

PICK&PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

OCTOBER 2010

PICK&PACK

Volume 50 Number 9

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.

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Colorado Federation of Gem & Mineral Societies (CFGMS)

Colorado Springs Mineralogical Society

Founded in 1936

Lazard Cahn

Honorary President

Articles in this Issue:



Fig. 1. Faceted fire opals from Mexico. Photo courtesy of International Colored Gemstone Association.

Opal is a mineraloid, a mineral-like substance that does not have a definite chemical formula nor a definite crystalline structure (although some opal has a loose ordered arrangement of the silica spheres). Perhaps the best known mineraloid is obsidian, an amorphous volcanic glass. Opal is hydrous silica, that is silicon dioxide (like quartz family minerals) but with an indefinite amount of water (up to perhaps 18%-20%) in its atomic structure. Eckel and others (1997) noted that new studies using an X-ray Diffractometer (XRD) show that opal commonly contains significant amounts of the high temperature polymorphs (same chemistry, SiO_2) of quartz known as cristobalite and tridymite. The chemical formula is written as $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ where n represents the variable amount of water. In the real world, the more water opal contains the

more likely a chance for desiccation and cracking (termed crazing). Opal comes in a variety of colors, has a hardness of ~5.5-6.5, a waxy to dull to greasy luster, and a white streak. It also "feels light" as its specific gravity of ~2.15 is less than the specific gravity of quartz at ~2.65. I often find it difficult to identify common opal from other siliceous minerals such as chalcedony and agate; however, the key points seem to be the waxy/dull/greasy luster, and the low specific gravity. There is a plethora of names (well over 100 that I have located) assigned to opals with various colors and from different collecting localities. However, most collectors would differentiate opal into three broad groups: precious opal, common opal (including hyalite), and fire opal. Of course, precious opal is the most valuable of the group and specimens are characterized by a "play of colors", that is a flash of colors (almost every color "in the rainbow") when moved and rotated. This play of colors seems due to the refraction, reflection, and diffraction of light as it passes through the internal structure of somewhat ordered silica spheres (Klein and Hurlbut, 1985). The best known collecting localities for precious opal are Coober Pedy and Lightning Ridge, Australia. The latter locality produces black opal that exhibits a play of colors with red, green, blue, violet, magenta or yellow against a dark background. In addition these Australian opals are valued for their stability (low water content).

In the U. S. the Virgin Valley of Humboldt County, Nevada, produces a fantastic array of precious black opal, much of it being opalized conifer wood, a pseudomorph after the original wood. I have found references to the following varieties (and several more) of precious opal: white opal (most common, white or cream stone color), black opal (dark stone with a strong play of colors), crystal opal (transparent to translucent stone), boulder opal (opal in veins), harlequin opal (play of colors in rectangular shapes), pinfire opal (play of colors in small points), and cat's eye opal (play of colors in a "cat's eye"). In order to best display the play of colors, most precious opals are cut into cabochons, rather than shown faceted.

The famous opals of Nevada were officially recognized in 1987 when the State passed the following: **NRS 235.100 State precious gemstone.** *The precious gemstone known as the Virgin Valley black fire opal is hereby designated as the official state precious gemstone of the State of Nevada.* Australia went even a step further when the Commonwealth, in 1993, declared opal as the national gemstone.

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Besides Nevada, other U. S. states producing precious opal on a commercial scale include: Arizona (two mines producing blue precious opal), Idaho (second in production to Nevada), known for pink precious opal, Louisiana (sandstone with precious opal cement), and Oregon (from geodes or “thundereggs”) (U. S. Geological Survey, 2002). Many other states produce precious opal on a small scale collector or specimen basis.



Fig. 2. Outcrop of Ogallala Formation, Wallace County, Kansas. The more resistant beds contain a silicified sandstone/conglomerate as well as opalized nodules. Photo by author.

Fire opals usually do not display a play of colors (some brown-tones may be an exception), are translucent to transparent and most often come in a variety of “earth tones”—yellow, oranges, and reds, most likely due to the presence of minute amounts of iron oxide. The most famous collecting localities for these gems is in the State of Queretaro, Mexico although Australia is now producing significant quantities and Brazil has opened a mine producing orange and yellow stones. In the U. S. Oregon is producing orange fire opals. Not all fire opals need cutting into cabochons as many display facets quite nicely (Fig. 1).

Common opal does not show a play of colors but often displays opalescence, a sort of sheen on an otherwise chalky to transparent to translucent siliceous material. Opal is a mineral that is hard to describe; however, once you observe the gem it becomes recognizable (mostly!). Common opal usually is not considered a gemstone and according to some “authorities” is of little or no value (Oldershaw, 2004). However, beauty is in the eye of the beholder and I sort of enjoy common opal and have seen some really nice polished pieces. Milk opal (commonly called potch), quarried from Australia, is sometime gemmy since it usually has a bluish opalescence. Wood opal, if not precious opal, can still display nice colors. Menilite (liver opal) is a grey to brown common opal evidently occurring only in scattered European localities (MinDat, 2010). Hyalite, sometimes referred to as water opal or Muller’s glass, is a mostly colorless variety of opal usually found in globular concretions (MinDat, 2010). I have never observed hydrophane, an opaque variety that is highly porous and which turns more translucent or more transparent when immersed in water. Resin opal is a darker colored common opal with a resinous luster. Geyserite is an opal deposited around hot springs such as those found in Yellowstone National Park and is often confused with travertine (CaCO_3) springs. In fact, most Yellowstone travertine is found at Mammoth Hot Springs while the remainder of the springs produces geyserite. Diatomite or diatomaceous earth, is a sedimentary rock composed of the fossilized remains of diatoms, a type of algae with an opalized skeleton. Interest-

ingly, this nondescript opal has by far the most value since the uses in industry are enormously varied—from filters to insecticides to cat litter. In this part of the country the best known beds of diatomaceous earth are from the Tertiary Ogallala Formation of the High Plains. These diatoms evidently lived in warm fresh water lakes impounded in the vast fluvial system of the late Tertiary. Wallace County, Kansas, bordering Cheyenne County, Colorado, produced diatomaceous earth for many years from an open pit mine in the Ogallala. The locality is well known to vertebrate paleontologists as the lake sediments also have produced a nice vertebrate fauna, evidently animals “washed” into the lake by area streams.

Opal can form in a variety of environments. The famed Australian deposits have formed in Cretaceous sedimentary rocks as weathered silica collected in fissures, holes and other hollow spaces (a post-Cretaceous secondary formation of the opal). The original source of the silica was feldspar-rich sedimentary rocks with normal weathering producing a silica gel.

One may envision how opal might form by purchasing Sodium silicate (Na_2SiO_3), or water glass, from a pharmacy, and then combining the substance with vinegar (a weak acid). The silicate reacts with the hydrogen of the vinegar to form silicic acid which turns into a hard glassy substance as water evaporates. If the evaporation is rapid, numerous cracks will appear. Slow evaporation and the substance will be rather solid. This is a situation similar to the formation of opal--slower is better! Additional formation types of opal include: deposition of silica from hot water, the geyserites; leaching of silica from volcanic ashes; aqueous solutions percolating through organic matter, such as wood, with subsequent deposition, etc. Opal also occurs as a vein mineral in ore bodies or as amygdale fillings in volcanic rock, mostly rhyolite (Eckel and others, 1997). Opal is rare in metamorphic rocks. Most opal is very young (geologically speaking) since it cannot withstand the heat and pressure associated with burial and metamorphism—the water is lost. I am guessing (I am not a chemist) that dehydrated opal “becomes” a form of microcrystalline quartz such as chalcedony. Somewhere in my mind is a stored factoid that no opal is older than the Triassic (came from a class somewhere in the past); however, I could not locate a valid reference.

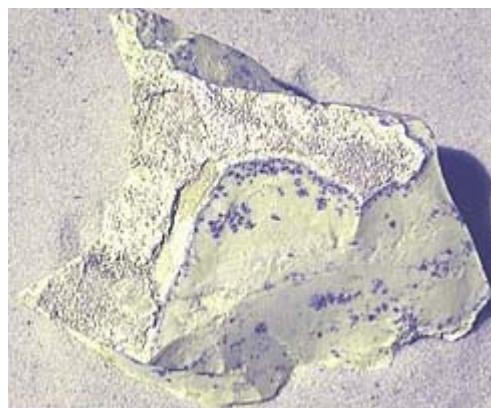


Fig. 3. Common opal with dendrites (manganese oxide) collected from western Kansas. Also known as “moss agate”. Photo courtesy of Kansas Geological Survey.

Eckel and others (1997) noted that common opal has been found at a variety of localities and different geological environments across Colorado, and I refer the reader to that wonderful publication. Very few localities in the state have produced significant amounts of gem opal or fire opal. Of interest to this article, however, is the common opal occurring in the upper Tertiary Ogallala Formation. I have written about the Ogallala Formation before and refer readers to the September 2010 CSMS Pick & Pack for an overview. In general, the Ogallala was deposited in a series of streams, flood plains and lakes

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extending eastward from the front ranges of the Rocky Mountains, an area now known as the High Plains (Fig. 2). Eckel and others (1997) listed a locality about 20 miles north of Burlington in Weld County, Colorado, that produced "moss opal". I have collected from this area and the material is rather poor, at least in the seams that I observed. However, areas across the state line in western Kansas have produced very nice specimens of

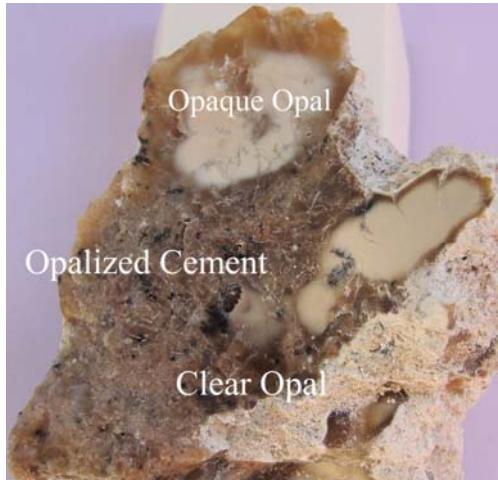


Fig. 4. Nodule of almost pure opal collected from the Ogallala Formation south of Wallace, Kansas. The transparent or clear opal is almost gemmy. Specimen is about 5 inches in length. Photo by author.

moss opal (also known as moss agate) (Fig. 3). Within the last few months I have run across outcrops of the Ogallala that produced really nice specimens of opalized nodules that almost have a gemmy clear variety of opal (Figs. 4 & 5).

Silicified beds in the Ogallala have been known since the early part of the 20th century, mainly from Kansas, but also common in parts of Nebraska and Texas. The best known of these silicified beds is the aptly named "Green Quartzite", a quartz to opal cemented sandstone and/or conglomerate that forms the local "caprock" in many western Kansas localities. Of greater interest to this study are the concretions and beds described by Frye and Swineford (1946) as *irregular masses (up to 8 inches in long diameter) of dense, cream-colored, waxy or resinous opal ... containing vugs lined or filled with the more common translucent opal and some chalcedony, and on the outside consists of dull white porous silica... The rock is brittle and breaks easily with pronounced conchoidal fracture into small splinters.* The current thought is that the source of silica was the vast beds of volcanic ash scattered throughout the Ogallala. Essentially this



Fig. 5. Nodule of opal collected from Ogallala Formation south of Wallace, Kansas. Photo by author.

opal is a weathering product---silica leaching downward from the overlying ash beds.

The opalized nodules south of Wallace, Kansas, pictured in Figs. 4 & 5, are among the most beautiful of the opalized concretions that I have observed. Some of the translucent opal is almost, or may be, gem quality. Although small, the "moss" dendrites (manganese oxide) are also present. Currently CSMS member Rick Copeland is cutting several slabs off a nodule so we may obtain a polished surface. If any CSMS member wants to try their skills at faceting, please contact me. So, as an answer to the inquiries, common opal may be located near Wray, Colorado in road cuts of the Ogallala Formation; however, more impressive specimens are currently known from across the state line in Kansas. I am unaware of jewelry, cabochons or faceted stones from this opal. But---there is always a first time!

*Oh, give me a home where the buffalo roam
Where the deer and the antelope play
Where seldom is heard a discouraging word
And the skies are not cloudy all day*

Dr. Brewster Higley penned these words describing western Kansas in a poem that later became the official State Song---Home on the Range. I distinctly remember that students could not "pass" fifth grade until we were able to recite the entire poem (luckily I did not need to sing the song).

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Mt. Antero Adventures, part I



Photos Courtesy of Amanda Adkins (See article on page 6 in this Pick & Pack about the Mt. Antero field trip!):



The steep road up to Mt. Antero.

Mt. Carbonate as seen from the switchback roads.

Introduction to Crystallography

Sign Up Sheet

Your Name:

Address:

Phone No.:

e-mail Address:

Do you prefer to meet (please highlight or circle your choice):

Once a month

Twice a month

Once a week

Do you prefer to meet (highlight or circle as many as you wish):

On a weekday (daytime or evening) (circle or highlight which)

Which day? (Mon.) (Tues.) (Wed.) (Thurs.) (Fri.)

On a weekend? Daytime or evening? Saturday or Sunday?

(Please list any days/times when, because of other commitments, it would be impossible for you to attend:

Describe your knowledge of crystallography (highlight or circle):

Beginner Intermediate Relatively advanced but need a review

Describe your interest in crystallography and minerals (highlight or circle as many as you like):

I self-collect crystals/mineral specimens.

I buy crystals/mineral specimens.

I am a gem faceter.

I am a jewelry maker.

Other (describe below)

Do you own any basic books that include sections on crystallography? If so, please list (up to 5):

Do you currently use any of the mineral databases now available through the internet? If so, please list:

These Old Bones Museum: A Museum of Imagination

By Aaron Hendricks, CSMS Pebble Pup

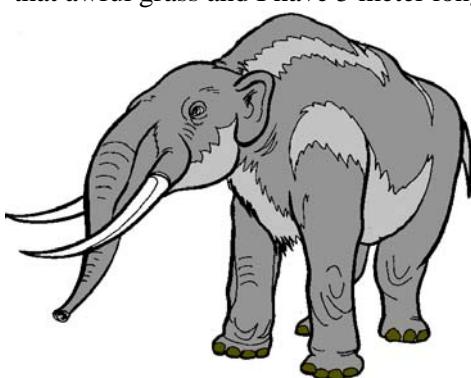
Hello my name is *Camelops D. hesternus*. Yep, that's right I'm a camel. I live in the world famous "These Old Bones Museum" in Yukon, Oklahoma. In my old life (meaning I'm currently extinct) I always looked down because I am 7 feet tall at my shoulders! Sometimes being tall has its disadvantages...Once, while on a walk looking for some greens with my friend Jeff the Parrot, I was looking down and WHACK, I ran straight into a tree. Jeff fell off my shoulder and yelled, "No wonder you're all extinct!" Thinking about the tree and being extinct made me remember my uncle. Did you know



Camelops image courtesy of authorsclipart.org. All rights reserved.

they found him while digging holes to plant trees in at a Wal-Mart? We now hang out together here at the museum. The plaque in front of our display says we died off during the Pleistocene period (about 2 million years ago) along with the mastodons. Our bones suggest that Clovis culture tools were used to butcher us. Enough about us. Look here, lucky for you the mastodon bones just woke up from a nap.

INTRODUCING: Bob M. Mastodon. Howdy! I am Bob M. Mastodon, almost a mammoth but not quite. The difference between us varies. I have no undercoat, a larger flatter skull, and a skeleton that is stockier and more robust than the mammoth. Plus, my teeth are sharper and suited for eating yummy leaves more than that awful grass and I have 5 meter long tusks to boot!



Mastodon image courtesy of authorsclipart.org. All rights reserved.

The people of the land hunted us for sinew, meat, and fur. I also heard we went through an Ice Age. Nowadays most of our bones were just put up in a museum. *Camelops* and I have been here for many years along with a whole family of black footed ferrets. Well what do you know?

We lived in cold spruce woodlands and since I am not the hunting sort, leaves and roughage had done me nicely. Say, speaking of hunting, do you know my kind never got any respect?

The people of

Here comes our little friend now. Looks like BFF would like to introduce himself.

Hello, I'm BFF or Black Footed Ferret. And yes, I am little and yellowish and brown. Guess what color my feet are? I'm always stepped on by bigger animals because I'm 18 inches long and I only weigh two pounds.

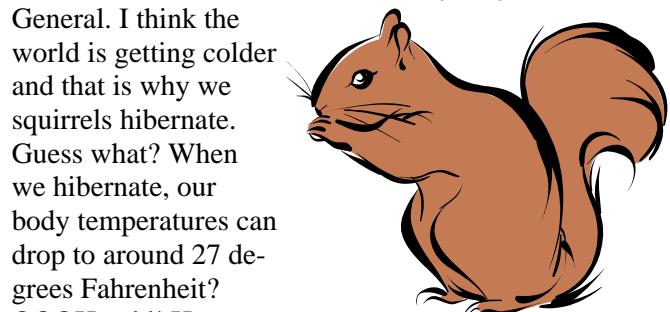
I think I'm in this museum because Bob M. Mastodon stepped on me; however, he swears I couldn't possibly be that old. 'Til this day he still knows how to push my last button. We are on the endangered list now but in the last

year we made what humans call "an astonishing comeback." When my family and I lived and roamed we were lean, mean, black-footed hunting machines. I think we made the prairie dogs endangered because we hunted them. I also once tried to eat a very strong arctic ground squirrel but he got away. He's now in this museum too but his family is in the "least concern" category. Last but definitely not least.....General Arctic Ground Squirrel.

ATTENTION!!! General Arctic Ground Squirrel reporting for duty. I died because of old age and since I was a superior general, I was placed here in this fine museum. I may look cute, cuddly and furry but I am cold and hard core inside. That's why they call me General. I think the world is getting colder and that is why we squirrels hibernate.

Guess what? When we hibernate, our body temperatures can drop to around 27 degrees Fahrenheit?

OOOH cold! Here we have controlled climate so I don't hibernate anymore. I think they should serve me three gourmet meals a day here but we don't get to eat anything. I sure miss all the grasses, mushrooms, roots, flowers, and seeds I used to eat. My family and I really hate grizzlies, foxes, and eagles. They eat us!!!! In this exhibit I am right in front of an eagle. So if you don't hear from the eagle again, you'll know I won the war and took him out. Someday soon I wish to travel back to my homelands in the Arctic Circle but until then, we'll live in this really imaginative museum.



An Arctic Ground Squirrel takes a peek.

WMMI HAPPENINGS

225 Northgate Blvd. Colorado Springs, CO 80921

Main: 719.488.0880 Toll Free: 800.752.6558

Hours: 9 a.m.-5 p.m., Monday-Saturday (June-August)
9 a.m.-4 p.m., Monday-Saturday (September-May)
Daily Guided tours at 10 a.m. and 1 p.m. (included in admission).

The Western Museum of Mining and Industry is a private, nonprofit museum founded in 1970. We educate over 8,000 school children a year on the importance of mining in the American West.

Farmers' Market— Runs through October 27, every Monday & Wednesday through October: Farmers' Market featuring Colorado Grown Fresh Produce Fresh vegetables from local Pueblo farms, breads, meats and more—located in front of the Red Farmhouse. Guests visiting the museum get the opportunity to see operable steam engines, learn how to gold pan, see a recreated mine drift, play with hands-on exhibits, and catch a glimpse of the pioneer lifestyle. There are over 27 acres to explore at the Museum, with picnic grounds and two very adorable burros.

Margaret Whiting Exhibit – “Laws of the Land”--
Opening: Thursday, September 23; 5:00 p.m.–7:00 p.m.; September 24-December 30; 9:00a.m. - 4:00p.m.

Opening September 23, Laws of the Land will exhibit work by artist Margaret Whiting! Margaret Whiting explores contemporary issues related to land use and encourages thoughtful consideration of the laws that regulate our relationship to the land by highlighting phrases and words in the text of law books to build new statements. Related programming will explore the history and future of the Mining Law of 1872. Exhibit runs from September 23 – December 30. For more information call 719-488-0880.

Heritage Lecture – “Ranching & Mining Reclamation” Thursday, November 4, 7p.m.–8:30 p.m.

Rancher, writer, and poet Sharon Salisbury O'Toole will discuss the relationship of land to ranching and reclamation. O'Toole is a fourth-generation rancher from the Little Snake River Valley on the Wyoming- Colorado border. Sharon and her husband Pat operate the Ladder Ranch, which the Salisbury/O'Toole family has owned for over 120 years. They have collaborated on reclamation-related projects with the Nature Conservancy, Wyoming Game and Fish Department, U.S. Fish and Wildlife Services and other organizations. O'Toole describes daily life on the ranch on her blog at www.westernfolklife.org. **Reservations: 719-488-0880 or email us at RSVP@wmmi.org.**

The Gold Assay Process: *Magic or Chemistry?*

Saturday, November 27, 10:00 a.m. & 1:00 p.m.

Gold does not come out of the ground ready to wear. Join us at the Western Museum of Mining & Industry to discover how ore is proceeded 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 "cold" assay demonstration will overview the math, mechanics, and chemistry of this exciting process. Customary admission applies, and reservations are requested. Please call 719-488-0880 or email us at RSVP@wmmi.org to secure your spot

2010 Mt. Antero Collecting Trip

By Amanda Adkins

To the brave souls who conquered the 14,269 ft. Mt. Antero with me again this year, I'd like to thank you and encourage you to join the two trips I plan to lead next summer as well. The warnings of rough terrain were well-warranted, especially this trip, and to make a long, somewhat humorous story short, I wound up having to ride to the top of the digging area with one of the club members. The weather for Saturday could not



have been better. Sunday, we practically blew off the mountain! Almost all club members were able to find our beautiful Colorado state gemstone, aquamarine. Several members also found fluorite, phenakite, and

phantom quartz that weekend. This trip was yet another wonderful collecting experience as well as one of the most beautiful landscape photo opportunities one could ask for.

Even the drive up Mt. Antero was tantalizing, as both sides of the road all the way up to tree line were covered with ripe bright red raspberries. What a wonderful tasty treat that was! The road was rough, as to be expected with almost any 14er, but well worth the experience. The breathtaking view was a surprise to many of the club members, especially those who had not been so high in altitude for collecting gems before. Mt. Antero is the highest gem-collecting locale in North America, and the third highest in the world. I look forward to joining the club on our next aquamarine adventure next year!



THINGS TO DO FROM CSMS MEMBER PETE MODRESKI

All Denver area mineral collectors and other interested persons are invited to come hear a special presentation to be given as the bimonthly program of the Friends of Mineralogy, Colorado Chapter. Richard C. Bostwick, a long-time mineral collector who will be in Denver for the Geological Society of America annual meeting, will give a presentation on **Minerals and Mining History of Franklin and Sterling Hill, New Jersey**. The talk and slide show will be in the VIP Room, Denver Museum of Nature and Science, 7:30 p.m., Thursday, November 4. Enter the museum via the Staff door to the left of the main entrance, and check in at the security guard station; the VIP Room is to the left, through the cafeteria seating area.

Sat.-Sun., Oct. 23-34, Mineral Sale at the home ("in our barn", actually) of Ray and Eloise Berry, 7513 Tudor Rd., Colorado Springs (I-25 exit 149), 9 a.m. - 4 p.m.; please call 719-598-7877 or email rayber@q.com for directions or more info.

Tues., Oct. 26, The Friends of Dinosaur Ridge Fireside Chat Series presents "**The Chinese National Museum**", by Dr. Bruce Geller, Director, Colorado School of Mines Geology Museum. 7:00 p.m., at the Lutheran Church of the Master, NE corner of Bear Creek Parkway, W. Alameda, and W. Jewell Ave., Lakewood, CO. "In the spring of 2010 Dr. Geller had the rare opportunity to take a backroom tour of the Chinese National Museum. Come and see his pictures and hear the story of his "trek" through this famed storehouse of fossils!" For more info please call Tom Moklestad, 303-697-3466.

Thurs., Oct. 28, 6:30 p.m., "The first-ever Denver Café Scientifique II will be at Brooklyn's on Thursday 28 October 2010 at 6:30 p.m. Speaker, Timberley Roane, PhD, Integrative Biology, University of Colorado Denver; **MICROORGANISMS RULE THE WORLD: DEAL WITH IT (Bugs that eat nasty stuff)**. The Café is free and open to everybody. Brooklyn's is right across from the Auraria campus on Auraria Parkway." For a summary of the talk and more info about Café Scientifique see <http://cafescicolorado.org/> (And, P.S., advance note on the Nov. 16 Café Scientifique at the Wynkoop, **Jaelyn Eberle on Fossils from the hot Eocene Arctic!**)

Mon., Nov. 1, 7:00 p.m. Monday, Western Interior Paleontological Society (WIPS) monthly meeting, Ricketson Auditorium, Denver Museum of Nature & Science; **VOICES OF SCIENCE: TALKS BY TWO WIPS GRANT RECIPIENTS: Derek J. Main.** – **"Paleoecology & Biogeography of Mid-Cretaceous Coastal Ecosystems as viewed from the Arlington**

Androsaur Site, North Texas" Malcolm W. Bedell, Jr. – "Rejuvenated Juvenile" (research concerning a sub-adult Diplodocus from the Jurassic Morrison Formation of Wyoming)

Mon., Nov. 1, 7:00 p.m., Denver Region Exploration Geologists' Society (DREGS) monthly meeting, **The Case for the Mantle-Epithermal Connection in Western USA**, by Jim Saunders (Auburn University) and Matt Brueseke (Kansas State University). Social hour, 6:00 to 7:00 p.m. Presentation: 7:00 p.m. Location -Consolidated Mutual Water Company lower level, 12700 W. 27th Ave., Lakewood, Colorado (just off Youngfield St.). See an abstract of the talk at the DREGS website, <http://www.dregs.org/abstracts.html>

Sun. Oct. 31- Wed. Nov. 3, The Geological Society of America Annual Meeting, a national geological conference, takes place in Denver at the Convention Center. Geologists must register to attend the meeting, but we at the USGS have a limited number of complimentary passes for admission to the exhibit hall only (many exhibits by geoscience companies, book publishers, professional societies, universities, state geological surveys). The exhibit hall is open Sunday 6-8 p.m. (welcoming session), Monday and Tuesday 9 a.m. - 6 p.m., Wednesday 9 a.m. - 2 p.m. If you are interested in coming to see the exhibits please contact Pete Modreski, pmodreski@usgs.gov, 303-202-4766.

Fri., Nov. 5, "Rock Out for the Ridge" is a fund-raising evening (dinner, silent auction, and lecture) for the Friends of Dinosaur Ridge, held at the Red Rocks Park Visitors Center. The lecture presentation will be by Mr. Mike Green, "The Rooney Ranch Story". Tickets for the event are \$75; for more information please contact Clare Marshall at 303-697-3466 x 105 or dino-discovery@dinoridge.org.

Fri.-Sat.-Sun., Nov. 5-7, Denver Area Mineral Dealers Annual Gem & Mineral Show, Jefferson County Fairgrounds Exhibit Hall, 15200 W. 6th Avenue Service Road, Golden CO (west of Indiana Street); Fri. & Sat. 10 am–6 pm, Sun. 11 am – 4 pm. "Public welcome, free admission, ample parking; 18 dealers with minerals, fossils, lapidary, jewelry, and carvings." For more information call (303)279-5504 or (303)986-3647.

Thurs.-Fri., Nov. 18-19 is the **Colorado Science Conference**, a professional development conference for science teachers. It's held at the Denver Merchandise Mart ; for registration and more information see <http://coloradocast.org/professionaldevelopment.php?page=overview> . A worthwhile event for anyone involved in teaching science! The 2010 theme is "Science: What Works for You?".

PRESIDENT'S CORNER

by Ron Yamiolkoski, CSMS

Greetings folks!

What a change from last year! I looked at last year's Presidents letter and I was complaining about cold and talking about snow. I think we would all like to see some moisture (maybe not snow) to help the trees and lawns.



It is time to select new officers for CSMS. Some of the members of the Board will be stepping down to allow someone else the opportunity to serve. If you are interested in a particular office, contact the current officer and chat with them about the position. Let me know and I will pass along your interests to the Nominating Committee. I will not run for President again. I will continue on the board as the Past President a position that has been largely unfilled for the past two years). I will also continue to serve as Show Chair and if the new President wishes, I will continue to serve as Field Trip Chair (unless someone wants the job).

If you're not interested in being an officer, but would like to help out, all of the officers are carrying a few extra jobs that they would love to have assistance with. It is a great way to get more familiar with the workings of CSMS and to contribute to the success of your club.

We are at the bottom of our Field Trip list, but fall is still a great time to have a field trip. We have four Field Trips in October: The Holcim Cement Quarry on 10/02, a Fossil Collecting Trip on 10/09, the April Fools Claim trip on 10/16 and the Picketwire trip on 10/23. If you want to lead a trip this year, please contact me as soon as possible and we will get it posted on the website. Keep checking the website: www.csms.us. Before I forget, I want to thank all of our Field Trip Leaders for providing our members with such great opportunities this year. The word is getting around that CSMS is a club that does Field Trips that are fun and positive experiences for the whole family. Your efforts make this true.

We will not be having an Indoor Show this year. We never did find a venue. Next June we will be Hosting the Rocky Mountain Federation and our Rock Fair at WMMI/Pikes Peak Gem & Mineral Show will be the focus of that event. There are a lot of things happening now in connection with that event. If you want to be

part of the effort, join us in the lobby of the Senior Center at 6:30 PM before the regular monthly meeting and hear what is going on and see how you can help.

Next month I hope to provide you all with details on our Holiday Party and the Annual Banquet.

Take care,

Yam

RMFMS PRESIDENT'S LETTER

BY BILL SMITH, RMFMS



I hope everyone has had an opportunity to read the September issue of our newsletter. Of major concern is the Senate Bill "Tony Dean Cheyenne Valley Conservation Act of 2010." It proposes to remove part of the Fairburn Agate collecting area, and I am sure, if it passes, more will be removed later. It is time to call, write, or e-mail your Congressmen and ask them to vote against this acquisition. Let's keep as much of our country "multiple usage" as possible. This is very important to all of us rockhounds. I do want to go back and see if I can find the Fairburn's I almost found this year.

I am not sure how much time we will have before and after the RMFMS show in Colorado Springs next year, but after reading the articles, "All Roads Lead to Colorado Springs," our stay gets longer. I hope you are planning to see some of the beautiful sites and maybe go on a field trip before or after the show.

Janet and I are back on our feet. I was able to get both shoes on last week. We are now planning on heading to Denver for the Denver Gem and Mineral Show. I will be meeting with Richard Jaeger, and we plan to talk to the Denver clubs. I hope to get them active in the Federation again.

Dove season opens the first, duck the 15th of September, so action should soon get fast and furious around here.

Until next month,

Bill

ASK A GEOLOGIST

BY MIKE NELSON, CSMNS

Roger writes: *Rockguy, are natural stones better for sharpening knives and axes than artificial ones? Does Colorado produce natural sharpening stones? Where do the natural stones come from?* Roger, that may be one of the more interesting questions that I have received here at the ASK column! But, I will try to give it an answer since the thought of "sharpening stones" brought back a flood of memories---mostly of sweaty work on a hot and humid Kansas summer day.

Growing up in a rural area my summers seemed to be spent playing sandlot baseball, fishing, and working—in no particular order. Remember, my childhood was in an age of pre-federal work rule days so you could "legally" work at any age with or without "dangerous" tools. Two of these tools I dreaded were the machete and the scythe, for these meant some really sweaty times "were a comin"; both tools were common on farms and in town homes. Usually, sometime in July, a local farmer would show up in my father's place of business and ask "if Mike wanted to work today (and tomorrow)". Of course my father always replied in the affirmative without asking about my fishing plans. At any rate, some of my earlier jobs entailed walking through corn fields with a machete hacking down thistles and Johnsongrass. Boy, was that a hot and sweaty job with the only cold water being a stone jug with a wet "gunny sack" wrapped around it. Oh well, it represented money to buy new baseballs but especially baseballs cards looking for that elusive Mickey Mantle. Come August and the wild sunflowers, with wild bees and flying ants (we called them pissants), were getting larger around the edges of the fields so out came the scythe—an instrument of torture for a young kid (Fig. 1). But, again ---money for a new fishing pole.

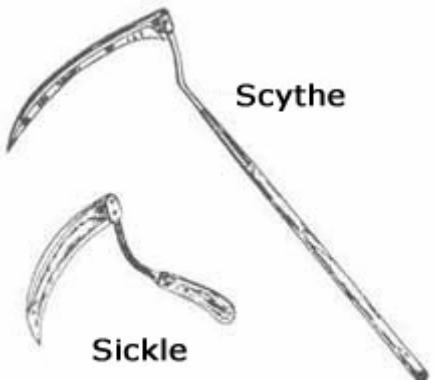


Fig. 1. A scythe, and sickle, with the sharp part of the blade on the inside. Many scythes, as least from my foggy childhood memory, had a small perpendicular handle (for the left hand) on the main handle. Sketch courtesy of Wikipedia.

Well, what I learned early on was that it was imperative to keep both tools sharp at all times in order to make life a little easier. Most everyone had two instruments for this task, a pedal-powered (or treadle-powered) grindstone and a whetstone (Fig. 2). Before heading to the fields in the morning the pedal-powered grindstone was used to remove all nicks from the blade and smooth out the sharp edge while the whetstone was finishing tool. The grindstone has been around for centuries and was used at a slow speed as to not destroy the temper of the blade, as would a power grindstone. Today most people sharpen their lawn mower blade, for instance, with a power rotary grinding tool. In doing so the blade gets very hot, turns rather blue, and the temper is lost. So, the blade will not hold an edge and sharpening at more frequent intervals becomes necessary. Pedal-powered grindstones turn slowly and do not heat up the blade. I

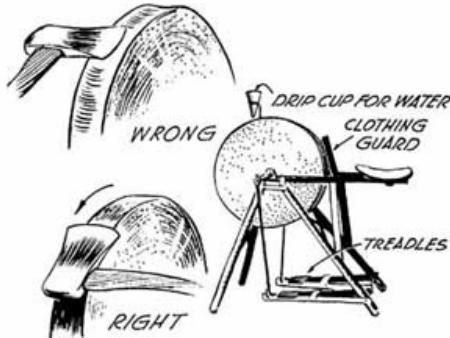


Fig. 2. Sharpening an axe using a treadle-powered grindstone (some machines used pedals). The worker slowly turns the grindstone wheel by use of the treadles; this "slow method" preserves the temper of the steel and gave rise to the phrase *putting your nose to the grindstone*. Sketch courtesy of Frederic Kock.

Only a few of the "townies" would use artificial carbides as sharpening stones. Later in life as a student I decided to find out more about the collecting localities of these stones.

The Berea Sandstone (Berea Grit of older literature) is of earliest Mississippian age (~345 Ma) with a type locality near Berea, Ohio, just south of Lake Erie and today in the southeast suburbs of Cleveland. The rock evidently was used and quarried by the settlers by the early 1800's. The sand grains of the unit are angular, rather than rounded, are rather uniform in size and mineral composition (about 95% silica) and the sandstone itself is, in many beds, free from cracks, pebbles and other impurities; therefore, the stone is an ideal abrasive (Ohio History Central, 2010). The sandstone also was quarried extensively for use as building stone, sidewalks and bridges.

The Berea Sandstone has a very interesting, and complicated, geological history related to a rising chain of ancient mountains in what is now the eastern part of the United States. Starting in the Late Devonian (~360 Ma), but continuing into the Mississippian, parts of the ancient North American continent collided with terrain that is now part of western Europe (geologists call this event the Acadian Orogeny; Fig. 3) and large amounts of sediments were shed to the west--the "Catskill Delta". Close to the source area, as in the Catskill Mountains of New York, the resulting rocks are coarse-grained and the grains rather unsorted. Many hundreds of miles away, in a band from Pennsylvania to Ohio to Kentucky, the sediments were deposited by streams flowing into shallow seas. The resulting rocks are fine grained and well sorted and are named the Berea Sandstone. Ohio has produced about 90% of the natural grindstones in the U. S. and



Fig. 3. Paleogeographic map of the Early Mississippian (~345 Ma) showing location of mountain building events in the eastern U. S. and the locations of Colorado and Ohio. Modified map courtesy of Ronald Blakey of Northern Arizona University.

also carried the whetstone with me as a portable tool to "keep the edge on" during working hours (and as excuse to rest).

Being somewhat inquisitive I asked some of the local "old timers" about the stones and learned that the best grindstones were from Ohio and were known as Berea stones while the best whetstones came from Arkansas.

many/most were from the Berea Sandstone (Crowell, 1996). The finishing tools for blade sharpen-

Continued on Page 10

Arkansas. Arkansas Whetstones are composed of a material called novaculite, and more specifically quarried from a geological formation formally named the Arkansas Novaculite (Devonian to Early Mississippian in age, ~400 --345 Ma) found in the Ouachita Mountains. Novaculite is a recrystallized (probably from low grade metamorphism) form of chert or flint (a microcrystalline quartz), and is extremely pure (~99% silica). It was used by early Native Americans for projectile points and cutting tools (Fig. 4) and by more recent Americans as sharpening instruments for everything from axes to surgical instruments. In addition, novaculite is quarried for road aggregate, riprap and in the manufacturing of items calling for the use of material rich in silica.



Fig. 4. Lithic fragments of novaculite. Photo courtesy of Diana Rose Angelo at www.Lithicsourcing.com.

As with the Berea Sandstone (of similar geological age), the geological conditions surrounding deposition of the Arkansas Novaculite are quite complex and fascinating. The novaculite was deposited in a marine basin called the Ouachita Trough (actually it extended from Arkansas to west Texas) and according to the U. S. Geological Survey (Cecil, 2004) was “sediment starved” due to aridity in the area and a restriction of sediments entering from streams. A long time ago, during a field trip to the Ouachitas, we were informed that the source of silica (and there is a tremendous amount) for the novaculite was dissolution of tiny one-celled organisms with a siliceous shell called radiolarians. Other professors argued for the silica coming from submarine volcanic vents, dissolution of volcanic ash, or even post-burial introduction by fluids. Today, geologists with the USGS still are uncertain but a new theory is now on the books—the introduction, and dissolution, of wind-blown silica dust (Cecil, 2004). Whatever the case, the novaculite represents a large source of silica, which later in its geological life, would produce the finest sharpening stones in the world.

Just to top off this discussion of paleogeography, I will remind readers that warm and tropical marine waters invaded the future Colorado during the Devonian and Mississippian periods and large expanses of carbonate muds were deposited. Today these rocks are known as the Chaffee Group, the Ouray Limestone and the Leadville Limestone (of mining fame). So, as Fig. 3 shows, while the eastern U. S. was undergoing mountain building, the stable interior of the continent was covered by shallow seas, and a deep water trough occupied south central U. S.

As for your question about natural or artificial stones, I suppose that is a personal choice. Today’s artificial stones are complex and come in a bewildering variety of compositions and types; many are instrument-specific. Silica carbide stones may be much less expensive than novaculite whetstones but there is some satisfaction in owning a nice natural whetstone carefully cared for and carried in a leather case.

All of this talk about grindstones and whetstones has opened up a world of new questions---at least for me! At this time I am

ing then, and now, included whetstones and the finest, by most accounts, come from

unable to answer most of them and perhaps some reader could enlighten me. The references (Crowell, 1996) pointed out that 90% of the natural grindstones came from Ohio. How were they shipped to frontier western settlements, especially those without a railroad or ship dock? Were grindstones of local origin in common usage? For example, did sandstones of Colorado produce material for grindstones? I suppose local farmers and ranchers threw down a large piece of hard sandstone in the yard for sharpening purposes but were round wheels constructed? But, I also know that frontier settlements usually had a blacksmith who commonly sharpened tools and itinerant “tinkers” traveled the country sharpening tools and scissors. It is my understanding, but I can’t lay a finger on a reference, that novaculite whetstones were precious possessions and handed down from generation to generation? They certainly would be easier to pack around. But again, did Coloradans use local chert as a whetstone?

These questions then lead to something much larger---millstones, which are actually very large and thick grindstones. Virtually every frontier settlement near a running water source (sometimes wind) had a mill to grind grain. These mill stones, composed of either limestone or sandstone but sometimes granite, weighed many hundreds of pounds (a millstone around my neck=a heavy burden) and again their slow action did not heat up the grain during grinding. So my question—what is the source of millstones used in Colorado mills—local or shipped in? I will continue looking for an answer.

As a postscript, this has been sort of a “weird” discussion! Grindstones and whetstones are directly related to “geology” but much is hard to explain in a column like this. Today, most sharpening is completed using power tools, except for perhaps knives. In fact, it seems as though the sale of Arkansas Whetstones is increasing on a yearly basis. Old-time grist mills using stone millstones and water power (or even electricity) are a source of amazement for me and I have visited several. Most modern mills are steel ball mills, blade mills, or roller mills, except for Hodgson Mills (with North Carolina red granite millstones), the miller of some of my personal use grain products. Next month I will try and stick to geology; however, most questions coming my way are answered.

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Cecil, C. B., 2004, Eolian Dust and the Origin of Sedimentary Chert: U. S. Geological Survey Open-File Report 2004-1098.
Crowell, D. L., 1996, From Pulpstones to Bats: Ohio Geology (Ohio Geological Survey).

Ohio History Central, 2010: <http://www.ohiohistorycentral.org/entry.php?rec=2859>.

Mt. Antero Adventures, part II



Photo Courtesy of Amanda Adkins:

Summit of Mt. Antero

Introduction to Crystallography

(Preliminary Announcement)

Most serious mineral collectors and gem cutters eventually recognize that they need some basic knowledge of crystallography. When a mineralogy text or website says that topaz is an orthorhombic mineral with perfect (001) cleavage, what does that mean? Why are the pointed faces on the tip of a quartz crystal described as *rhombohedral*; how does that differ from the *rhombic dipyramid* often seen on a topaz crystal? Gem cutters realize that hardness, color, and refractive index of many gemstones vary with direction and depend on crystallography. One can easily ruin a fine piece of rough by choosing to cut it in the "wrong" crystallographic orientation.

Although it's easy to find basic information on crystallography, it takes real determination for most people to wade through the jargon and figure out what it's all about. Most people need a "hands-on" experience and some friendly encouragement to get started. That's the purpose of this course.

This **introductory, college-level** course is designed to meet the needs of the serious amateur mineralogist who doesn't have the time or resources to take a full-blown college course. It will consist of hands-on work, making use of my own collection, which was amassed over 55 years of active collecting and includes over 1700 catalogued specimens. There will be 10 2-hour sessions at my home, plus assignments designed to build on your knowledge and allow you to continue to learn through independent reading and study afterwards. This will require a commitment by you and is not appropriate for anyone under 14 years old (which is about when I started to learn about crystallography). However, it doesn't require that you bring anything with you other than a desire to learn about crystals.

Topics to be covered include:

- An introduction to symmetry and symmetry elements (center, axis, plane of symmetry);
- The 32 crystal classes, and how they are defined by symmetry;
- Characteristics and recognition of the 6 crystal systems; standard orientation of a crystal;
- Miller indices—"naming" of crystal faces;
- Goniometric (angular) measurements of crystals and the stereogram;
- Crystal form vs. crystal habit;
- The isometric system
- The hexagonal system
- Tetragonal and orthorhombic crystals
- Monoclinic and triclinic crystals

The cost of the course is \$100 per person, of which **\$20 will be donated to the Lake George Gem and Mineral Club for Club projects** (Pebble Pups, scholarships, claim maintenance, study projects, etc.). The fee is due at the first class, but it will be refunded if, at the end of that class, you decide that the course doesn't meet your needs.

Minimum enrollment to make the course "go" is five students; **no more than 10 students will be accepted**. If there is enough demand, the course will be repeated.

Before each class, you will receive, via e-mail, handouts, exercises, and other items to be printed out and/or completed and brought along to the class. Although I will go over each assignment with the class, there will be no grades, and the level of participation is up to you. I will be available to answer questions via e-mail. **Above all, I want this class to be fun for you while also providing you with a serious introduction to crystallography.** Suggestions are always welcome.

Some information about me You can find my biography in the Mineralogical Record's label archive, on-line: www.minrec.org/labelarchive.asp; click on "Biographies" and "Select a biography"). I taught mineralogy and geology for over 30 years at Waynesburg College and Lock Haven University of Pennsylvania and have collected minerals since I was 12 years old. Based on my experience teaching mineralogy, I know what's likely to be useful to the collector and where the "hang-ups" are that discourage many students. I can help you to overcome these.

If you are interested in enrolling, I need some information. Please fill out the form on pages 12 and return it to me by e-mail (ccarnein@gmail.com) (just fill in the blanks and send it back) or snail mail (**Bob Carnein; 507 Donzi Trail; Florissant, CO 80816**). Thanks for interest; don't hesitate to contact me if you have questions.

Bob, Newsletter Editor, Lake George Gem & Mineral Club

Continued on Page 4

CSMS FIELD TRIPS

Field Trips for 2010 have already been set. As usual, check the CSMS website (www.csms.us) for the latest list of Field Trips. Also, if you have an idea about a field trip or would like to lead a field trip, contact Yam our Field Trip Chair at ron.yamolkoski@ecom.com.

Holcim Cement Quarry—Oct. 2, 8 a.m.—Led by Bob Germano gliders1@hotmail.com—Limited access, safety equipment required—many specimens available

Fossil Collecting—Oct. 9, 9 a.m.—Led by Yam—see details on csms.us website

April Fools Claim—Oct. 16, 8 a.m.—Led by John Casto Jcasto@fvs.edu—smokies, amazonite, feldspar, and other pegmatite minerals

Picketwire Canyon Dino Footprints—Oct. 23, more info. to come—Led by Terry Beh 303.886.6923—not a collecting trip, fee involved, 4wd required, carpooling advised

FROM THE LIBRARY

by Frank Rosenberg, CSMS



This is your library. We encourage all CSMS members to take advantage of our fairly extensive inventory of reading material. Check the CSMS website to make your selection then Email or call Frank or Ellie to make your request. We appreciate all mineralogical book donations.

Mt. Antero Adventures, part III



Photos courtesy of Amanda Adkins:

Steep climbing involved with collecting aquamarines on Mt. Antero



Baldwin Creek, behind campsite



Coneflower, one of the beautiful flora found around Mt. Antero



View from Quartz Corner, Mt. Antero

THE SUBURBAN ROCKHOUND AND SHARING THE ROCKS

We had some new neighbors move in a few months ago. A husband, wife, a couple of kids and a grandfather make up the family. We said the usual hi's and welcome to the neighborhood. About a week ago the doorbell rang and the new neighbor boy was selling Boy Scout popcorn. We were eating dinner at the time and asked if he could come back later, which he did.

I happened to meet the boy out by the garage with his father. We conducted our business and then I asked him if he was interested in rocks. He said he was and I asked him if he would like a few. He said he would and so started an hour long show and tell and give session. Since my garage is like a lot of rockhounds it was just one thing after another.

The first thing we talked about was the kinds of rocks. With a little help from his father and a few clues from me he came up with: Igneous, Sedimentary and Metamorphic. We started with igneous and I showed (and gave) him some obsidian. We discussed how it was formed and where I had found it. We also talked about granite and quartz. I told him that quartz, obsidian and glass were all basically the same with the big difference being how they came to be. I also told him how sand like the others was primarily silicon dioxide. Maybe that was a bit technical, but I was trying to make a point about the kinds of rocks and how they are formed. We looked at petrified wood next and discussed how it was formed and again the importance of silicon dioxide. Next I showed him a piece of dinosaur bone which he was surprised to see was so hard and heavy.

Anyway we went on like this for about an hour as I dug up a variety of rocks and minerals out of various places in my garage. He walked home with a box of specimens, a little knowledge of geology and minerals, and my money for some popcorn. I stood there with a smile on my face and the satisfaction that perhaps one more person might get the bug to be a rockhound.

So I ask you, when was the last time you shared some of your rocks with the kids next door? If an appropriate opportunity comes your way, seize the moment. You will enjoy the feeling that you get from sharing rocks.

Photos courtesy of Amanda Adkins:



Coneflower, one of the beautiful flora found around Mt. Antero



View from Quartz Corner, Mt. Antero

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
		OCTOBER 2010 — CSMS CALENDAR				
3	4	5	6	7 7 p.m. Board Meeting	8	9
10	11	12 7 p.m. Micro-Mounts 7 p.m. Fossil Group	13	14	15	16 12-14 Lapidary Group— POSTPONED UNTIL A NEW LEADER/LOCATION FOUND!!!
17	18	19	20	21 7:30 p.m. General Assembly 5:15 & 6:30 Pebble Pups & Juniors	22	23 12 p.m. Jewelry Group
24	25	26	27	28 7 p.m. Crystal Group 7 p.m. Faceting Group	29	30
31						

REFRESHMENTS FOR GENERAL ASSEMBLY MEETINGS

Feb—Crystal
May—Jewelry
Aug—Picnic

Mar—Faceting
June—Lapidary
Sept—Projects

April—Fossil
July—Micromounts
Oct—Board

Area Code 719

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JUNIORS & PEBBLE PUPS	Steven Veatch	748-5010	Steven.Veatch@gmail.com
MICROMOUNT GROUP	Phil McCollum		acc@frii.com
PROJECTS GROUP	Ron Yamiolkoski	488-5526	Ron.Yamiolkoski@aecom.com
WEBMASTER	Allen Tyson	268-0775	allentyson@yahoo.com

Locations

Board Meeting: 1st Thursday @ 7:00p. Senior Center, *David Olsen*: 495-8720

Crystal Study Group: 4th Thursday of the month @ 7:00p, Senior Center; *Kerry Burroughs*: 634-4576

Faceting Group: 4th Thursday @ 7:00p, Senior Center, *Paul Berry*, 578-5466

Fossil Study Group: 1st Tuesday @ 7:00p, Senior Center, *Mike Nelson*, *csrockguy@yahoo.com*

Jewelry Group: 3rd Saturday @ 12:00p, 15610 Alta Plaza Circle, Peyton, *Bill Arnson*, 749-2328

Juniors & Pebble Pups: 3rd Thursday @ 5:15p & 6:30p, Senior Center, *Steven Veatch*, 748-5010.

Lapidary Group: 2nd Saturday @12:00p, IN NEED OF A NEW LOCATION!!!

Micromounts Group: 2nd Tuesday @ 7:00p, 1514 North Hancock, *Phil McCollum*, *acc@frii.com*, *Moyra Lyne*, 442-2673

Project Group: Meeting time TBD, *Ron "Yam" Yamiolkoski*

SEPTEMBER 16, 2010 GENERAL ASSEMBLY MINUTES

BY JENNIFER BEISEL, CSMS SECRETARY

Ronald "Yam" Yamiolkoski called the meeting to order at 7:30 p.m. and led the salute to the Flag.

Approval of the June & July 2010 minutes. Motion was made, seconded and all were in favor so passed.

Treasurers Report – Al Zelenak – in binder.

Introduction of New Members: Didn't have all the info at the time.

Chair's Group Introductions:

Crystal Group – Kerry Burroughs – meets the 4th Thursday of every month at 7 p.m. at senior center.

Fossil Study Group – Mike Nelson – 1st Tuesday of every other month (Jan, Mar etc) at 7 p.m. at the senior center.

Micromount group – Phil McCollum (Moyra Lyne) – 2nd Tuesday of the month at 7pm at the senior center and the 3d Saturday of each month (except December and June thru August) from 10:00 to 4:00 p.m. at 3609 Windsor Ave in Colorado Springs, CO. The micromount group has a couple of problems. First, they need a new chair. Phil can no longer make meetings on a regular basis. Anyone who would like to lead this group please contact me so we can arrange for an appointment. Second, with the unfortunate death of Randy Stapleton, we need a place to store about 75 boxes of rocks for the micro-mount group. In addition, we will need some fresh flats and help with the transportation of the materials from Marg Regal's garage. She picked them up from Randy's house and is currently storing them in her garage, but would like to have them removed before the snow flies so she can put her vehicle there.

Faceting Group – Paul Berry – The group will start up again in Sept; the group meets the 4th Thursday of the month at 7:00 p.m. at the Senior Center; class on Monday 1:00-3:30 p.m. and Tuesday 6:30 to 9:00 p.m.

Rock Fair Chair – Ronald "Yam" Yamiolkoski – Updated club on Marty Zinn's offer and 75th anniversary pin.

Field Trip Chair – Ronald "Yam" Yamiolkoski - We have 16 Field Trips posted on our website as of today. Unfortunately, we had to cancel the Kimberlite FT because of legal reasons. Details on the other FTs are on the website.

Presidents Report (Yam):

We still need people to volunteer for the nominating committee.

Colorado Federation meeting will be held Saturday, 18 September 12:00 to 2:30 p.m. at the Denver Merchandise Mart.

FT for the picket wire dinosaur field trip (website). 25 people. Leave here at 0600 and arrive 0800.

The vice president, secretary, members-at-large, membership, and editor didn't have anything to report.

Final reminders:

Yam is still looking for Field Trips to offer to our members. Please help out. It's easy and fun.

Lastly, thank you to Maria Weisser, our Social Committee Chair, and the Board for tonight's treats.

Yam closed the meeting and introduced Ray Berry, who spoke about the club's history.





Our Staff...

Teri Stoiber and Ann Proctor
Editors

CSMS Members Reporters

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

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

The ability to write well is NOT a requirement. We will fix the grammar while keeping the author's voice, style, and work intact.

Handwrite it, type it, or email it. Format does not matter. All submissions are welcomed.

DEADLINE for items to be included is the Saturday after the General Assembly every month.

To submit an item, please use the following:

For hardcopy photos or articles, mail to the address below or bring them to the General Assembly 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.

All articles not shown with an author are provided by the Editor.

Mail or email to:
b l a c k l a b a c c o u n t -
ing@gmail.com
PO Box 2
Colorado Springs, CO 80901

The PICK&PACK is published at least ten (10) times per year; 350-375 copies e-mailed/mailed per month (no issues in January or August).

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We would like to thank all the contributors to the Pick & Pack—without you, there would be no articles, photos, or a Pick & Pack, for that matter. Anyone who went on a field trip this year is encouraged to send an article about their experiences and finds...If you led a field trip, and took photos, please send them as well...

If you are a student of any age, or a Pebble Pup, your articles about the Club, and related experiences are welcomed! (Check out the article by 4th grader, Aaron Hendricks, on page 5 of this issue—well written and very informative!).

Also, if you know of anyone who has been recognized for their efforts in the “rocking” industry, please let us know—we will include that info, and hopefully a picture, in the Pick & Pack. For that matter, if you want to recognize someone’s hardwork and efforts, please send an article with whom and why...

Thank you to our regular contributors, Mike Nelson, Steven Veatch, and Yam—your articles are educational, informative, and entertaining.

Respectfully, Teri & Ann

CLASSIFIEDS . . .

NOTICE—Items listed for sale in the Pick & Pack are displayed only as an informational service to our members and advertisers. CSMS and/or the Pick & Pack do not promote nor warranty any item displayed. The sellers and buyers are responsible for the condition and ownership of any item shown.

CSMS T-Shirts, Badges, and Pins are available for sale at each meeting. See Store Keeper, Ann Proctor.

Have You Picked Up Your Membership Award Pin?

If you celebrated a CSMS anniversary in 2007, 2008 or 2009, your year pin award is available from the Storekeeper, Ann Proctor. Last call for 2007 pins.



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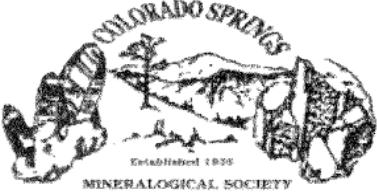
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General Assembly meetings are held the third (3rd) Thursday of each month, except January & August, beginning at 7:30 p.m. at the Colorado Springs Senior Center, 1514 North Hancock Blvd., Colorado Springs, CO. Visitors are always welcome.

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, see page 13.

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—\$10 Corporate—\$100

If you are interested in joining CSMS or would like more information, we encourage you to attend our next General Assembly meeting or visit our web site: www.csms.us.