



THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

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PICK&PACK
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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.

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Colorado Springs Mineralogical Society

Founded in 1936

Lazard Cahn

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DANGEROUS DUST

The Lapidary Hobby's Forgotten Hazard
by Douglas Hamilton

Rock & Gems, August 2010

(Editor's Note: This is not the complete article. It has been edited for available space. (I would recommend reading the entire article.))

When I first became interested in lapidary work, it seemed the perfect hobby. Today's equipment is simple, relatively cheap and very high tech. Working material is easy to find as rocks are about the most abundant material on the planet. The hobby is rewarding and exhilarating. And there is little danger of personal injury from runaway saws, faceting machines, or polishers. So after 30 years of procrastination, I finally decided to go for it and purchased a new rock saw and grinder/polisher. For the first few months I was in seventh heaven. All those lovely rocks I had lusted after for so long were finally put under my polishing wheel: lapis, agate, jasper, tiger's eye, malachite, turquoise, chrysocolla and quartz. But I soon began to experience a nasty and completely unexpected cavalcade of health problems: coughing, hoarseness, difficulty clearing my throat, breathlessness, and a dull ache in the pit of my lungs. I had always worn safety glasses as recommended in every manual, but a mask seemed a cumbersome hindrance. I tried several dust masks, but there was little improvement. I hit the books and started talking to fellow rockhounds. It was a revelation. Rock dust from lapidary work turns out to be more than just a nuisance; it can be deadly. A single heavy dose can cause crippling lifelong problems. It attacks the lungs in a variety of ways: First, by coating the inner lining and blocking the transmission of oxygen into the bloodstream. Second, tiny sharp fragments slice and cut into the alveoli, which coat the inner lining of the lungs, causing irritations and inflammation. Fresh dust seems to be more harmful because the sharp edges have not had a chance to be softened by moisture. Some forms of rock dust are quite poisonous in and of themselves. Whether it is inhaled, ingested, or contacted by exposed skin, the effect can be injurious to your health.

Among the worst offenders are minerals containing copper (II) oxide (CuO), the higher oxide of copper, which can cause damage to the endocrine and central nervous systems. These minerals include some of our most colorful and treasured semi-precious stones: turquoise (9.8) percent copper oxide), chrysocolla (45 percent), and malachite and azurite (70 percent). It is worth remembering that other closely related copper compounds are highly bioactive and have been used in pesticides, fungicides, and wood preservatives for decades. This is dangerous material. These high-copper rocks should not be licked to bring out the color, and oil mixed with the dust should be carefully cleaned off exposed skin. Symptoms of CUO dust poisoning mimic the flu, causing headaches, coughing, sweating, sore throat, nausea, and fever. Skin, eye, and respiratory tract irritation are also common, along with a distinct "metallic" taste. A common name for these health effects is "metal fume fever".

In fact almost all the rocks most favored by cutters and polishers contain compounds that can be dangerous when inhaled. Silicates are the most common family of minerals on earth and

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Oct 2011 CSMS Calendar

Tues., Oct 4—*Fossil Group*, 7 p.m., Senior Center. Mike Nelson, Leader, csrockguy@yahoo.com

Thurs., Oct 6—*Board Meeting*, 7 p.m., Senior Center.

Tues., Oct 11—*Micromounts*, 7 p.m., Senior Center. Dave Olsen, Leader, 719.495.8720

Sat., Oct—*Lapidary*—RSVP please. If you would like to cut stones, call Sharon Holte at 217.5683 for an appointment.

Thurs., Oct 20—*General Assembly*, 7:30 p.m., Senior Center.

Sat., Oct, *Jewelry Group*, By reservation only. Please call, 15610 Alta Plaza Cir., Peyton. Bill Arnson, Leader, 719.749.2328

6:30 p.m. to 7:15 p.m. *Pebble Pups & Juniors*. Steven Veatch, Leader,

Thurs., Oct 27—*Crystal Group*, 7 p.m., Senior Center. Kerry Burroughs, Leader, 719.634.4576

Camera Club is looking for a leader and meeting place, date and time. Interested? Contact Roger Pittman.

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

Project Group—TBD—contact Ron “Yam” Yamiolkoski, yamofthewest@gmail.com

For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to

The Senior Center is located at **1514 North Hancock** in Colorado Springs.

Nov 2011 CSMS Calendar

Tues., Nov 1—*Fossil Group*, 7 p.m., Senior Center. Mike Nelson, Leader, csrockguy@yahoo.com

Thurs., Nov 3—*Board Meeting*, 7 p.m., Senior Center.

Tues., Nov 8—*Micromounts*, 7 p.m., Senior Center. Dave Olsen, Leader, 719.495.8720

Sat., Nov—*Lapidary*—RSVP please. If you would like to cut stones, call Sharon Holte at 217.5683 for an appointment.

Thurs., Nov 17—*General Assembly*, 7:30 p.m., Senior Center.

Sat., Nov, *Jewelry Group*, By reservation only. Please call, 15610 Alta Plaza Cir., Peyton. Bill Arnson, Leader, 719.749.2328

6:30 p.m. to 7:15 p.m. *Pebble Pups & Juniors*. Steven Veatch, Leader, 719.748.5010

Thurs., Nov??—*Crystal Group*, **CANCELED**

Camera Club is looking for a leader and meeting place, date and time. Interested? Contact Roger Pittman.

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

Project Group—TBD—contact Ron “Yam” Yamiolkoski, yamofthewest@gmail.com

For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to our website, csms.us

The Senior Center is located at **1514 North Hancock** in

On the Trail of Colorado Blue Quartz: Re-discovery of “Llanite” Outside the Lone Star State

By Andy Weinzapfel

Many mineral collectors are aware of a hard, attractive rock (fig. 1) from the Texas hill country west of Austin, informally known as “llanite” or “llanoite”. Occurring as injection dikes into the 1 billion-year-old Town Mountain Granite and older metamorphic rocks, the rhyolite contains unusual blue quartz bipyramidal crystals. The blue coloration in llanite quartz is a result of Rayleigh scattering of light from sub-micrometer ilmenite (titanium oxide) inclusions (Zolensky et al, 1988). Total amount of ilmenite within the blue quartz is only about 0.02 per cent by volume.

Fig 1: Typical Texas llanite (rhyolite), showing blue quartz crystals and pink K-feldspar phenocrysts in a dark groundmass (porphyritic-aphanitic texture)



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silicosis has long been one of the chief hazards facing stone masons. The symptoms of inhaling crystalline silica (SiO) dust include shortness of breath, cough, fever, emphysema, pulmonary fibrosis, lung scarring, and increased susceptibility to tuberculosis and cancer. Silicosis often takes many years to develop from repeated exposure to low doses of dust, but once established it is irreversible.

The silicates include a bewildering variety of precious and semiprecious stones. The family includes quartz, chalcedony, jasper, agate, aventurine, bloodstone, carnelian, chrysoprase, amethyst, opal, onyx, beryl, petrified wood, obsidian, flint, chert, soapstone, sandstone, glass, and tiger's-eye. In almost all of these, the content of silicon dioxide approaches or exceeds 50 percent. It should be mentioned that African tiger's eye also exposes the lapidary to another potent danger: asbestos. The vibrant optical effect of its chatoyancy is caused by parallel-oriented, finely fibrous amphibole asbestos.

You might be surprised to discover a very different kind of hazard: radioactivity from fossils. In a recent study of 300 randomly selected fossils from the Hagerman Fossil Beds of Idaho conducted by C. Neal Farmer, Ronald L. Kathren, and Craig Christensen, a hand held Geiger-Muller survey instrument detected discernible levels of radiation one to two orders of magnitude above the ambient level of background radiation in three-quarters of the specimens ("radioactivity in Fossils at the Hagerman Fossil Beds National Monument", *Journal of Environmental Radioactivity*, Vol 99, Issue #8, August 2008, pp. 13551359)

According to the study, radioactive fossils seem to occur most commonly between 900 and 1,000 meters above sea level in ancient sandy riverbeds, while clay-rich deposits and those of other altitudes do not seem to show these high levels. Apparently, naturally occurring uranium produces radium, which decays into radon, an inert gas. Ancient ground water transported these radioactive elements into sandy fossil bearing areas where they precipitated out of solution during the fossilization process. Even small fossils like shark teeth and trilobites can have significant readings. While it is probably safe to collect most fossils, you should wash up and change your clothes after leaving the field. And always wear a respirator when you cut or polish the pieces – radioactive dust is highly carcinogenic!

But enough of the doom and gloom. This litany of dangers is not intended to drive rock lovers from their favorite hobby. On the contrary, a few simple precautions can almost completely eliminate the threat of injury from most rock dusts. Here is a list of suggestions that will make your workshop safer and allow you to enjoy lapidary work in good health.

1. Always wear a National Institute for Occupation Safety and Health (NIOSH) approved respirator with replaceable cartridges and dust filters. Respirators provide a wide variety of protection against dusts, solvents, fumes and mists. Avoid cheap dust masks; they don't fit tightly enough and they filter poorly. If you can, try on several different respirators at the store to get the best fit. Store the mask in a closed container or plastic bag when it is not in use and occasionally wash it with warm soap and water both inside and out.

2. An open window or air conditioner does not provide adequate ventilation for the lapidary workplace. The simplest solution is to work outside. This keeps most contaminants out of your workshop and costs nothing. For inside, consider setting up a local exhaust ventilation system. This would include a dust hood to collect contaminants, ducts to carry them outside, and a suction fan to power the system. Some wood-working tool suppliers have an ingenious system. They have adapted a wet/dry vacuum cleaner with a High Efficiency Particulate Absorbing or Arresting (HEPA) filter to collect shop dust. The system should work for rock dust as well. Information on this system can be found at leevalley.com or elsewhere on the Internet. Search for "dust collection" and "dust collection network".

3. Always use water or oil as a lubricant when cutting, drilling, polishing or faceting. Be aware there are problems with both fluids. When water evaporates, it stops holding the dust down, allowing it to become airborne. A fine oil mist laden with toxic dust can be kept out of your lungs with a good respirator, but it will settle on skin surfaces and stick like glue. Also, most lapidary oils are highly irritating or poisonous to breathe and some like kerosene are flammable.

4. Always wear a head covering and apron and/or coveralls when grinding and change clothes after you have finished. Rock dust loves to stick to clothing and hair, and you will carry it around the house and breathe it all day long if you don't change.

5. Never dry sweep the workshop. Most of the dust will become airborne and migrate elsewhere. Use a vacuum cleaner with a HEPA filter instead. If you really want to get down and dirty, use a wet mop on the floor and a wet rag with a water bucket on other surfaces. Not all of these suggestions need to be slavishly followed. If you grind infrequently, you can probably forget some of them. (Not likely, this is cumulative)!! Individuals vary greatly in their tolerance to rock dust. Some will go through life with nary a problem, but others can be extremely sensitive. Low doses on a daily basis will slowly accumulate, and that dust isn't going anywhere once

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you breathe it in. Listen to your body. If your lungs start to complain, take more precautions; you only have one set to last a lifetime!
 (Further Reading: Health Hazards Manual for Artists, 6th Ed. by Michael McCann, Lyons and Bukrford Publishers, 1994)

On the Trail of Colorado Blue Quartz, cont

Library research by the author recently uncovered references (Hawley, 1969; Hawley and Wobus, 1977) to blue quartz within a small unnamed circular or funnel-shaped zoned intrusion in the Tarryall Valley, Park County, Colorado. This is along the western edge of the Precambrian Pikes Peak Batholith. While cryptocrystalline blue to pale blue quartz of volcanic origin (agate, chalcedony) has been documented in four counties of Colorado (Eckel, 1997), the Tarryall Valley occurrence is exceptional because it is of the crystalline (subhedral to euhedral) variety, hosted within a plutonic rock. This rock occurs only on and near the topographic crest of a small mountain (figure 2) having no formal USGS place name. For purposes of this article, the locality is henceforth named “Blue Quartz Mountain”, and the unnamed igneous pluton “Blue Quartz Mountain Intrusive”, or “BQMI.



Figure 2: blue quartz is found only on and near the topographic crest (elev 8,906 feet) of this unnamed mountain, extensively burned by the very large Hayman fire of 2002.

regional, straight-line feature interpreted as an old Precambrian fault system reactivated in the Tertiary. The four northern intrusives along this lineament—Lost Park, Redskin, BQMI, and Lake George, are all thought to be the deeply eroded exposed plutonic roots of volcanoes. The BQMI appears similar in genesis and in size to the Ossipee Ring Complex of New Hampshire (Eby et al, 2004).

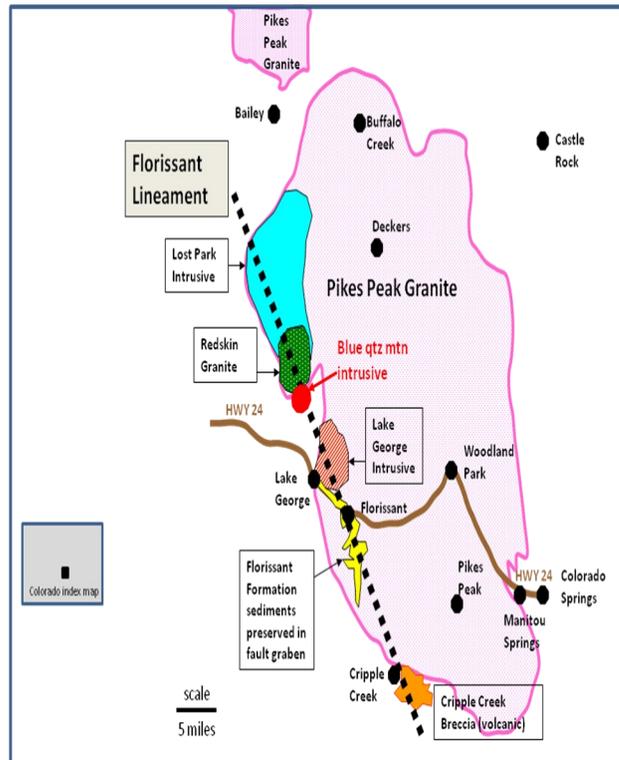
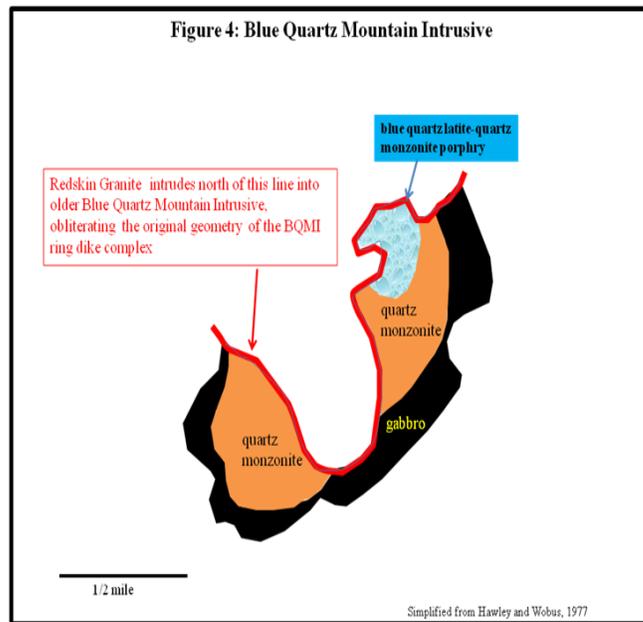


Fig 3: Elements of the Florissant Lineament

Figure 4 is a simplified map of the BQMI, modified from the USGS. This was field-checked during summer, 2011, and found to be quite accurate. Only the southern outcrop of the BQMI exists today, as the northern portion was consumed by intrusion of the Redskin Granite about 1 billion years ago. The Redskin is a highly evolved tin granite, rich in fluorine (fluorite, topaz), and perhaps the youngest intrusive center of the entire Pikes Peak Batholith. The BQMI, clearly older than the Redskin, has not been radiometrically dated, but may be considerably



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Goethite The Mineral Collectors Hate to Display

by Ray Berry

It has always been a mystery to me why one seldom sees well-crystallized specimens of goethite displayed in special and competitive exhibits. If you do see one it often is a massive piece from some famous mine, often little more than a black coating!

The Pikes Peak pegmatites of Colorado have undoubtedly produced the world's finest crystallized goethite, yet other than in local collectors' displays it is universally ignored by museums and top exhibitors. I have visited many of the U.S. mineral museums, and while some may have fine specimens, they are usually missing from their exhibits at major shows around the country. Why is this so? I have asked this question, and the answer is either a non-committal shrug or "It's black!". That doesn't register with me, for many other black minerals are very well represented in displays, such as *melonite*, *acanthite*, *cassiterite*, some *sphalerite* and a host of others some of which are quite ugly and massive!



Is it rare? No, it has been found in beautiful groups of acicular shiny black crystals from the Teller and Park county areas of the Pikes Peak granite since the late 1800's. Clarence Coil, Ray Ziegler, George Fisher have all found superior examples in their time, and this collector has found lots of goethite in dozens of pockets

. Even the poorest of Colorado goethite puts specimens from other localities to shame. In addition to the shiny black crystals our pegmatites also yield the velvety yellow sub-variety called *sammetsblende* or *pribramite*, and quartz with goethite inclusions called informally "*onegite*". *Sammetsblende* is described by Dana's textbook from Pribram, Bohemia, Czech Republic. For more information about *onegite* see "*Quartz with Goethite Inclusions*", *Berry, Rocks & Minerals*, July/August, 2001

Goethite was first described in 1806 from the Mesabi Range of Minnesota, where most of our iron ore was mined. It was named for Johann Wolfgang Goethe (1748-1832), the German author and mineral collector, but it was known and used from pre-historic times in its decomposed form as a paint pigment.



Goethite is a low temperature hydrous iron oxide, $\text{FeO}(\text{OH})$, usually massive or in radiating mammillary habits similar to hematite. It is orthorhombic in crystal habit; hardness of 5 to 5.5; perfect cleavage on Miller Index 010; opaque to sub-translucent. Its streak is brown, brownish-yellow to orange-yellow. Specific gravity ranges from 3.3 to 5.3. It is the main ore of iron so it is a very important commercial mineral.

In searching the internet for other localities that have produced crystallized goethite I found only one macro-sized specimen labeled only as Morocco. It appeared to be well crystallized and was nearly 5 by 5 inches. I saw only one other and it was microscopic! No other locality has given us goethite with such beautiful, long, shiny black crystals in large groups and often attached to smoky quartz crystals. My question is still unanswered! Pictures cont on next page:



Continue on next page

Picks & Pans

Earning a Merit Badge: in Leadership

By Jack Shimon

Jack Shimon, a CSMS pebble pup, earned his merit badge by completing 3 activities. He had a lot of fun doing this.

Activity 1: Organize a group display, etc. Jack entered his fossil display in the junior competition at the RMFMS entitled "The Rudist of Bivalves". He also put together a tri-fold display about the Pebble Pups group and what the club means to him. This display is on its way to a museum in Colorado Springs for temporary exhibition with his fossil.



Activity 2: Plan and Lead a Field trip- Jack planned an earthcaching trip to Monument Rock with his class mates. They went on May 3 and Jack led them to the site and asked questions about the geology: How tall do you think Monument Rock is? Guesses were 50-200 feet tall. Which was here first, the rock or the town? The rock. What is the rock made of? Nobody except Jack knew it is sandstone, but he taught the kids how sandstone weathers and is much softer than granite.



References:

Textbook of Mineralogy, Edward S. Dana, 4th edition, revised by W.F. Ford, 1932, page 504

Quartz with Goethite Inclusions, Raymond R. Berry, *Rocks & Minerals*, Vol. 76 No. 4, July/August, 2001 pages 228-232.



Activity 3: Manage a booth- Jack set up a rock/fossil and lemonade/cupcake stand to show off and sell some of his extra collection. He and Jane recruited their friends Hailey, Ty and Lexi Brennan (new Pebble Pups) and they hosted it together. Jack has also fulfilled part of Activity 7, become a mentor. It is his friendship with the Brennans and enthusiasm for sharing his interests that helped Ty decide to join Pebble Pups. Jack also made Ty a started rock collection with his extra stuff.



Reprinted with pictures. **Way to go, Jack!**

MY ROCK GARDEN

By Bob Brice

All of us have a rock pile, a rock garden or some type of collage collection of our favorite rocks and minerals, whether it be beads or jewelry, gem stones or sea shells. It's something of great interest to all of us. I find it interesting to see what each of us collects, even if it's just one amazing garden-art rock.

The photo below is of my beautiful North Hollywood river-washed granite stones that make my rock garden. Most of them I found in my backyard. Others I have collected to complete the garden. It is also accented with water lily tub-gardens. Each tub-garden, which can be as small as five gallons, is a small ecosystem consisting of oxygenating grasses, water lilies, pond fish and water snails. I have mosquito fish in the tubs which can tolerate the extreme daily temperature change we experience in Southern California. The water never needs to be changed and it is always clean, clear and balanced. The fish eat algae and mosquito larvae, and the snails eat the fish waste and decomposing materials. They do not eat aquatic plants and never leave the pond. As you can see the rocks are always in full bloom and the water lilies are caching up to them! — **BOB**

Reprinted Courtesy of Rockhound Ramblings June 2011



WMMI HAPPENINGS

225 Northgate Blvd., CS, CO 80921

Main: 719.488.0880/Toll Free:

800.752.6558 info@wmmi.org

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: Open every Monday and Wednesday through **October**. Fresh vegetables from local Pueblo farms, breads, meats and more. Look for vendors in front of the red house. 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. Also, fun for everyone, especially the youngsters, Halloween Scavenger Hunt, all month long. Starting Wed 26 thru Mon 31, the Haunted Mines will be open. For times, contact the museum at [\(719\) 488-0880](tel:7194880880). More info on their web-site!!

Things to do from CSMS member Pete Modreski

Thurs., Oct. 20, 7:00 p.m., Colorado Scientific Society 2011 Student Paper Night—Pizza Night! Berthoud Hall Room 243, CSM Campus, Golden, CO "Our October meeting will feature presentations by students from area universities. This is a competition for cash prizes, with approximately \$700 to be awarded among those chosen for presentations. The initial announcement has already been sent to regional schools; abstract submission deadline is Oct 9. We have already started receiving abstracts, and there will be some very interesting talks! There is still time to encourage students to submit papers. Finalists in this competition will be announced on our society website, <http://www.coloscisoc.org/> and by email on October 14. The abstracts will be published online and in our newsletter. Our members have been pleasantly surprised when attending student night talks—these young scientists work hard, and present very interesting materials. As an added bonus, we will be providing our hungry students and audience with pizza and drinks. There will also be a drawing for door prizes." All are welcome to attend.



Fri., Nov. 11, Rock Out For the Ridge! Join the Friends of Dinosaur Ridge for their annual fundraiser, Rock Out For the Ridge! Starting at 7 p.m. at the Ship Rock Grille at the Red Rocks Visitor Center, with dinner, live music, a presentation about Mesozoic Crocodiles, a live auction and a silent auction, and awards presentations. See www.dinoridge.org for full information about making reservations.

Sat.-Sun., Nov. 12-13, a weekend event that is well known to Colorado mineral collectors is the **New Mexico Mineral Symposium**, sponsored by the New Mexico Tech Mineralogical Museum, Socorro, New Mexico. The event at the Joseph A. Fidel Center, New Mexico Institute of Mining and Technology campus, includes 1½ days of lectures, a Saturday evening banquet, a Sunday afternoon silent auction, and mineral dealers set up Friday through Saturday in a local motel. For complete information and registration details see <http://geoinfo.nmt.edu/museum/minsymp/home.cfm> Field trips are not an official part of the symposium, but many mineral hunting sites are available in the area and a free rockhounding guide to New Mexico can be downloaded from the NMIMT website at <http://geoinfo.nmt.edu/publications/fieldguides/rockhound/home.html>

Fri., Nov. 18, for educators, **Colorado Science Conference for Professional Development**; sponsored by CAST (Colorado Association of Science Teachers) and affiliated organizations, and held at the Denver Merchandise Mart Expo Hall, 58th Ave. at I-25. Featured presentation this year will be by Dr. Phil Plait, author of "Bad Astronomy". 8 a.m. - 3:45 p.m., followed by a reception with annual awards presentations, and with three optional post conference workshops on Saturday, Nov. 19. For full information see <http://www.coloradocast.org/professionaldevelopment.php?page=overview>

Sat., Nov. 19, Littleton Gem and Mineral Club Annual Silent Auction, 12 noon - 5 p.m. at Columbine Hills Church, 9700 Old Coal Mine Avenue, Littleton. "Set-up will begin at 11:30 a.m. with the auction beginning at 12:00 p.m. Non-members are asked to not bring more than 12 specimens to sell. The club retains twenty (20) percent of the selling price. The verbal auction and a short business meeting will start at 12:30 p.m. There will be minerals, gems, jewelry, fossils, books and much more available for bidding at the silent auction. Food and drinks will be provided by the club and its members. For more information please email info@littletongemandmineralclub.com or call (303) 840-1177."

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ANNUAL GEM & MINERAL SHOW
NOVEMBER 4-6, 2011

Exhibit Halls
Jefferson County Fairgrounds
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Hours: Fri (10-5), Sat (10-6), Sun (11-4)

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ARE YOU SURE ITS JADE?

1. If a chip is knocked off, the freshly broken surface should not sparkle in the sun. If it does, it's not jade.
2. If you can scratch it with a knifepoint, it isn't jade.
3. It will be much heavier than a common rock of similar size.
4. Tap the specimen with a hammer. If a moon shaped fracture appears, it is agate or jasper, but not jade.
5. If it is jade, it will have a smooth, waxy almost greasy look.
6. The more milky the water is when cutting jade, the better the grade of jade. If the water isn't milky, then you don't have true jade. You have something else.
7. The only positive test for jade is x-ray analysis and specific gravity tests.

*...from the Rockhound Ramblings June 2011 via
The Sequoia GMS Rockette May 2011 via the South
Bay Lapidary & Mineral Society Agatizer Feb 2011,
Rock Chips, March 2011, The Rock Collector 9/04,
Rock Writings, 7/04, Chips'n Splin-ters 12/00,
Rockhound Rumbings 11/00, Chips'n Splinters
12/00, via Rock Writings, 7/04; via The Rock*

On the Trail of Colorado Blue Quartz, cont

The outer zone of BQMI is described by the USGS as a very dark coarse-grained olivine gabbro which contains noticeable interstitial ilmenite (figs 4 & 5). The inner core of the intrusive is described as a pink to gray quartz monzonite porphyry containing blue quartz (figs 4 & 6). This rock is resistant to erosion, forming the crest of a hill at 8906 feet elevation. In the field, it often displays a fine grained phaneritic-porphyrritic texture quite similar to Texas llanite, and resembles porphyritic quartz latite. The genetic association of ilmenite and blue quartz in different parts of the same intrusive strongly suggests that the cause of the blue color of this quartz is due to ilmenite inclusions, just as in Texas llanite.

An examination under a binocular microscope, without the benefit of thin sections or more sophisticated mineralogical techniques, finds many similarities between Texas llanite and Colorado quartz latite: felsic calc-alkaline compositions for both; unusual blue quartz having the same crystal size, usually about 2 mm diameter; similar porphyritic-aphanitic to fine grained phaneritic-porphyrritic textures more typical of volcanic rocks than igneous-intrusives; reaction rims around some K-feldspars; biotite mica included within some K-feldspar grains; and likelihood of titanium being the chromophore for both.

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2011 CSMS Officers

Roger Pittman, President
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 Ann Proctor, Co-Editor
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 Al Zelenak, Member-at-Large
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Camera Club Chair is Vacant
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 Ann Proctor, Store Keeper
 Kerry Burroughs, Crystal Studies Group
 Paul Berry, Faceting Group
 Mike Nelson, Fossil Group
 Bill Arnson, Jewelry Group
 Sharon Holte, Lapidary Group
 Steven Veatch, Juniors & Pebble Pups
 Dave Olsen, Micromount Group
 Brian Paterson, Webmaster

To contact an officer or chairperson, go to csms.us, click on Board Members, and, if their name is underlined, click on it.

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

Feb.—Crystal	Mar.—Faceting	Apr.—Fossil
May—Jewelry	June—Lapidary	July—Micromounts
Aug.—Picnic	Sept.—Projects	Oct.—Board

On the Trail of Colorado Blue Quartz, cont



Figure 5: gabbro from the outer ring of BQMI, showing abundant ilmenite grains in reflected light (top portion).

The fine grained phaneritic groundmass of Colorado quartz latite porphyry is generally lighter than that of Texas llanite, hence the contrast between the blue quartz and its parent rock is somewhat less for the Colorado occurrence. This means, in my opinion, that Texas llanite is more attractive. There is no data related to the per cent ilmenite by volume in the Colorado blue quartz, but some Texas llanite *appears* slightly bluer. Texas llanite seems to be injected as narrow dikes, while the BQMI is clearly a much larger ring complex. Texas llanite has only one small

Continued on Page 11



Jewelry Bench Tips

Over the last year I've been writing up jewelry bench tips as fresh content for our rock club newsletter. The idea started as part of the jewelry classes that I teach, and folks seem to enjoy reading them. I thought they might be of interest to your Colorado Springs club as well.

A couple sample tips are included below. Feel free to use them in your newsletter, and please have your Editor get in touch if you'd like to receive more jewelry tips each month. They come in handy when you need to fill a little extra space.

I'm glad to supply these free to fellow rockhounds. The understanding is that the material is for non-profit use, to be given away, and not to be sold. The only thing I ask is an acknowledgement with each publication that says:

More Bench Tips by Brad Smith are at: Yahoogroups.com/group/Bench Tips/ or Facebook.com/Bench Tips/

Best regards,
Brad Smith - Culver City Rock & Gem
brad@greenheart.com
CulverCityRocks.org
Santa Monica, CA

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PICKLE PROBLEMS

Dropping a hot item into the pickle after soldering causes a hiss that sends small droplets of the acid pickle into the air. This will rust your nearby tools and can't be all that good to breathe either. My solution is to use a coffee cup of water next to my solder block to quench the piece before dropping it in the pickle.

Also, a hot pickle pot gives off fumes that bother me in my home workshop. I get around that by using my pickle cold. I mix it a little stronger than with a hot pot so that it works about as quickly. I keep it in a large-mouth peanut butter bottle and cap it off whenever I'm done using it.

MODIFY TOOLS FOR PRONG SETTING

When setting stones in a prong mount avoid slipping by grinding a groove in the face of your prong pusher or one jaw of your flat-nose pliers. Easiest way to cut the slot on the pusher is with a file. The easiest way to cut the slot on your pliers is with a cutoff wheel in the Freedom.

On the Trail of Colorado Blue Quartz, cont

outcrop open to the public, which is gradually disappearing due to decades of collecting in a very limited road cut. In contrast, the Colorado locality in Pike National Forest is open to the public for mineral collecting (except for some private mining claims targeting fluorite near the edge of the blue quartz area). By volume, this interesting Colorado site cannot possibly be depleted by non-mechanized equipment, and is a legacy for future generations to enjoy.

The literature suggests a few other geographic occurrences of plutonic blue quartz, in and outside the USA. Contrasting the geology of these localities could be an excellent topic for a future masters/PhD thesis.

Finally, I want to thank Bob Carnein, Pete Modreski, and John Rakowski for insightful comments made during field work together, and Bob Carnein for offering suggestions to improve this article.

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PRESIDENT'S CORNER

by Roger Pittman, CSMS

The calendar says that it is fall and the trees are turning but we are still having collecting weather. At our last meeting I asked if anyone would like to go to a site that I had read about online; Sharon Holte and I checked it out on Saturday. The purpose of this expedition was to try and find a good location for our young collectors to



go to. Our results were a little disappointing as far as the mineral collecting and safety of the area were concerned, but we saw many yard rocks that would have been great to bring home just because of their attractive patterns. The mine we went to was an open thirty-foot deep pit with many copper and iron specimens on the dump. The article says there are abundant mica specimens, but we saw nothing that supported that claim. The article also claims micro garnets on pink feldspar. I did find micro garnets on nearly any rock at the higher elevations in the area so this could be a micro-mount possibility. I have several other locations that this online author published and only one of sounds like it has potential. If anyone knows of a potential location that would be suitable to bring our smaller members to please let me know!

We need several board positions for our upcoming elections. If you could serve as editor or member at large please let any board member know. Remember this is your club and it only works if you make it

FROM THE LIBRARY

by Joni Peterman, CSMS



While Frank and Ellie are on the adventure of a life time to the land down-under, Joni Peterman is staffing the CSMS library. Remember this is your library, so CSMS members take advantage of the extensive learning resource data available.

Be sure to look at CSMS website to make your selection then Email Joni at rp_colorado@hotmail.com We greatly appreciate donations from everyone. We don't accept only books; bring in DVDs, videos, and magazines, anything relative to 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.

RMFMS Vice President's Letter

By DELANE COX, RMFMS

Here are some thoughts I had that your rock club should ponder:

1. Did you have some people go to the Colorado Springs/Rocky Mountain Federation Show in June? These shows are great. Not only do you get to see some top display cases, find excellent gem, mineral, and fossil dealers, make new friends, and just the field trips alone are worth the trip! Be sure to tell your people to find me and introduce themselves. I want to get to know our RMF members better.

2. Who in your club is your Rocky Mountain federation delegates? Did they represent you at the June Show? You really need to be represented at the Delegates Meeting in order to know what is going on and to vote for what your Club needs from the Federation. There are always new items coming before the delegates for discussion and vote.



3. Didn't have a delegate who could attend the Show? Then you may submit a Proxy voter...either your State Director, or even you vice president (that's ME) will be happy to vote for your club (State Directors are listed on the last page of this newsletter).

4. Your Federation is looking for clubs to host future shows. Does your club have a show? It is not too much more to include the Rocky Mountain meeting along with your show. A meeting room for the Executive Committee and the Delegates Meeting, a room and menu for the Saturday morning Editors'/Web masters' Breakfast, and a room and menu for the Saturday night Awards Banquet. Some of these meetings can take place in the same room, just at different times. And a few extra display cases for complete exhibits, even if they are borrowed from a neighboring club. Give it some thought, and let the RMFSM president know.

5. Does your club have a Junior Rockhound Club yet? (Yes, we do! - CSMS Pebble Pups / Juniors) My club started one last January, and these 12 kids are so excited. You should see the great cabs they have made under careful tutoring, for sure. But they are having a good time and learning, too. Remember, these are our future rock club members

Rocky Mountain Federation News—October 2011.

October 2011 General Assembly Minutes

BY ROGER PITTMAN, CSMS PRESIDENT

By Roger Pittman as Joan L. Peterman was off playing

1. Roger Pittman called the meeting to order at 7:30 p.m., with the pledge of allegiance.
2. Roger asked for and received a motion and a second to approve the minutes for the June meeting as posted in the June Pick & Pack.
3. Roger announced that we are dropping the treasurer's report out of the main meeting agenda to shorten the business meeting. Anyone wanting this information, can come to the Exe. Meeting or can corner the treasurer during the break
4. Guests were asked to stand up and introduce themselves and state what their interests were. After several guests introduced themselves Roger introduced Sharon Milito 4th grade teacher at Patrick Henry Elementary school who asked the membership for assistance with projects she and her class are working on at the Pioneers Museum to bring mineral specimens out of storage (many of which were donated by CSMS members) and get them back out on display. The first stage will be held on Sept 22 @ 9:30 a.m. and will consist of cataloging the collection by measuring, weighing, and photographing each specimen. Steven Veatch and Roger Pittman volunteered.
5. Satellite group Reports: Crystal Study, Faceting, Fossil, Micro-mounters, Lapidary, and Jewelry. Each updated their status.
6. Other Reports: Show – Ann Proctor has an incomplete auditing of our show expenses, pending any bills that we've not received yet showing us in the black.
7. Old business – none
8. New Business: Roger announced that it's time to form a candidate search team – since there were no volunteers for the task Roger assigned the satellite group leaders to ask their groups to see if there are any volunteers to fill our editors position and member at large position for sure and any other position that someone may be interested in.
9. Break to set up program and socialize during refreshments.
10. Kevin Witte gave us an excellent program about collecting and prospecting the Pikes Peak Batholith.
11. Door prize drawings – five specimens were given away
12. Question? Any other club business – none.
13. The meeting was adjourned at 8:55 p.m. by Roger Pittman

Paul Somers writes:

I joined the CSMS back in early 2010. My wife had purchased this older model lapidary setup for me and I just have no place to fully utilize it. I am mainly into woodworking and re-caning old chairs. So I don't have the time to truly devote to another full time hobby. I thought it might be something that someone in the CSMS would be interested in. I will send you a few pictures of the unit so that you can pass that along to anyone interested. The unit is about 41" in length, 7" deep and about 15" tall. It weighs about 150 pounds. I do have it hooked up to a 1/2 hp motor that would go with it. I would like to sell it for \$400. I really appreciate any suggestions you may have, and certainly appreciate you passing this information along to anyone with interest. Thanks! Paul Somers pasomers11@yahoo.com





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:
blacklabaccounting@gmail.com

Pick & Pack Editors
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).

Unless otherwise marked, materials from this publication may be reprinted. Please give credit to the author and CSMS PICK & PACK.

Take care: Sharon & Ann

From the Editor

I have thoroughly enjoyed putting this Pick & Pack together. I only hope that I have not inserted an article already printed recently. If you would like to see an interesting article, please forward it to me and/or tell me where to find it! Or else, I will be forced to pick and choose what I find interesting, which may not be what you find interesting or of value.

Further, I will need all the help I can receive by way of articles, jokes, interesting tidbits, etc. I will endeavor to include most of what is sent to me at sholte@csu.org. (The home computer and gmail have disagreements on how to handle incoming mail and attachments). However, if I have too much, I will have a back-up file where I can hide pieces for future use.

Also, I have done my very best to give credit where credit is due. It has been a number of years since I attempted references. Have a super month! Sharon

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.

Classifieds

CSMS

T-Shirts, Badges, and Pins

are available for sale. See Store Keeper, Ann Proctor.

Hurry! Hurry!! Hurry!!

Have You Picked Up Your Membership Award Pin(s)?

If you celebrated a CSMS anniversary in 2007, 2008, 2009, or 2010, your year pin award is available from the Storekeeper, Ann Proctor.



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APPLICATION FOR MEMBERSHIP

- All memberships run from **January 1 to December 31**.
- Any person or corporation joining the CSMS as a new member after June 30th shall pay half of the yearly rate. Corporate Membership grants up to five (5) Individual Memberships. Any person or corporation joining as a new member after October 1st receives membership for November and December plus the following year beginning January 1. The partial year membership shall not apply toward the 25 year Lifetime Membership.
- Anyone who has previously been a member **MUST** pay the full rate each year **REGARDLESS** of the time of the year they pay their dues.
- Members who have paid their dues for 25 years will be awarded a Lifetime Membership on their 26th year. Lifetime Members receive all of the CSMS benefits and no longer have to pay the annual dues. Individual Memberships provided by Corporate Membership are excluded from Lifetime Status.
- Corporate membership grants up to 5 individual memberships and one Yearly (10 issues) 3.5 x 2" advertisement in the CSMS Pick & Pack.
- Members in good standing receive the following benefits: 10 electronic issues of the CSMS *Pick&Pack* newsletter, right to participate in all field trips (additional fees may be required on some field trips and members are responsible for all transportation to and from), participation in one or all Satellite Groups (some groups may request additional fees to help cover resource costs), free admission to the Western Museum of Mining and Industry, a year of learning and enjoyment, plus a lifetime of memories.

LAST FIRST MIDDLE

SPOUSE

STREET

CITY

STATE ZIP EMAIL*

PHONE CELL

HAVE YOU PREVIOUSLY BEEN A MEMBER OF CSMS NO YES WHEN

YOU ARE PAYING FOR THE YEAR

Each year the Colorado Springs Mineralogical Society publishes a Membership Directory. *The directory is distributed **ONLY** to CSMS members.*

Your dues **MUST** accompany this application Check if you do **NOT** want your name & address included

* Will and can you receive the newsletter via email? YES NO

	All Members	All Members	New Members Only	
	Before Jan 31	After Jan 31	After June 30	Oct 1 – Jan 31
<input type="checkbox"/> Junior Membership (12 –17 years old and parent is not a member)	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$15.00	<input type="checkbox"/> \$ 7.50	<input type="checkbox"/> \$10.00
<input type="checkbox"/> Individual Membership (18 and over)	<input type="checkbox"/> \$25.00	<input type="checkbox"/> \$30.00	<input type="checkbox"/> \$15.00	<input type="checkbox"/> \$25.00
<input type="checkbox"/> Family Membership (parents & dependents under 18)	<input type="checkbox"/> \$35.00	<input type="checkbox"/> \$40.00	<input type="checkbox"/> \$20.00	<input type="checkbox"/> \$35.00
<input type="checkbox"/> Corporate Membership (entitles up to five (5) Individual Memberships)	<input type="checkbox"/> \$95.00	<input type="checkbox"/> \$100.00	<input type="checkbox"/> \$50.00	<input type="checkbox"/> \$95.00

YOUR INTERESTS <i>Please check ALL that apply</i>			
CRYSTALS <input type="checkbox"/>	MICROMOUNTS <input type="checkbox"/>	PROJECTS <input type="checkbox"/>	Sometimes knowing where our members are employed or retired from helps us when we are looking for special information or guidance in our activities. This information will not be published or accessible except by the CSMS Board of Directors:
FOSSILS <input type="checkbox"/>	FACETING <input type="checkbox"/>	YOUTH ACTIVITIES <input type="checkbox"/>	
LAPIDARY <input type="checkbox"/>	SILVERSMITHING <input type="checkbox"/>	OTHER <input type="checkbox"/>	
JEWELRY <input type="checkbox"/>	PHOTOGRAPHY <input type="checkbox"/>		
METEORS <input type="checkbox"/>	FLUORESCENTS <input type="checkbox"/>		
VOLUNTEER CAPABILITIES <i>Clubs are made up of volunteers!</i>			
ARTIST <input type="checkbox"/>	CLUB OFFICER <input type="checkbox"/>	EDITOR <input type="checkbox"/>	List any other things you may be willing to do:
MAILING <input type="checkbox"/>	LOCAL SHOWS <input type="checkbox"/>	WRITING <input type="checkbox"/>	
PROGRAMS <input type="checkbox"/>	FIELD TRIPS <input type="checkbox"/>	LIBRARY <input type="checkbox"/>	
PUBLICITY <input type="checkbox"/>	WEB SITE <input type="checkbox"/>	REFRESHMENTS <input type="checkbox"/>	

I hereby agree to abide by the Constitution and By-Laws of the Colorado Springs Mineralogical Society.

CSMS Constitution and By-Laws are available at our website: www.csms.us

Signature of Primary Applicant _____

Application Date _____

Mail this form and your payment to:

Colorado Springs Mineralogical Society
 PO Box 2
 Colorado Springs, CO 80901



PICK&PACK
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Joining the Colorado Springs Mineralogical Society (CSMS)

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 30.

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 page 33 and at csms.us

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.