



**Colorado Springs
Mineralogical Society**
Founded in 1936

**November 2014
PICK&PACK
Vol 54..... Number 9**

CSMS General Meeting

Thursday, November 20, 2014, 7:00 PM

November's speaker(s) will be several students
from the **Pebble Pups Group**.

They will each speak on a topic of their choice.

Treats provided by the Jewelry Group.

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RARE NICKEL SULFIDES FROM THE MIDWEST (Part 2)

Mike Nelson csrockguy@yahoo.com



One of the most collectable nickels, the "Indian Head" (reverse on left) minted from 1913-1938.
Public Domain photo.

If I said the word "nickel" most people would immediately think of the U.S. coin representing \$.05. The nation has issued a "nickel" since 1866 and today the coin is composed of 75% copper (Cu) and 25% nickel (Ni). I suppose that most citizens do not realize that nickel plays a very critical role in our ordinary and everyday lives. Pure nickel is rare in nature but refined nickel from sulfides and oxides is used in so many products—rechargeable batteries for our cell phones (and other electronics), numerous pieces of medical equipment,

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CSMS Calendar

November 2014

Tue., **Nov 4**—**Fossil Group**, 7 p.m., Senior Center. Jerry Suchan 303 648-3410
Thu., **Nov 6**—**Board Meeting**, 7 p.m., Senior Center.
Tue., **Nov 11**—**Micromounts**, Cancelled—No Meeting, Dave Olsen, 719 495-8720
Thu., **Nov 20**—**General Assembly**, 7 p.m., Senior Center.
Pebble Pups & Juniors, 5:30 to 6:15 p.m., Steven Veatch, 719 748-5010
Thu., **Nov 27**—**Crystal Group**, Cancelled—No Meeting, Kevin Witte, 719 638-7919
Faceting Group, Cancelled—No Meeting, Paul Berry, 719 578-5466
Lapidary, By Appointment, Sharon Holte 719 217-5683.
Jewelry Group, By Appointment, Bill Arnson, 719 337-8070

December 2014

Tue., **Dec 2**—**Fossil Group**, 7 p.m., Senior Center. Jerry Suchan 303 648-3410
Thu., **Dec 4**—**Board Meeting**, 7 p.m., Senior Center.
Tue., **Dec 9**—**Micromounts**, Cancelled—No Meeting, Dave Olsen, 719 495-8720
Thu., **Dec 18**—**General Assembly**, 7 p.m., Senior Center—Christmas Party—Potluck, Silent Auction, Gift Exchange: mineral related gift up to \$10.00—Food: last name A thru L – hors d'oeuvres; last name M thru Z - desert
Pebble Pups & Juniors, 5:30 to 6:15 p.m., Steven Veatch, 719 748-5010
Thu., **Dec 25**—**Crystal Group**, Cancelled—No Meeting, Kevin Witte, 719 638-7919
Faceting Group, Cancelled—No Meeting, Paul Berry, 719 578-5466
Lapidary, By Appointment, Sharon Holte 719 217-5683.
Jewelry Group, By Appointment, Bill Arnson, 719 337-8070

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, www.csms.us

Other Events of Interest to CSMS Members

Thurs., Nov. 13, 7:30 p.m., monthly meeting of the Colorado Chapter, Friends of Mineralogy, with the presentation, "**Minerals of Stove Mountain, El Paso County, Colorado**" by Gary Zito, Colorado School of Mines. This well-known locality for pegmatite minerals is located near the Gold Camp Road, just west of Colorado Springs. All are welcome to attend. Denver Museum of Nature and Science (museum admission not required); meeting will be in the Big Horn Room, museum 3rd floor near the Botswana, Africa exhibit; see <http://friendsofmineralogycolorado.org/>.

Fri-Sun., Nov. 14-16, "Denver Mineral Dealers 2014 Gem and Mineral Show" at the Jefferson County Fairgrounds, Exhibit Building; Golden, CO; no admission charge; 10-5 Friday, 10-6 Sat., 11-4 Sunday.

Sat., Nov. 15, 10 a.m. – 4 p.m., Exhibit Opening & Family Day, Steps in Stone: Walking Through Time, at University of Colorado Museum of Natural History, CU campus, Boulder.

"A new exhibition that features real fossil tracks and trackways from the University of Colorado Museum of Natural History collections. Interactive exhibits invite children and adults alike to explore how animals, from insects to dinosaurs, moved across the earth, how their tracks became fossils, and how we study tracks to learn more about ancient landscapes and animals. The exhibit features never before exhibited trackway fossils from the collection of paleontologist Martin Lockley, recently retired from the University of Colorado-Denver. To celebrate this opening, the museum is hosting a free family day with multiple hands-on stations for children of all ages (and grown-ups, too!) to learn about fossil tracks and see the new exhibition. We'll be joined by our friends from WOW! Children's Museum, City of Boulder Open Space and Mountain Parks, and Dinosaur Ridge for activities and information on other places where we can explore fossil tracks in our Colorado backyard."

Continued on pg. 6

corrosion-resistant coverings, tougher steels, catalysts in the petrochemical industry, heat exchangers, special magnets critical in industry, and many others. Of particular interest is stainless steel, an alloy with iron and 8-12% nickel. Somewhere over 3000 nickel alloys are in daily use, mostly nickel combined with copper, iron, chromium and zinc but other nickel compounds contain sulfur, oxygen, and chlorine. Many nickel blends are a characteristic green in color such as chrysoprase, a type of chalcedony colored green by nickel compound inclusions. Nickel is fairly common in meteorites (iron-nickel types), and is known from deep sea nodules. Geologists also believe that nickel is a common element in the core of the earth.

Nickel is one of those minerals that is essential, strategic and critical to the U.S. economy; however, it is not a major product of the nation's mines. In fact, the U.S imports at least 40% of our nickel that we use in: stainless and alloy steel production (~50%), nonferrous (non-iron alloys) and superalloys (~40%), electroplating (~7%), and other uses (4%) (www.minerals.usgs.gov/). All other nickel seems to come from recycling (including plants in Louisiana and Texas producing a nickel-cobalt byproduct while reprocessing spent catalysts used in the petrochemical business) or as a byproduct from other metal mining. The famous Stillwater Complex in the Beartooth Mountains of Montana produces platinum and palladium with nickel as a byproduct. Canada, Indonesia, Australia, Philippines, and Russia currently are the World's biggest producers (all over 200k metric tons per year).

The last major U.S. nickel mine, near Riddle, Oregon (Glenbrook Nickel Company), was closed around 1998 when the base price of ferronickel collapsed. By 2007 the price of nickel had skyrocketed and was trading on the commodities market at over \$23 per pound. On June 20, 2014, the market was pricing nickel at \$8.21. Generally speaking, the price is increasing as industrial activity picks up after "The Great Recession."

So, without much nickel production, or even large proven reserves, how should the U.S. move forward? I cannot answer that question fully; however, one positive note is that a new mine has recently opened in Michigan and the USGS reports the presence of a chalcopyrite-pentlandite (iron-nickel sulfide) underground operation with full production scheduled for late this year (perhaps as much as 16,000 tons). Two other nickel prospects are in varying stages of development in northeastern Minnesota.

There are two kinds of commercial nickel deposits: residual concentrations of nickeliferous laterite associated with basic or ultrabasic igneous rocks, and nickel sulfide ores formed by replacement or magmatic injection. About 60% of world nickel resources occur as laterite (nickeliferous limonite $[(\text{Fe},\text{Ni})\text{O}(\text{OH})]$ and garnierite [hydrous nickel silicate] and 40% as sulfides (pyrrhotite $[\text{Fe}_{1-x}\text{S}]$, pentlandite $[(\text{FeNi})_9\text{S}_8]$, chalcopyrite $[\text{CuFeS}_2]$, nickel galena $[\text{PbS}]$, nickeline $[\text{NiAs}]$ in solid solution with breithauptite $[\text{NiSb}]$, and magnetite $[\text{Fe}_3\text{O}_4]$; pentlandite is the major commercial primary nickel mineral (DMITRE Minerals at www.minerals.dmitre.sa.gov.au/).

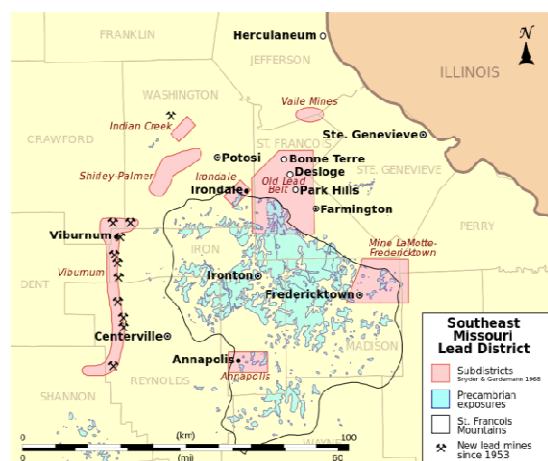


Fig. 1. Map showing location of the Viburnum Trend and Old lead Belt (east). Public Domain photo.

However, of real interest to me (considering my long history living in the Midwest) are the minor nickel accessory minerals associated with Paleozoic limestone and dolomite beds. Two of those minerals are millerite and polydymite associated with calcite crystals and geodes described in the October Newsletter. A third minor nickel mineral is siegenite $[\text{CoNi}_2\text{S}_4\beta\text{-}\alpha\text{Ni}_2\text{CoS}_4]$ from calcareous rocks in the Viburnum Trend (lead and zinc) in southeastern Missouri (Fig. 1). Porter Geoconsultancy (2013) described the geology of the Viburnum Trend as: being one of two major sub-districts (the other being the Old Lead Belt) of carbonate-hosted lead-zinc deposits comprising the Southeast Missouri District. The Trend extends for more than 50 miles along the western flank of the St. Francois Mountains, a region of Precambrian igneous rock exposed at the structural apex of the Ozark Plateau. Mineralization is hosted primarily by the Cambrian Bonnetterre Dolomite, a regionally distrib-

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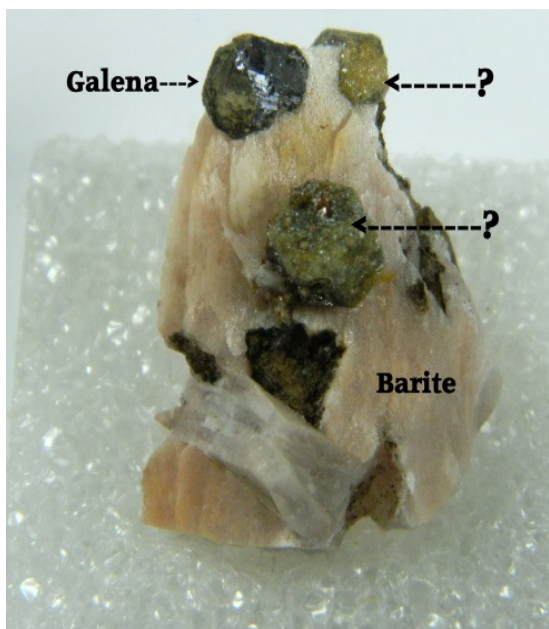


Fig. 2. Specimen labeled Galena on Barite Viburnum Trend. However, two crystals are confusing to me—they appear to be decomposing galena covered with druzy calcite. Total width of specimen ~2 cm.



Fig. 3. Double terminated, gemmy calcite crystals. Length of right crystal ~3 cm. Sweetwater Mine.

uted limestone formation that has been extensively dolomitized within the Southeast Missouri district. Metallic mineralization is virtually continuous over the entire length of the Trend, forming a single deposit. Lead (galena) dominates, with grades averaging 5.5 to 6%, accompanied by lesser zinc (sphalerite), the highest average grade of which is 2.8% Zn. Geochronologic and geochemical evidence links the formation of the ores to Alleghenian (Upper Carboniferous-Permian) tectonism in the Ouachita Mountains ~200 miles to the south. Uplift of these mountains and of the associated Arkoma Foreland Basin (in Arkansas and Missouri situated between the Ouachitas and the Southeast Missouri District), stimulated a regional groundwater-flow regime that led to the carbonate hosted Pb-Zn deposits. This situation is similar the deposition of millerite described in the October article—the solution flow came from adjacent deep basins.

One of the more famous, and specimen producing mines in the Viburnum Trend, is the Sweetwater Mine in Reynolds County near the southern edge of the Trend. The mine may, or may not be, in current operation as the mine seems to change ownership quite often. As with other Trend mines, the Sweetwater is a lead-zinc mine producing from several ore bodies in the Cambrian Bonnetterre Formation that in turn was deposited in Cambrian marine waters around and on the residual Precambrian knobs, hills and valleys. Specimen mining has produced cubic galena (Fig. 2), clusters of large dogtooth calcite (Fig. 4), double termi-

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Fig. 4. Double terminated dogtooth calcite (scalenohedrons) perched on a dolomite-rich matrix. This specimen was "for sale" at the Tulsa Show. Not collected at the Sweetwater Mine but the nearby Fletcher mine in the "1960s".



Fig. 5. Calcite (fairly transparent) plates with a single galena cube. Width of specimen ~5.5 cm. Sweetwater Mine.



Fig. 6. Chalcopyrite on dolomite rhombs. Width of crystal ~5 mm. Sweetwater Mine.

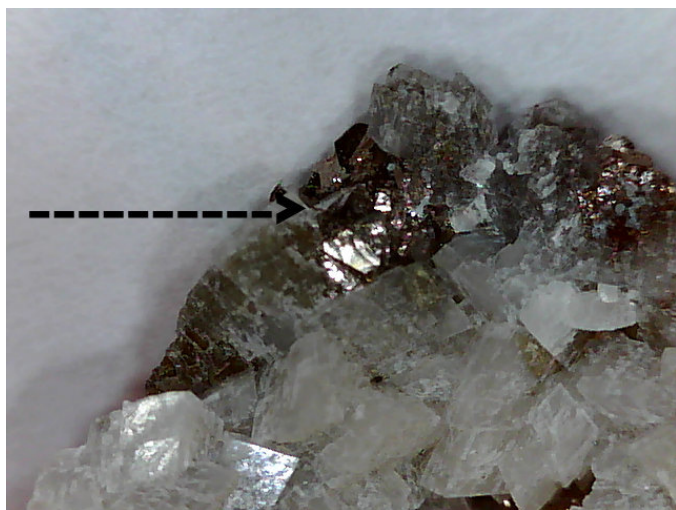
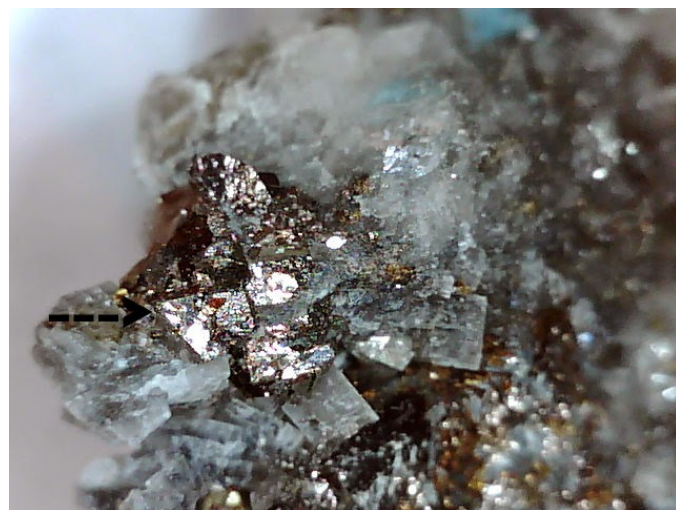


Fig. 7. Siegenite crystals on dolomite rhombs. Each crystal at end of pointers are ~ .5 mm. Sweetwater Mine.



nated and gemmy yellow calcite (Fig. 3), plates of white-clear calcite (Fig. 5) dolomite crystals, pyrite crystals, chalcopyrite (Fig. 6; some is iridescent but many commercially marketed specimens are subjected to an acid treatment to produce “peacock ore”), and especially siegenite crystals (Fig. 7).

Siegenite is one of those minor nickel minerals that pops up in localities around the world (MinDat lists 225) but is considered to be uncommon. In the October Newsletter I described another uncommon nickel mineral, millerite (while mentioning possible polydymite) found in Midwestern Paleozoic carbonates. Well, siegenite $[\text{CoNi}_2\text{S}_4\beta\text{-}\alpha\text{Ni}_2\text{CoS}_4]$, with a variable range of composition of nickel and cobalt, also is present at a few localities in the Midwest but is most common in the Paleozoic carbonates of the Viburnum trend and especially in the Sweetwater Mine. In fact, most of the siegenite specimens listed “for sale” on various web sites were collected at the Sweetwater. I picked up my first specimen at the Denver Show a couple of years ago and recently another nice specimen in Tulsa.

Siegenite crystals, often octahedral, have a steel-gray color and a metallic luster. The hardness ranges on either side of 5 (Mohs) and the crystals are certainly opaque. For a muddler like me, the crystals certainly could be mistaken for galena, or maybe even silver.

I just find it quite interesting that these somewhat rare nickel minerals are present in Midwestern carbonates and have been deposited via deep-seated solutions. There are several other of these uncommon nickel minerals for which I will keep my eyes peeled.

REFERENCES CITED

Porter Geoconsultancy, 2013, Viburnum Trend - Viburnum No. 27, Magmont, Buick, Brushy Creek, West Fork, Fletcher, Sweetwater Missouri, USA: www.portergeo.com.au/database/mineinfo.asp?mineid=mn293

Other Events of Interest to CSMS Members

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Sat., Nov. 15, 12:00-4:00 p.m., **Silent Auction**, gems, minerals, etc., sponsored by the Littleton Gem and Mineral Club. Columbine Hills Church, 9700 Old Coal Mine Ave., Littleton, CO 80123; all are welcome. Free refreshments!

Mon., Nov. 17, 3:00 pm, Denver Museum of Nature and Science, Seminar Series, VIP Room, **"Reconstructing Ancient Colorados with geologically accurate animations"**, by James Adson, Joseph Rogers, Eric Lobato, and Paul Weimer (UC-Boulder). See <http://igp.colorado.edu/> for information about this research at CU.

Wed., Nov. 19, 4:00 p.m., CU Boulder Geological Sciences Colloquium, **Tracking the oxidation state of Earth's mantle through time**, by Dustin Trail, University of Rochester; Benson Earth Sciences Building auditorium (room 180); refreshments at 3:30 on the 3rd floor.

Thur., Nov. 20, 7:00 p.m., **20 Years After: An Update on the Study of Telluride Minerals and Deposits**, by Bruce Geller, Director, Colorado School of Mines Geology Museum; at the Colorado Scientific Society meeting, Shepherd of the Hills Church, 20th Ave., and Simms St., Lakewood; all are welcome.

Sat.-Sun., Nov. 22-23, 9 a.m. – 4 p.m., **"Garage Sale"** at the **Colorado School of Mines Geology Museum**, 13th and Maple Streets, Golden. Rocks, minerals, fossils, books, maps, USGS folios, etc. "Prices vary by item or box. Most prices will drop during the event." Information: 303-273-3815.

Sat., Nov. 22, 9:00 a.m. until 1:00 p.m. **Open House - Mineral Sale**. 1990 S. Cherokee Street, Denver. Minerals will be sold by the flat; flats will be sold as is (sorry, no cherry picking). This inventory consists of flats of attractive cabinet specimens; all flats are priced at discounts of 20% to 40% percent of retail. Specimens should attract the amateur collector. (The warehouse is tucked into an industrial neighborhood, about a block north of the Evans Lite Rail Station. If you have trouble finding the place, call Rhonda Driscoll at 720-775-7234.)

Sat., Nov. 29, a seminar at the Western Museum of Mining & Industry, Colorado Springs, **The Gold Assay Process: Magic or Chemistry?** To be given at 10 am and 1 pm. "Gold Assay Seminar! Gold does not come out of the ground ready to wear. Join us to discover how ore is processed to extract gold. Hands-on learners of all ages will crush and classify ore as they learn the basics of gold ore assaying--determining the value of gold in the rock. This fast moving, interactive assay demonstration will overview the math, mechanics, and chemistry of this exciting process; in addition this event has become a detailed educational program with the support of experts from the Gold Prospectors of Colorado and Pilot Mining. Explore Colorado's rich mining heritage from the gold rush days to the 21st century. Find out what's happening in mining today! Museum admission required; PLEASE RSVP TO 719-488-0880 OR rsvp@wmmi.org ; for more information see <http://wmmi.org/>.

Wed., Dec. 3, 4:00 p.m., CU Boulder Geological Sciences Colloquium, **Mastodons and mountain climates: Final results from the Snowmastodon Project**, by Ian Miller, DMNS; Benson Earth Sciences Building auditorium (room 180); refreshments at 3:30 on the 3rd floor.

Fri.-Sat.-Sun., Dec. 12-14, **Flatirons Gem and Mineral Show**, sponsored by the Flatirons Gem and Mineral Club, Boulder; held at Boulder County Fairgrounds, Exhibit Building, 9595 Nelson Rd. (Nelson & Hover), Longmont, CO. For more info see <http://bcn.boulder.co.us/community/fmc/fmcshow.htm>

Wed., Dec. 17, 3:00 pm, DMNS Seminar Series, VIP Room, **"On the trail of Colorado's newest, oldest sedimentary rock formation: Eluded at every turn by the Tava sandstone"**, Christine Siddoway (Colorado College). See <http://sites.coloradocollege.edu/csiddoway/> for background info on the speaker.

Brad's Bench Tips—Taking Better Photos

By Brad Smith

Most digital cameras these days have the ability to take a good picture of your small jewelry items, but set-up is important. There are four major items to control - background, lighting, camera motion and focus control.

Lightly colored papers from an art store make reasonable starter backgrounds. Try experimenting with other products later like glass or colored plastics. Avoid fabrics because the weave can often be distracting at high magnification.

Outside lighting is the easiest. In fact for close-ups, flash never works well. Turn off your camera's flash. Choose a bright but overcast day or a lightly shaded area when the sun is full. For inside use, two gooseneck desk lamps can be used with 75 watt bulbs. Whatever you use, be sure to set the camera to match the type of lighting you use or else the color will be off.

You'll be shooting up close, so turn on the macro mode. Now at this range, if the camera moves even a little bit during the shot, the picture will be blurry, so it's essential to use a tripod. Used ones are available inexpensively from eBay, yard sales or some camera shops. And even with a tripod, I put the camera on the self-timer mode so that any vibration from when you click the button settles down before the camera takes a picture.

In order to get the largest part of your jewelry in focus, you have to close the lens down to the minimum aperture (highest F-Stop number). This is done by taking the camera off of "Auto" mode and selecting Aperture Priority, usually denoted by "Av" and then setting the aperture to the largest number, which is F-8 on my camera. You'll probably have to get out the book or go back to the store to ask about this, but it's really worth it.

That's it. In recap, here are the camera settings I use:

1. Set the lens to Macro for a close-up shot.
2. Move the camera in close enough for the item to cover at least $\frac{3}{4}$ of the frame.
3. Look for adverse reflections from the jewelry surface.
4. Try to minimize reflections with changes of light position, camera angle or white background paper.
5. Carefully check for any fingerprints or dust that might be on the piece.
6. Make any final tweaks with light and arrangement.
7. Turn the camera's flash off.
8. Select "Av" for aperture priority mode.
9. Set the lens opening to the highest number for max depth of field.
10. Set the lighting to match what you're using (daylight, overcast, light bulb, fluorescent, etc).
11. Set the timer to delayed shooting, either 2 seconds or 10 seconds, to avoid camera movement. The delay also gives you time to hold up a piece of white paper to reduce any final reflections.
12. Take the shot.

Get all 101 of Brad's bench tips in "[Bench Tips for Jewelry Making](#)" on Amazon.

Gift for the Holidays—It's often difficult to find a nice gift for a friend who makes jewelry. The Bench Tips book has earned over 25 Five Star reviews, was ranked Number One in Amazon's Top 100 list for Jewelry, and named by Amazon as one of the Best Books in 2014. Get a copy at www.amazon.com/dp/0988285800/



Guide to Minerals: Copper

By Steven Marquez

Copper is used in many ways that help us live. Since copper is an excellent conductor of heat and electricity, it is used for electrical wiring, consumer and industrial electronics, in plumbing, and in cooking utensils. Copper is also used in buildings, submarines, missiles, radar, cell phones, and jet planes.

Copper occurs in mineral deposits large enough to mine (ores). These include: antlerite, azurite, bornite, chalcocite, and malachite. Most copper is produced from chalcopyrite.

Facts on File:

Color: Copper-red; tarnishes to black, blue, green

Transparency: opaque

Luster: metallic, shiny

Streak: rose

Hardness: 2 ½ - 3

Specific gravity: 8.9

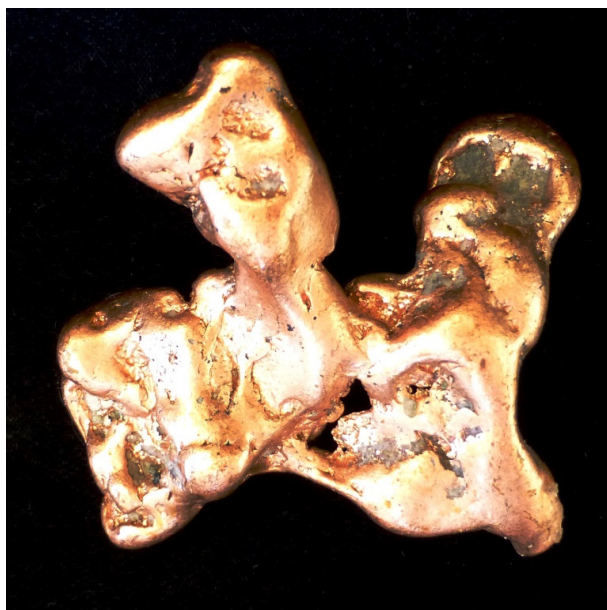
Fracture: Hackly (jagged, torn surfaces)

Cleavage: None

Crystal system: Isometric

Haiku:

*Shiny copper red
A very unique color
Shining in the sun*



This native copper specimen was found in northern Michigan. A Steven Marquez specimen. Photo © by Steven Marquez.

For further reading:

Brady, George S., Henry R. Clauser, and John A. Vaccari. *Materials Handbook*. McGraw-Hill, 1997.

Chesterman, Charles, *The Audubon Society Field Guide to North American Rocks and Minerals*. Allred A. Knopf, 1990.

Heiserman, David L. *Exploring Chemical Elements and Their Compounds*. TAB Books, 1992.

Hombostel, Caleb. *Construction Materials*. John Wiley and Sons, Inc., 1991.

Kroschwitz, Jacqueline I. and Mary Howe-Grant, ed. *Encyclopedia of Chemical Technology*. John Wiley and Sons, Inc., 1993.

Stwertka, Albert. *A Guide to the Elements*. Oxford University Press, 1996.



About the author:

Steven Marquez is an Earth Science Scholar with the Colorado Springs Mineralogical Society. He is a volunteer in the mineral section of the Cripple Creek District Museum. Steven enjoys studying minerals and field work. He is in 8th grade.

AROUND AFRICA IN 83 DAYS - DAYS 1-7

By Frank and Ellie Rosenberg

It was nice to finally get aboard the Rotterdam, unpack and get settled into a shipboard routine. Crossing the channel was a little rough enough for Ellie to need the sea sickness bands. But once we got out of that body of water the ocean was very calm. Barely any waves at all.

As always there is a lot to do onboard. At 8:00am and 5:00pm most days Ellie is taking a Tai Chi class. At 10:00am we do bridge lessons. At 11:00am and sometimes at 2:00pm there are interesting lectures on the explorers who first circumnavigated Africa. Fortunately for us we won't run out of food or get scurvy. It was interesting to see the technology that was developed from really ancient times to the times of the great explorers.

After two days at sea we reached our first port: Lisboa, Portugal. We were able to walk into the main square from the ship. From there we took a tram to Belem. This is where the Maritime Museum is located. It is in a huge Palace (Fig. 1). The ceilings looked to be 20 to 25 feet high. There were models of sailing vessels from around 1100 AD to the end of WWII. After that we went back to the main square walked around a bit looking for the elevator to the upper part of Lisbon but couldn't find it. So we went back to the Square and had a beer at the Museum of Beer (I kid you not that was its name) before returning to the ship.

Next stop Gibraltar. We arrived at 4:30pm and had an 11:00pm departure but we managed to get to see quite a bit thanks to Hillary Harper a native of Gibraltar and our van driver. We lucked out and had a better tour of Gibraltar than was available from the ship (and cheaper). We were planning to share a taxi with a couple we met at dinner but just as we got out to where the taxis would be, we found these independent tour vans. We got to ride all over Gibraltar. Our first stop the cave. There is a big cavern in the limestone formation with lots of stalactites and stalagmites most of which have joined each other. It was used to store protect munitions and supplies during WWII. They noticed that the big chamber had great acoustics. So now it is used for concerts (Fig. 2).

We drove up further on the "Rock" for some great views. But even better than the views were the Barbary Apes. They look more like monkeys but they do not have tails as monkeys do. We were warned to be careful as they have been known to grab cameras, phones and even backpacks. They are quite tame. One jumped right down on the shoulder of another tourist which really took him by surprise. Some were quite large and there were many females with babies (Fig. 3). When food is involved though they show that they are still wild animals: we watched several discussions involving bared teeth and loud hissing. But no fights developed.

Gibraltar is connected to Spain by a causeway. In fact this causeway goes right across the main runway of the Gibraltar Airport. It was also much bigger than we expected. There are many large apartment complexes. Some built around marinas. The streets however are incredibly narrow and sometimes there is not enough room to pass. In which case, someone has to back up until you can. There is virtually no place to park.

Malaga: There was a shuttle bus to the main square which made it easy to do Malaga on our own. Last time we were there we found a McDonalds with great free Wi-Fi. Since they had a nice outdoor sitting area you did not even have to buy anything. We have bought some Wi-Fi on the ship but since it costs 25 cents a minute we try to use Wi-Fi when we are off the ship. After catching up with internet stuff we walked around the main downtown area which is all pedestrian malls (Fig 4). There were a lot of street performers looking like statues or in incredible positions that you wondered how they did it. What a way to make a living. After sipping a sangria and people watching for a while we made our way back to the ship.



Fig. 1: Maritime Museum Palace—Lisboa, Portugal



Fig. 2: Limestone Cave—Gibraltar

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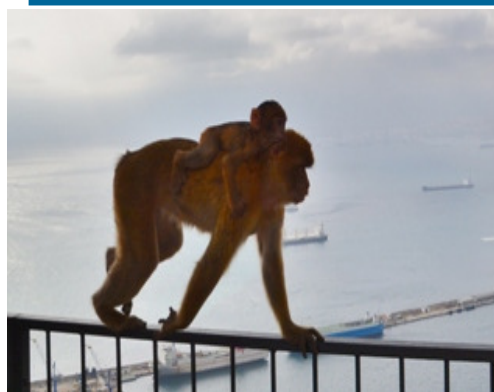


Fig. 3: Mother and baby Barbary Apes—Gibraltar

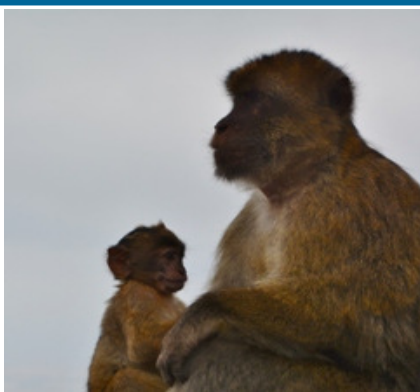


Fig 4: Pedestrian Mall—Malaga

[Click here to view more photos from AROUND AFRICA IN 83 DAYS—DAYS 1-7](#) Editor Note: For those who are new to CSMS, Frank and Ellie are long time and very active members. Ellie was the past Pick & Pack Editor (until they left for Africa), Frank serves as a Member-at-Large, and they are currently the Club Librarians. I will add articles about their trip in future Pick & Pack issues, as space permits, or if you would like to read more about Frank and Ellie's adventures, please send an email to csmseditor@hotmail.com.

2014 CSMS Officers

Mark Lemesany, President
Jean Miller, Vice President
Sharon Holte, Secretary
Ann Proctor, Treasurer
Lisa Kinder, Editor
Ariel Dickens, Membership Secretary
Susan Freeman, Member-at-Large
Frank Rosenberg, Member-at-Large
Roger Pittman, Past President

2014 CSMS Chairpersons

Kim & Bodie Packham, Show Chairs
TBD, Field Trip Director
TBD, 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. Fossil	Mar. Jewelry	Apr. Lapidary
May Micromount	June Board	July Crystal
Aug. Picnic	Sept. Faceting	Oct. Fossil
Nov. Jewelry	Dec. Christmas Party	

SECRETARY'S SPOT by Sharon Holte

Minutes of the Colorado Springs Mineralogical Society General Meeting, October 16, 2014

Called to order: 7:02 p.m. By Mark Lemesany - President / Followed by Pledge of Allegiance.

Program for evening: was Linda Smith, PhD. Geology - Water and Rock. She spoke on Filters 4 (for) Families. Linda was an excellent speaker and explained how much of the earth is contaminated with natural occurring and mining contaminates - heavy metals such as arsenic. She explained how her team has developed an inexpensive filter which is put in homes where contamination is prevalent. It only costs about \$ 60.00 per unit. These units, when used properly are very effective. Two of the areas where there is natural occurring arsenic poisoning are Nepal and Pine Ridge, SD, USA. Linda is an excellent speaker and was extremely knowledgeable.

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

The break for refreshments was well appreciated by all!

Bob Landgraf was not present as the chair of the Nominating Committee. Susan stated that most of the positions have been filled. We need only a vice-president at this time. Mark asked for more volunteers for the Board for 2015.

Adjourned at 8:50 p.m.

Reported by Sharon Holte - CSMS Secretary



Our Staff... Lisa Kinder—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

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 are available for sale.

If you celebrated a CSMS anniversary in 2012 or 2013, your year pin award

See Storekeeper,
Ann Proctor

Classifieds

DECEMBER 13th*, 14th, & 15th

Flatirons Mineral Club

Rock & Mineral Show

- Displays
- Demonstrations
- Kids' Area†
- Grab Bags†
- Gold Panning
- Classes & Speakers
- Hourly Door Prizes
- Grand Prize

†Proceeds go to FMC Scholarship Fund

Dealers selling: rocks, jewelry, fossils, minerals, gems, and tools
website: bcn.boulder.co.us/community/fmc • Contact: Ray Gilbert 303-774-8468



Boulder Model Railroad Club 36th Annual

Model Railroad Show

- Model RR Displays
- Kids' Layout
- Operating Layouts
- \$1 Raffle Tickets to Win a Layout



Vendors for books, videos, apparel, model trains & railroadiana
website: www.bouldermodelrailroadclub.org • Contact: Jim Froning 303-823-5531

PLACE:

Boulder County Fairgrounds
Hover & Nelson Roads, Main Exhibits Building, Longmont, CO

DATES & TIMES:

Friday, December 13th* 10am-6pm
*Rock and Mineral Show ONLY
Saturday, December 14th 9am-5pm
Sunday, December 15th 10am-5pm

ADMISSION:

Friday \$3 • Saturday \$5 • Sunday \$5
Ages 12 & Under: Free with paying adult



Both clubs are non-profit organizations.

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Joe & Marylee Swanson Colorado Springs, CO
Krystals@webtv.net



PICK & PACK
P.O. Box 2
COLORADO SPRINGS, CO 80901-0002

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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:

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

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