 11
Secretary's Corner	Pg 10
Classified	Pg 11

## A TRIP TO AFMS AND RMFMS CONVENTION

Mike Nelson csrockguy@yahoo.com

As a CSMS delegate (and also the Western Dakota Gem & Mineral Society), I recently attended the combined American Federation of Mineralogical Societies—Rocky Mountain Federation of Mineralogical Societies meetings in Tulsa, Oklahoma. The host society was the Tulsa Rock and Mineral Society and members did a fantastic job. I am uncertain of attendance; however, members came from across the U.S.

As a native Kansan, I have traveled I-35 and I-70 hundreds of times; therefore, whenever possible I like to ramble around on the two-lane state highways taking in the different scenery and stopping to examine a few outcrops---as I did on my trip to and from Tulsa. On the way down from Colorado Springs I traveled east from Pueblo on the Colorado Piedmont (mostly Pierre Shale) and the High Plains (Tertiary Ogallala Formation mantled by Pleistocene sand and loess). I followed the Arkansas River east and was somewhat amazed that it actually carried water into Kansas. Of course, Colorado is now in the "Monsoon Season" and rain had been heavy for a few days. At Dodge City (I avoided the tourists at Dodge City where Marshall Dillon still holds court) I turned south wandering across the desolate Kansas plains and almost deserted towns into the fascinating Permian redbeds of Oklahoma. These beds are similar to the redbeds visitors see here in Colorado; however, they have eroded into a series of buttes and mesas (major landforms in southern Kansas and western Oklahoma [Fig. 1]). Gypsum and anhydrite beds are common in the redbeds (Fig. 2). Near Tulsa the topography changes in a drastic manner as Pennsylvanian rocks begin to crop out and the landscape supports an abundance of trees. Tulsa was established on the Arkansas River and that body of water supplies an abundance of air moisture (humidity).



Fig. 1. The Permian redbeds in western Oklahoma form buttes and small mesas. Note gypsum caprock.

Continued on page 3

## CSMS Calendar

### September 2014

Tue., Sep 2—Fossil Group, 7 p.m., Senior Center. Jerry Suchan 303 648-3410

Thu., Sep 4—Board Meeting, 7 p.m., Senior Center.

Sat., Sep 6—Lapidary, 10 a.m.-2 p.m., Sharon Holte 719 217-5683.

Tue., Sep 9—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719 495-8720

Thu., Sep 18—General Assembly, 7 p.m., Senior Center.

Pebble Pups & Juniors. 5:30 to 6:15 p.m., Steven Veatch, 719 748-5010

Thu., Sep 25—Crystal Group, 7 p.m., Senior Center. Kevin Witte, 719 638-7919

Faceting Group, 7 p.m., Senior Center. Paul Berry, 719 578-5466

Sep, Jewelry Group, By appointment. Call, Bill Arnson, 719 337-8070. 15610 Alta Plaza Cir., Peyton

### October 2014

Thu., Oct 2—Board Meeting, 7 p.m., Senior Center.

Sat., Oct 4—Lapidary, 10 a.m.-2 p.m., Sharon Holte 719 217-5683

Tue., Oct 7—Fossil Group, 7 p.m., Senior Center. Jerry Suchan 303 648-3410

Tue., Oct 14—Micromounts, 7 p.m., Senior Center. Dave Olsen, 719 495-8720

Thu., Oct 16—General Assembly, 7 p.m., Senior Center.

Pebble Pups & Juniors, 5:30 to 6:15 p.m., Steven Veatch, 719 748-5010

Thu., Oct 23—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

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

**Sep. 5-7, Ouray-Silverton San Juan Mountains Mineral Symposium**, For the registration form and other questions and concerns, please contact Lou Conti, 303-797-3205 or [dlconti@aol.com](mailto:dlconti@aol.com)

**Sep. 6-9, Denver Fine Mineral Show**, at the Denver Marriott West, 1717 Denver West Boulevard, Golden, Colorado; see <http://www.finemineralshow.com/>

**Sep. 6-14, Denver Coliseum Mineral, Fossil,& Gem Show**

**Sep. 7-14, Colorado Mineral & Fossil Show**, Ramada Plaza Hotel (formerly Holiday Inn), Denver

**Sep. 10, Colorado School of Mines Geology Museum, Reception & Open House**, 6-9 p.m. The reception showcases new exhibits installed in the museum, with complimentary refreshments, music, and cash bar. 1310 Maple St. (the corner of Maple and 13<sup>th</sup> Streets) in Golden.

**Sep 12, 2014, 7:30-9:30 PM** Join Ranger Leo Sack and see the night sky. Florissant Fossil Beds National Monument

**Sep. 12-14, Denver Gem and Mineral Show**, Denver Mart, I-25 at 58<sup>th</sup> Ave.; The theme is "Agate"; see <http://www.denvermineralshow.com/> for more info. **Volunteers** needed for two educational booths, the **Kids Corner**, sponsored by the U.S.G. S., and **Minerals That Do Things!**, hosted by Dr. Andrew Sicree of State College, PA. Sign up for 2 to 4 hours any day of the show receive free show admission! Contact Pete Modreski, [pmodreski@usgs.gov](mailto:pmodreski@usgs.gov).

**Sep. 19-21, 9AM-6PM, Petrified Wood Seminar**, Walt Wright at the Grand Junction Gem & Mineral Club. Cost \$80. Contact Jim Schultz, 970-242-0428 or [js@jimschultz.net](mailto:js@jimschultz.net)

**Sat., Sept. 20, Dinosaur Discovery Day**, 10 a.m.—2 p.m. Public tour day, Dinosaur Ridge Visitor Center, Morrison, with interpretive guides to point out the dinosaur tracks, bones, other fossils & geologic features. 16831 W. Alameda Parkway; see [www.dinoridge.org](http://www.dinoridge.org) for more info or call 303-697-3466.

**Sep 24, 7:30 p.m., Colorado Scientific Society** monthly meeting at Shepherd of the Hills Presbyterian Church, 11500 W. 20<sup>th</sup> Ave., Lakewood. Speaker, **Dr. Emmett Evanoff**, of University of Northern Colorado—known for his field work in Colorado geology and paleontology. Note this not the normal meeting day of the Society; ALL are welcome to attend.

**Sep 25, 7:30 p.m., Friends of Mineralogy**, meeting at the Denver Museum of Nature and Science (V.I.P. Room), presentation by our own Ray Berry, "My Experiences in Mineral Collecting in the Crystal Peak area--the First 30 Years". (

**Oct. 11, Dinosaur Discovery Day** at Dinosaur Ridge, 10a.m.—2 p.m. Featuring National Fossil Day and Girl Scout Day.



Fig. 2. Big Basin is a sinkhole south of Dodge City, Kansas. Permian rocks (subsurface) contain halite and gypsum that dissolve and the overlying rocks (Ogallala Formation) collapse.



The vendors at the Oklahoma State Fair-grounds.



This crystal of euclase is as good as it gets. Part of the Thompson display.



Dogtooth calcite collected 1960s from the Fletcher Mine in the Viburnum Trend Missouri. For sale by a vendor.

In addition, I do not have air conditioning in my Colorado Springs home and was unused to the refrigerated air pouring out of vents in every building!

On the way home I headed north from Tulsa traversing through the Crookson Hills (Boston Mountains in Arkansas to the east), the Chautauqua Hills in Kansas, and finally the magnificent Flint Hills in Kansas (unbroken by the plow) before giving up and heading west back on the High Plains—although I avoided much of the Interstate 70 by heading west at Oakley, Kansas on US 40 and connecting to CO 94 to the Springs. The latter was an isolated road with a magnificent display of clouds and lightning.

Oklahoma is one of those states with a diverse geology and physiography that travelers often miss. In fact, the geology is actually quite complex with the folded and thrust faulted Ouachita Mountains in the southeast, the Wichita Mountains with an interesting granitic core in the south, salt plains and gypsum caves in the northwest, former zinc and lead mines in the northeast, and lots of land in-between. In addition, there are a plethora of fossil collecting localities with an abundance of Paleozoic specimens. Interested readers may read three expanded articles in the spring newsletters of the RMFMS ([www.rmfms.org](http://www.rmfms.org)).

I attended all of the appropriate meetings sponsored by the AFMS and the RMFMS. I duly reported to the AFMS what had been accomplished during my term as the Chair of the Legislation and Conservation Committee (mainly a monthly column in the AFMS Newsletter). I gave lengthy reports to the RMFMS detailing my work as Chair of the Colorado Public Lands Committee, Kansas Public Lands Committee, and International Relations. I also gave an “off the cuff” report for the South Dakota Public Lands Committee (gleaned from their *Ammonite Newsletter*).

Members of the Federations also contributed to the meeting by sponsoring a number of cases documenting their skills in lapidary, mineral collecting and fossil collecting. In my opinion, Jack and Kaye of CSMS had the best case with a collection of single crystals—some/many of “world class.” I am including photos of several cases that I found outstanding. I addition, I was able to purchase a small number of “cheap” specimens from the vendors to augment my modest personal collection. It is tough for me to pass up minerals like crystals of siegenite (nickel sulfide) for \$2, plattnerite (lead oxide) for \$3, and drusy malachite (hydrous copper carbonate) on tenorite (copper oxide) for \$3.



A member's case with a great slab of crinoids.



Look at this pseudomorph! Siderite after calcite.



Slabs of petrified wood from the western US.



An amazing fluorite in a quartz geode. Have you seen anything like this?



Nice spheres.



From the lapidary.

## Wollastonite

By Mike Nelson

During my early career as a paleontologist I struggled with "how to depict small rodent teeth" in professional publications. How does an author present "what the teeth look like" to a professional audience? Journal editors were quite "picky" and authors needed to submit quality photos. These were the days before digital photomicrographs, or even before third tube stereomicroscopes allowed for the addition of a film camera. I tried close-up lenses and bellows on cameras but without much success. Then, a more seasoned paleontologist introduced me to a camera Lucida (Fig. 1).

This device, fitted on a stereomicroscope tube, allowed an optical superimposition of the tooth being viewed onto an adjacent piece of paper. I then was able to view the tooth and at the same time sketch the object on the paper and render an accurate depiction of the fossil. Wow, this was a major accomplishment.

So, in those early days I depended a great deal upon this unique device. In fact, I used it extensively until the Scanning Electron Microscope came along and made life a little easier. In later years, I begin to wonder--who was the person responsible for "inventing" the device? Was it an artist? A scientist? Some other investigator?

It turns out that a chemist-physicist by the name of William Hyde Wollaston (England; 1866-1928) was responsible for the camera Lucida. And, the interesting secondary part of the story is that Wollaston was a world-class scientist (also a practicing physician) and responsible for a number of scientific discoveries. Perhaps he is best



Fig. 1. Artist using a version of a camera Lucida. Paleontologists and other scientists use a camera Lucida that attaches to a stereomicroscope tube.



Fig. 2. Wollastonite, length 3.2 cm.

known for discovering the chemical elements palladium (Pd) and rhodium (Rh)—not bad considering there are only 100 or so elements known! He made a large amount of money by developing and putting into practice a method for purifying platinum and dabbled in trying to understand electricity and batteries and their relationships to electric motors. He also worked with optics trying to determine the elements present in the sun, and developed a reflecting goniometer (mineralogists use such to measure crystal angles). And, of course he discovered some specific camera lenses and the camera Lucida in 1812. Wollaston was an intellectual heavy-weight.

After reading an abbreviated bibliography of Wollaston, my mind jumped back to the world of rockhounding and a mineral called wollastonite ( $\text{CaSiO}_3$ )—certainly it must be named after the famous scientist (Fig. 2). I remembered that it was some sort of an interesting mineral that combined calcium (but not much carbonate) and the silicate radical, affectingly termed a calc-silicate by mineralogists. Other members of that group include such minerals as diopside [ $\text{CaMg}(\text{Si}_2\text{O}_6)$ ] and grossular ( $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_3$ ]. The calc-silicates generally are associated with impure metamorphic limestones and dolomites, and seem especially common in skarns—the contact zone around igneous intrusions and carbonates.

Wollastonite is usually white in color, in fact a bright white, or at times rather colorless (although other colors exist), with a hardness of 5 or slightly less (Mohs). The colorless variety is transparent while the colored crystals are translucent to slightly opaque. Much/most of the time wollastonite is massive in nature with few observable crystals, and has a cleavage of  $\sim 90^\circ$  in two directions. The luster is vitreous to pearly. I thought that the specimen in my collection was a mass of small crystals; however, upon reading descriptions, and re-observing with a scope, it appears to be a mass of tabular/bladed, splintery, cleaved surfaces.

I had really never wondered about commercial uses of wollastonite until composing this article—but I found the answers from an economic geologist quite interesting. It is quite important in the manufacturing of tile and ceramics, plastics, and paint.

The specimen in my collection came from the famous Crestmore Quarry near Riverside, California. [Www.mindat.org](http://www.mindat.org) describes the geology as: *Two irregular, very roughly parallel, lenticular bodies of magnesium-rich limestone of Mississippian age were deposited, each approximately 400 feet thick, and whose principal portions ... conforms to the trend of the Peninsular Range to the south, and is almost perpendicular to that of certain other metamorphic rocks near Riverside. The lower is the Chino Limestone and the upper is the Sky Blue Limestone. They are separated by gneissic hornfelses, quartz-mica schists and diorite. The beds were metamorphosed and recrystallized into marble during the early Triassic. Several later magmatic intrusions produced a complex suite of contact metamorphic minerals.* In addition, on their website I count something close to 150 different minerals collected from the quarries. Wow.

I have one other specimen from Crestmore that also is quite interesting, torbermorite. I picked this up down at Ackley's Rock Shop since I didn't have the slightest idea what the specimen represented, and part of it was a beautiful sky blue in color! Who could pass up a two dollar specimen with an interesting sounding name and a nice color?

As it turns out, torbermorite is also a calc-silicate, sort of:  $\text{Ca}_5\text{Si}_6\text{O}_{16}(\text{OH})_2 \cdot 4\text{H}_2\text{O}$ . It has the calcium and the silicate along with the hydroxyl group (OH) and water ( $\text{H}_2\text{O}$ ). On the specimen it turns out that the sky blue section

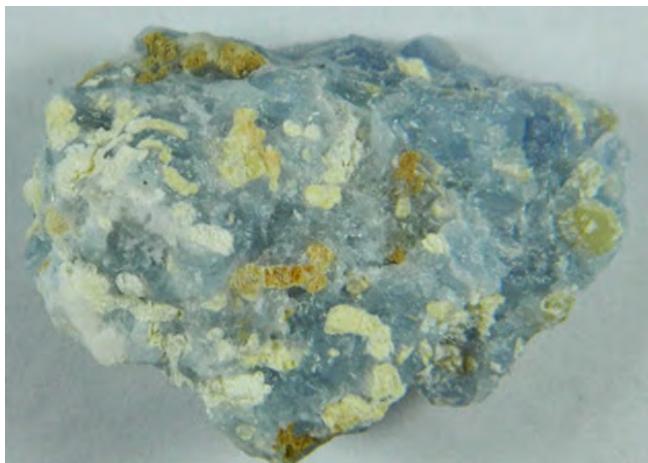


Fig. 3. Blue calcite with torbermorite and ellestadite. Length of specimen is  $\sim 2.7$  cm.

is calcite ( $\text{CaCO}_3$ ) while torbermorite is a white, translucent, soft (2.5 Mohs) bundle of tiny laths (Fig. 3). Although I certainly am not familiar with the mineral, it seems not uncommon in areas of metamorphosed carbonates.

But wait, in examining the specimen under a scope I noticed two different "light colored" minerals, or at least they could be two different minerals as they were slightly different colors. So I consulted MinDat and "discovered" a carbon copy of my specimen. The cream-colored second mineral was listed as ellestadite— $[\text{Ca}_5(\text{SiO}_4,\text{PO}_4,\text{SO}_4)_3(\text{F},\text{OH},\text{Cl})]$ . Now, this mineral seems way out of my league in understanding the mineralogy. Best that I can tell it is a type of apatite, or at least closely related to apatite---a calcium sulfate silicate. It appears in metamorphic carbonates and in the U.S is only found at the Crestmore quarries.

## A ROCKHOUND'S TOOLS

Bob King

I have often been asked, "What should I take on a field trip?" The equipment varies from field trip to field trip. For example, you don't take a gold pan on a field trip to Shirley Basin when you are looking for barite, jasper, petrified wood or agate. The two main tools that I'd take mineral collecting are a geology pick (Rock hammer) and an old collapsible Army shovel. I dug for years with only these two tools. Next would be a gad bar. I only carry chisels and crack hammers when I really think that I'll be needing them as they are very heavy. I use to use a back pack, but now carry my tools and specimens in 5 gallon plastic buckets. In my bucket you'd find my food, water, toilet paper and old newspaper. The newspaper is for wrapping the specimens that you collect. Most rock hunting areas do not have any amenities at all. I generally wear lightweight boots that have a good tread for traction on steep slopes, but sometimes I just wear sneakers. Fossil collecting and gold panning would require another kind of equipment such as gold pans, small brushes, Plaster of Paris, magnets, shovels and picks. I always wear a hat. A hat has saved my head several times from getting scrapped by a tree limb that I inadvertently hit. Gloves are good to protect my hands when I'm digging. Remember, whatever you take you must carry plus the specimens that you collect.



Noyo Beach

## A Rockhounding Trip to California

By Jerry R Perkins

I am a relatively new member to the CSMS but have been a rockhound for the better part (57) of my 66 years. The majority of my rock-hounding has been in California where I was born and raised. But I have also done some rock hunting in Nevada and Utah. I have been in Colorado for only about 10 years and am just starting to learn of some of the great rock, mineral and gems to be found here.

Last month I made a 10 day trip to California (my native state) to see my 86 year old mother and to collect a pickup truck that was offered to me (gratis) if I came out and picked it up. The first part of the trip was spent driving out and visiting with relatives and friends.

On the 3rd day I went for a walk on Noyo Beach at the mouth of the Noyo River, where I worked as a commercial fisherman for salmon for over 10 years. The beach is about 1/4 mile long and while not known for rock hunting, I picked up a whole pocketful of medium pebbles of Jasper and on the return walk along the high tide line I picked up a beautiful piece of green Jasper/Agate (about 3lbs+).

The next day I drove my newly acquired pickup to my Mother's home in



Beaver Dam

Upper Lake, CA. about 60 miles inland on Clear Lake. After visiting for a couple of hours with my Mom and brother Mark I suggested that we go to Bottle Rock Rd where there are outcroppings of Obsidian in the road-bank. It took less than 30 minutes to get there and in another 15-20 minutes we picked up about 75lbs of Obsidian which I brought back to Colorado with me.

On the way home I decided to make a short stop at the Cashe Creek Bridge on highway 20. I had found Jasper of several different colors in the past. I parked at the Redbud Trailhead by the bridge and walked down under the bridge along the creek. The rocks were all coated with a thin muddy coating making them all grey/brown. So I started looking at the rocks in the creekside where it was easy to wash off the muddy surface. In a few minutes I found a couple of nice Jasper specimens.

I had been so occupied with where I was stepping and looking at the rocks that when I stopped and looked around me I was surprised to find a beaver dam crossing the creek about 50 feet upstream from where I stood. After taking a couple of pictures of it I picked up the rocks and headed back to the truck.

I'll be bringing some of the specimens that I found on the way to show at the next CSMS meeting in September. They're not Colorado rocks but some of you might find them of interest.

## PEBBLE PUPS CORNER



### Pebble Pup News

**Zach Sepulveda** had a poem, "Caution Thrown Away" published in the June Ute Country News.

**Nate Blume** had a poem and an article on celestine published in an international rock, mineral, and fossil magazine

**Pikes Peak Pebble Pups will be making presentations at the Denver Gem & Mineral Show.** SATURDAY at 12:00 PM - 1:00 PM - In the Lecture Room (room H47-53). Jenna Salvat - Smithsonite. Jerrod/Nathan Gallup - Geology of White Sands. Sean Kosman - Gems of the Roman Empire. Jack Shimon - Dinosaur Tracks. Luke Sattler - Lithics of Pikes Peak Region. Blake Reher - On the edge of Discovery. See [http://www.denvermineralshow.com/2014/aboutevents\\_2014.php#pebblepups](http://www.denvermineralshow.com/2014/aboutevents_2014.php#pebblepups)

## PEBBLE PUPS CONSERVE CRIPPLE CREEK'S MINERAL COLLECTION

By Steven Wade Veatch

The Pikes Peak Pebble Pups are taking turns this year to work on the mineral collection displayed at the Cripple Creek District Museum. The museum is located in Cripple Creek, Colorado on 5<sup>th</sup> and Bennett Avenue in what was the Midland Railroad depot.

The mineral and rock collection is from the historic mines of the Cripple Creek and Victor Gold Mining District. Gold tellurides make up the majority of the collection. Pebble pups take turns working a shift with three scientists where they learn the procedures involved with conserving and cataloging this remarkable collection. The pebble pups learn and then perform a number of steps while working at the museum. First, the specimen is imaged in a photography light tent. The specimen is then examined with a microscope. During this examination Dr. Bob Carnein describes the specimen. A museum technician types Dr. Carnein's description in a computer. John Rakowski, a geologist, also writes the description in a lab notebook. Next measurements (in the metric system) are taken and recorded.

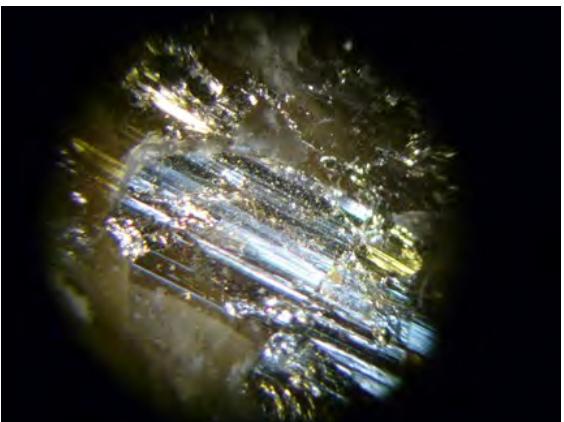
The second step is to brush a strip of archival white paint on the specimen; after the paint dries an archival pen is used to write a unique catalog number directly on the paint strip. Steven Veatch, the project leader at the museum and the pebble pup leader, creates in the final step a photomicrograph—or an image with a microscope—



Ben Nemo, who is in 5<sup>th</sup> grade, spent a day at the museum working on conserving one of Colorado's most important mineral collections. Photo by Steven Veatch.



Steven Marquez is in 8<sup>th</sup> grade. Steven measured specimens, learned how to take photos through the microscope, and painted labels on each specimen. Photo by: Steven Veatch.



A microphotograph of a crystal of gold-bearing calaverite. Note the distinctive striations on the surface of the mineral. Photo by Steven Marquez.

of the specimen. The pebble pups, who range in age from 10 to 16 years old, work on all steps of the cataloging and conservation effort. The pebble pups, at the end of their work, receive a certificate of training from Kathy Reynolds, the museum director.

The Pikes Peak Pebble Pup program (PPPP) includes students K-12 who explore the geosciences in the Pikes Peak region of Colorado. The program participates with the Future Rockhounds of America under the American Federation of Mineralogical Societies. The PPPP is composed of the youth of the Lake George Gem and Mineral Club (Teller County), and the Colorado Springs Mineralogical Society (El Paso County). A number of students from the United Kingdom participate in the program through the Internet. The goal of the program is to teach pebble pups to become rockhounds. Teen members of the group are called earth science scholars. The program focuses on communication, collaboration, creativity, and critical thinking. Communication is achieved through a blog site (<http://pebblepups.blogspot.com/>) where merit badge assignments, lessons, and pebble pup written work or art work is posted. The PPPP use Facebook™ as a method of communication within the group. Collaboration is through local and regional museums, the Florissant Fossil Beds National Monument, the Science Olympiad, and Cool Science.

Accomplishments of the PPPP include first place and third place awards in the National Park Service's art contest for National Fossil Day; monthly articles published in the *Ute Country News*; and researched articles are published in an international magazine. Two pebble pups entered a poetry contest sponsored by the Library of Congress: one pebble pup was a finalist in the nation and received a medal from the U.S. Poet Laureate while another pebble pup won first place in Colorado. A book of collected poems on geoscience by the PPPP has been published with all of the books sold within weeks. A teen PPPP presented a paper at an Ice Age symposium last year at the Colorado School of Mines campus. Several PPPP were coauthors on papers presented at the University of Denver and the New Mexico Institute of Mining and Technology in Socorro, New Mexico.

The pebble pups meet monthly during the academic school year. As there are so many ways for the PPPP to express their creative energies; the retention rate is very high. The informal setting allows for a more complete understanding of geoscience due to a more focused learning environment. The informal setting also allows for more personal and meaningful interaction between the informal educator and student. Students engaged in informal education are benefited on a personal level more than they would be in a formal setting. The informal education of the PPPP has proven to be more supportive to the development and growth of a student both intellectually and emotionally compared to education in a strictly controlled, formal learning environment. For more information on the PPPP contact Steven Veatch through his email at: [steven.veatch@gmail.com](mailto:steven.veatch@gmail.com).



## YOUTH EARTH SCIENCE SCHOLARS SERVE AS RANGERS AT THE FLORISSANT FOSSIL BEDS NATIONAL MONUMENT

By Steven Wade Veatch

Two Colorado Springs Mineralogical Society Earth Science Scholars worked at the Florissant Fossil Beds National Monument during the summer. The Earth Science Scholar program is for teenagers who are part of the Pebble Pup rock and mineral study program. The Pebble Pups serve local youth in grades K-12. Blake

Reher started in June. Jenna Salvat started in August. Both teenagers worked as interpretive rangers in the paleontology demonstration lab (fossil learning lab) where they took park visitors on a deep and meaningful journey of science and discovery. During school this fall Blake and Jenna will continue their work on Saturdays at the new visitor center.

Blake Reher is an active junior member of the Colorado Springs Mineralogical Society (CSMS). He is also the program assistant for the CSMS Pebble Pups and Earth Science Scholars. Blake's Earth science poems and science articles can be found in newspapers and magazines. Blake presented a paper at the University of Denver last year. Blake has earned his black belt in Kempo Karate, and is active in Boy Scouts, but his real passion is paleontology and geology. Blake is 15 years old.

Jenna Salvat is a coauthor on a paper presented at the University of Denver and at the New Mexico Institute of Mining and Technology. She is planning a career in the geosciences. Jenna is a member of the CSMS and is active in research and field investigations. She is in 8<sup>th</sup> grade.



Jenna Salvat trained at the fossil learning lab at the Florissant Fossil Beds. Photo © by Steven Veatch.

visit their website at: <http://pebblepups.blogspot.com/>

This youth program has a unit in El Paso County (Colorado Springs) and one in Teller County (Florissant).



Blake Reher takes a short break from examining plant and insect fossils contained in Eocene lake shales. Photo © by Steven Veatch.

Blake and Jenna work at the monument under the National Park Service's "Volunteer-In-Parks" program where they are trained in various capacities to help the Florissant Fossil Beds National Monument in its mission to interpret local fossil resources to the public. Both of the teen park rangers, using the resources of the fossil learning lab, provided memorable experiences with Florissant's fossils to visitors of all ages.

Florissant is known for the diversity of its late Eocene plant and insect fossils preserved in the shales of an ancient lake and the petrified redwood stumps preserved by volcanic mudflows. Together these fossils provide a window to a period of climate change during the late Eocene and to an ecosystem that thrived at Florissant 34 million years ago.

For more information about the Earth Science Scholar program for teens and the Pebble Pup program for younger students



View of the fossil learning lab at the Florissant Fossil Beds National Monument. Photo © by Steven Veatch.



The fossil learning lab is a busy site during the summer at the monument. In addition to teaching about Florissant's fossils, Blake and Jenna showed visitors why protecting and preserving fossils is so important. Photo © by Steven Veatch.

## 2014 CSMS Officers

**Mark Lemesany, President**

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**Ariel Dickens, Membership Secretary**

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## 2014 CSMS Chairpersons

**Kim & Bodie Packham, Show Chairs**

**TBD, Field Trip Director**

**TBD, Science Fair Chair**

**Frank & Ellie Rosenberg, Librarians**

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**Georgia Woodworth, Social Committee Chair**

**Ann Proctor, Store Keeper**

**Gary del Valle, Webmaster**

## SECRETARY'S SPOT by Sharon Holte

## MINUTES OF COLORADO SPRINGS MINERALOGICAL SOCIETY GENERAL MEETING JULY 17, 2014

Called to order: 7:00 p.m. By Mark Lemesany - President Followed by Pledge of Allegiance

Program for evening: by Dr. Pete Modreski "Colorado Turquoise". Dr. Modreski is from Lakewood, Co. He is our liaison for USGS Public Education and for USGS Out Reach Program.

This program looked at Turquoise in Colorado in great detail. Colorado Turquoise can be found in 4 locations: Burtis Turquoise Mine – Teller County; King Mine, - **Manassa, Conejos County**; **Turquoise Chief Mine, Lake Country**; and **Villa Grove Turquoise Mine – Saguache County**.

New members and guests were introduced. Several guests also introduced themselves.

The break for refreshments was well appreciated by all!!

Sharon Holte picked up the bag of awards from Ellie and Frank Rosenberg. Joyce Price was the only writer present to receive her award for her article: "Fossil Group Field Trip to Florissant, CO". Kay Thompson volunteered to obtain a list of all of our awards. Dr. Mike Nelson and Ellie and Frank Rosenberg also received numerous awards. The Secretary has a bag full of awards for Dr. Steven Veatch and his Pebble Pups and Earth Scholars. These will be handed out in September.

The drawing was held for several minerals.

Adjourned at 8:20 p.m.

Respectfully Submitted: Sharon Holte acting CSMS Secretary

### Sub-Group Responsibilities for Refreshments for General Assembly Meetings

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

## Classifieds



### 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:  
[csmseeditor@hotmail.com](mailto:csmseeditor@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.

### CSMS

**T-Shirts, Badges, and Pins**  
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If you celebrated a CSMS anniversary in 2012 or 2013,  
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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](http://www.csms.us).

### **CSMS is a Member of: the following:**

American Federation of Mineralogical Societies (AFMS) [www.amfed.org](http://www.amfed.org)

Rocky Mountain Federation of Mineralogical Societies (RMFMS) [www.rmfms.org](http://www.rmfms.org)