PICK&PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

SEPTEMBER 2004

Volume 44 Number 7

The Florissant Lineament

Geologic processes creates "String of Pearls"

Andy Weinzapfel, geologist

Have you ever wondered why the fossil-rich Florissant formation is where it is? Could there be something in the underlying geology of Pikes Peak backcountry that has generated a "string of pearls" in nearly a straight line: Tarryall topaz, Crystal Peak amazonite, Florissant fossils, and Cripple Creek gold? In order to consider these questions, let's look first at the geologic big picture.

The geology of the Pikes Peak region is dominated by the 1.08 billion-year-old Pikes Peak batholith, a large body of once-molten igneous rock that was likely derived from the earth's deep mantle and injected upward to a depth of 3 miles or less below the ancient surface. The Pikes Peak granite, extending over an area of 1,200 square miles, is exposed at the surface today only because the rocks that once covered it have gradually eroded away. This granite outcrops on the west side of Manitou Springs, and extends westward beyond the Florissant valley (see map). In the deep subsurface, it has been penetrated by petroleum exploration wells in the Denver basin, east of Colorado Springs.

It is unusual to find significant layered sedimentary rocks within the outcrop area of a very large igneous intrusion like the Pikes Peak batholith. A drive westward from Colorado Springs along US 24 crosses two noteworthy anomalous narrow "islands" of bedded sedimentary rocks in a "sea" of Pikes Peak granite: Woodland Park and the Florissant valley. Narrow sedimentary rock remnants within large granite bodies most typically occur in down-dropped fault blocks, known as grabens, where they are somewhat protected from erosion.

The broad, linear valley extending from Woodland Park northward is known as the Manitou Park graben. Within it are Paleozoic sedimentary rocks approximately 300-

*See **Florissant** on page 4*

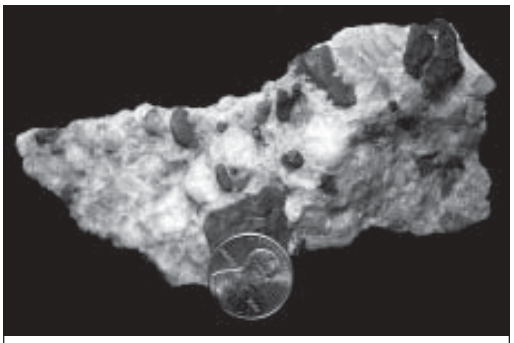
The Michigan Puddingstone

Unusual rocks glacially exported from Canada

Steven Wade Veatch

Although puddingstones look like a blob of pudding with raisins and nuts, they are actually recycled rocks. Puddingstones were originally sandstone conglomerates containing red jasper clasts. The jasper, a fine-grained red to brown quartz, was deposited from swiftly flowing streams and rivers onto sandbars. This material was eventually buried, and with time, formed sedimentary rocks known as conglomerates. These conglomerates were then subjected to heat and pressure, which transformed them into a metamorphic rock. The light-colored, fine-grained matrix or cement that now binds the jasper pebbles is a white quartz-

*See **Pudding** on page 5*



Unpolished puddingstone from Michigan. These rocks are commonly found just after farmers plow their fields in Michigan. Puddingstones were brought to Michigan by Ice Age glaciers. Jo Beckwith specimen, photo by S.W. Veatch

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 monthly to assist and promote the above.**

PICK & PACK

Our Staff...

Ethan A. Bronner *Managing Editor*
Cindy Bronner *Assistant Editor*

Robert & Naoko Murphy *Mailers*

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 E-mail it. Format does not matter. All submissions are welcomed.

DEADLINE for items to be included in the next month's issue is the fourth Friday of every month. To submit an item, please use the following:

Photos:
For hardcopy photos, mail to the address below or bring them to the General Assembly Meeting. All photos remain the property of the submitter. All photos will be returned. Electronic photos should be submitted at resolutions above 200 dpi in TIFF or PICT format.

Articles:
Mail, E-mail, or fax to the address and numbers below. ALL FORMATS ARE WELCOMED.

E-mail:
CSMSpickANDpack@msn.com

Address:
1025 East Boulder Street
Colorado Springs, CO 80903

Phone & Fax:
(719) 448-9949
For faxes no precalls are required.

The PICK & PACK is published ten (10) times per year. 270 issues printed, 200-250 mailed per month.

PRESIDENT'S CORNER

Thanks for a Great Show!

Robert Landgraf

A big thanks to those of you who wrote in support of keeping Table Mountain open for Zeolite collecting. Although not final yet, the recommendation from North Jeffco Open Space staff is to keep the two quarries open for collecting without needing a permit. Other areas may be available on a permit basis. At least the traditional collecting areas will be open if the recommendation passes.

Place on your calendar two upcoming symposiums. The second weekend in November (13 & 14) will be the 25th Anniversary Mineral Symposium at New Mexico Tech in Socorro. Over two hundred amateur and professional rockhounds generally attend the symposium. The symposium is a great meeting place to exchange information on mineral collecting areas.

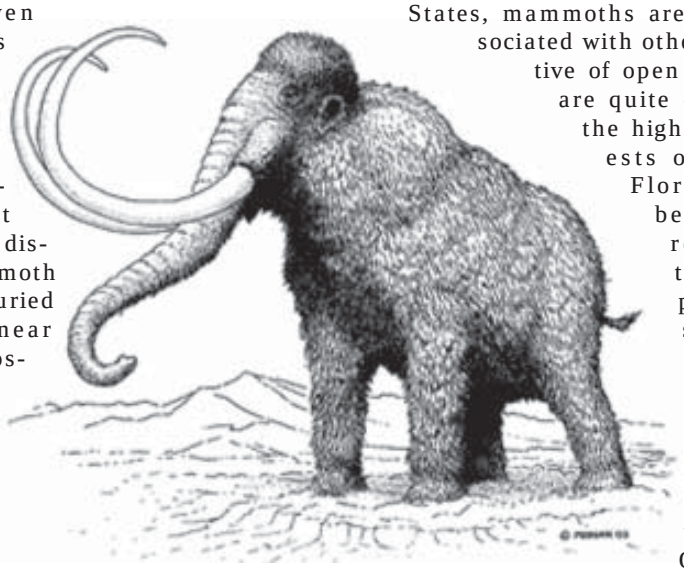
March 12 & 13 is the Founders Symposium, "Extinctions: Punctuations in Time," presented by the Western Interior Paleontological Society. WIPS sponsors the Founders Symposium every two years. The location will be at the Green Center at the Colorado School of Mines in Golden. I have a reading list for those who are interested in doing some advance preparation. We have arranged for the Nevada Mineral & Book Co. to have a selection from the list at the Denver Show in September.

September Programs

Steve Veatch will present a program on the Florissant mammoth. Rich Fretterd and Steve Veatch will present a second program on the Petra Placer immediately following the mammoth program.

A Mammoth Find in Florissant

During the last Ice Age the mighty mammoth, creatures no longer of this earth, roamed the hills and valleys of Florissant, Colorado. Eleven thousand years ago they vanished from the face of the earth. Join Steven Veatch as he reveals, for the first time, the exciting discovery of a mammoth that has been buried in the ground near the Florissant Fossil Beds National Monument Visitor Center for at least 49,000 years. This discovery represents a relatively high elevation for mammoths and is the first documented mammoth in Teller County. Throughout the western United States, mammoths are generally associated with other taxa indicative of open habitats that are quite different from the high elevation forests of today. The Florissant fossil beds are world renowned for the fossil plants and insects from the paper-thin shales of the Eocene Florissant Formation. Fossils from the overlying Quaternary sediments are rare.



*See **The Petra Placer** on next page*

The Petra Placer: A Topaz Bonanza

The Tarryall area in Park County is well-known for many beautiful topaz specimens found there. Rich Fretterd, a member of the Colorado Springs Mineralogical Society, staked the Petra Placer in April 2004 after he discovered a number of fine topaz specimens at this locality. The Petra Placer is south and east of Pilot Peak.

The specimens from the Petra Placer are remarkable for their size and clarity. Many specimens have a bluish-tinge.

The name of the claim comes from the Latin *petra*, meaning rock or stone.

Topaz specimen from the Petra Placer. This prismatic crystal specimen terminates with a frosted pyramid on top. Rich Fretterd specimen, Steve Veatch photograph. © by S. Veatch

September 2004 General Assembly
Thursday, September 16, 2004, 7:30

Colo. Springs Senior Center
1514 North Hancock Blvd

September's refreshments courtesy:
Faceting Group

Minutes...

July 15, 2004

Bob Landgraf called the meeting to order at 7:30 p.m.
Minutes from previous general meeting were accepted.

Treasurer's Report: Jim Bushnell reported on balances of the general fund and show fund. Net income from the show is $3,600.

Satellite Groups: Camera, crystal, faceting, fossil, lapidary, micromount and jewelry group leaders announced dates, meeting locations and program for next month.

Show Report:
- The CSMS Treasurer reported on financial results of the Show.
- Trophies awarded: (1) Jack and Kaye Thompson for the best of show theme, (2) Founders Trophy to Ray and Eloise Berry Display, (3) Education case to Lorrie Hutchinson, (4) Best Field Collected Specimen to Jack Null and (5) Recognition to Show Chairman Manny Sanchez.

Field Trips:
- R. Fretterd plans trip to new area on July 31st. Four-wheel drive vehicle is required for this trip.

Old Business:
- The membership roster for 2004 was not published in March because of ongoing updates. It is going to be sent out with Pick & Pack later this year.

New Business:
- The CSMS has the opportunity to buy the third-largest quartz crystal from R. Fretterd's claim in order to create memorial in name of Leonard Sutton. The general meeting unanimously approved two motions: (1) to find museum to display this memorial and (2) to buy the crystal for $300.

The general meeting was adjourned at 8:10 p.m., followed by Ed Raines' presentation on "Frauds, Scams and Poor Business Decisions of the Front Range Mining Industry."

Bring your 2005 Finds for a Show and Tell

Field trip participants are encouraged to bring a few of their finds to the September meeting for show and tell. Roger will bring a small case to put them in.

Season End Field Trips?

If you have a place that you want to go to in September Roger Pittman would like to organize and lead a field trip. Please contact Roger Pittman at 719-683-2603.

Western Museum of Mining and Industry: New Exhibit on Gold

In The Changing Exhibit Gallery:
GOLD!

Gold. Its chemical symbol is Au, after the Roman Goddess of the dawn—Aurora. A noble metal, it is highly resistant to corrosion and oxidation. Due to its permanence, beauty, and rarity, humans have feverishly sought gold for over 5,000 years. Though gold gilds our treasures and adorns our bodies, it is more than simply beautiful. Gold forms the reliable electrical connections that ensure that the airbags in our automobiles deploy. Gold helps form new life-saving medicines and enables soldiers to see in the dark. Mined from the depths of the earth and the icy waters of mountain rivers, gold protects spacecraft in the outer-reaches of our solar system. Visit the new exhibit at Western Museum of Mining and Industry and explore the amazing properties and multiple uses of gold!

CSMS members recieve free admission with their membership card.

Located just north of Colorado Springs. Take I-25 to the Gleneagle Exit (156A); the Museum entrance is immediately east of the interstate, just opposite the north entrance to the U. S. Air Force Academy. Remember to visit our web site at: www.wmmi.org.

The Florissant Lineament

Selected References

Foord, E.E. and Marlin, R.F., 1979. Amazonite from the Pikes Peak batholith. Mineralogical Record p373-384

Hawley, C.C. and Wobus, R.A., 1977. General geology and petrology of the Precambrian crystalline rocks, Park and Jefferson Counties, Colorado. USGS PP 608-B

Hawley, C.C., 1969. Geology and beryllium deposits of the Lake George beryllium area, Park and Jefferson Counties, Colorado. USGS PP 608-A

Hawley, C.C. et al, 1966. Geological and geochemical features of the Redskin granite and associated rocks, Lake George beryllium area, Colorado. USGS PP 550C.

Hawley, C.C., 1963. Geology of the Pikes Peak granite and associated ore deposits, Lake George beryllium area, Park County, Colorado. USGS open file report 63-44 (692)

Meyer, H.W. 2003. The fossils of Florissant. Smithsonian books 258pp

Modreski, P.J. and Michalski, T.C., 1996. Colorado topaz. Rocks and Minerals v71 n5, p306-323

Odiorne, H.H., 1978. Colorado amazonstone, the treasure of Crystal Peak. Forum publishing 51 pp

Smith, A.E. and Raines, E., 1985. The cresson vug, Cripple Creek. Mineralogical Record v16 p231-238

Scarbrough Jr, L.A., 2001. Geology and mineral resources of Park County, Colorado. Colorado Geological Survey. RS 40 89pp

Thompson, T.B., Trippel, A.D. and Dwelley, P.C., 1985. Mineralized veins and breccias of the Cripple Creek district, Colorado. Economic Geology. v80 p1669-1688

Wobus, R.A. and Anderson, R.S., 1978. Petrology of the Precambrian intrusive center at Lake George, southern front range, Colorado. USGS Journal of Research v 16 #1 p 81-94

Wobus, R.A. and Epis, R.C., 1978. Geologic map of the Florissant 15 minute quad, Park and Teller counties, Colorado. USGS map I-1044

Wobus, R.A., Epis, R.C., and Scott, G.R., 1976. Reconaissance geologic map of the Cripple Creek-Pikes Peak area, Teller, Fremont, and El Paso counties, Colorado. USGS misc field studies MF-805

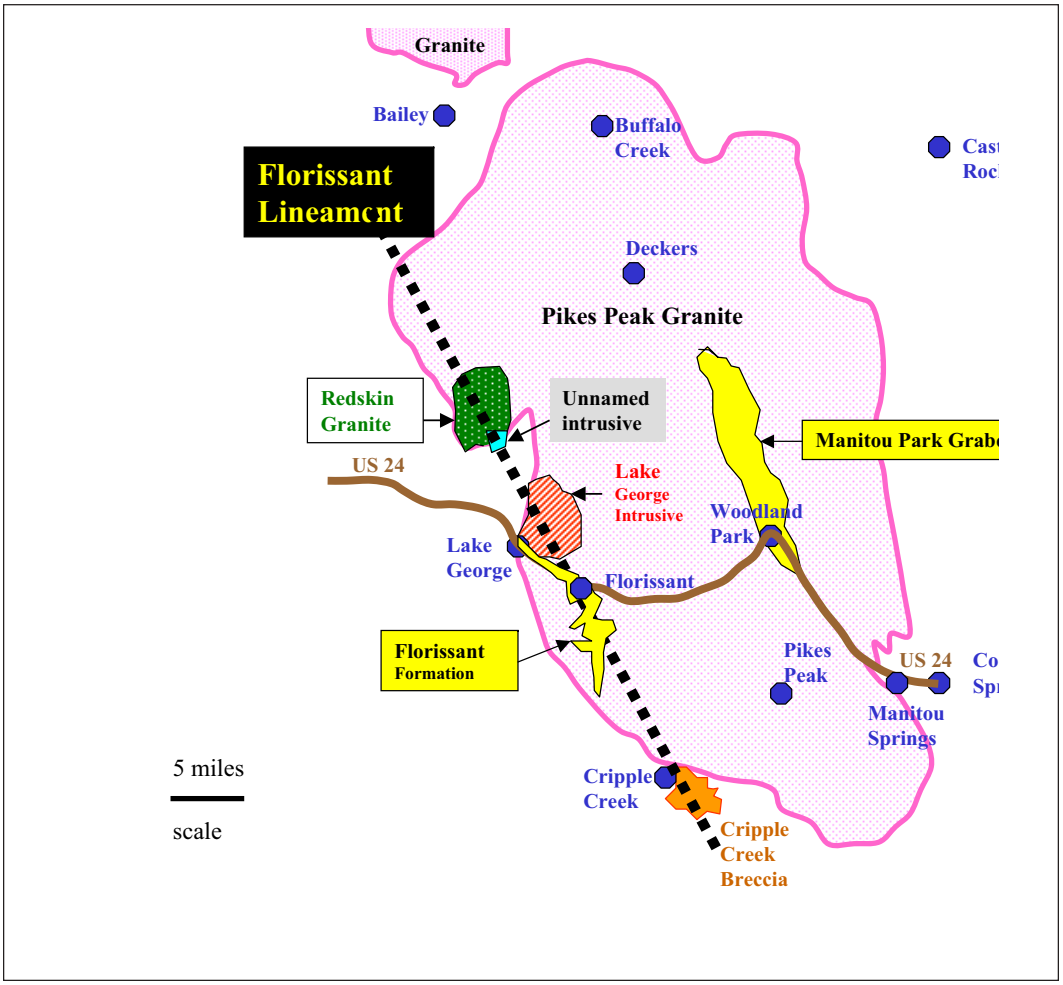
Florissant

continued from page 1

550 million years old. The west side of the valley is the site of an old rupture, the Ute Pass fault. This fault follows US 24 down Ute Pass, wrapping around the east side of Cheyenne Mountain. Much lesser faults occur on the east side of the graben at Woodland Park. Along US 24, these can be readily recognized as offsets within the Fountain formation behind Casa Grande restaurant.

The fossil-rich Florissant formation is centered on Florissant, but extends as far west as Lake George and south to Evergreen Station along Teller CR #1. This unit, composed of a series of lakes, was deposited in an ancient valley 34 million years ago. The lakes were fed by south-flowing streams, naturally dammed by volcanic mud flows, or lahars, crossing the valley near Evergreen Station. While faults within the Florissant valley have not been recognized, probably due to minor cover by recent sediments, it is likely a graben system exists, a smaller scale twin of the Manitou Park graben at Woodland Park. This is strongly suggested by a newly recognized regional geologic element, henceforth named the **Florissant Lineament**. This "string of pearls" connects in a straight line several interesting anomalous features that have yielded major treasures of both mineralogical and paleontological interest: Redskin stock (Tarryall topaz), Lake George intrusive (amazonite crystals near Crystal Peak), Florissant valley (fossils), and Cripple Creek (gold). An old major fault, sporadically reactivated through geologic history, is the likely culprit. Once a fault, always a fault; that is, a rupture of the earth usually remains a zone of weakness for a very long time. The geologic events along this linear vary greatly in age, but become younger to the south.

Finally, the Florissant Lineament roughly parallels not only the Manitou Park graben/Ute Pass fault, but other recognized faults of the area: Pulver Gulch, Ilse, and Oil Creek. The orientation of these fault systems speaks to a similar regional tectonic stress field operating in Pikes Peak backcountry at the time the ruptures first developed, likely about 1 billion years ago.

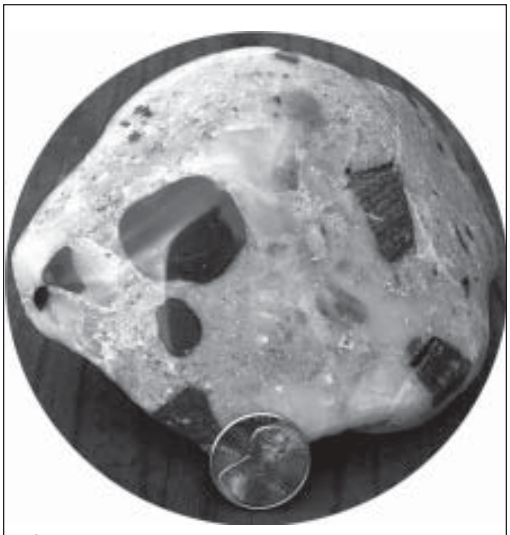


Pudding

continued from page 1

ite that is very hard.

These interesting rocks are not a Michigan product, but were brought to Michigan by great ice sheets from Canada. The source for the puddingstones is the Lorrain Quartzite of the Cobalt Series—located 30 to 40 miles southeast of Sault Sainte Marie, Ontario.



Since puddingstones are so hard, they take a nice polish as seen with this example. Steven Veatch specimen, photo by S.W. Veatch

After puddingstones made the transition from a sedimentary to a metamorphic rock, they hitched a ride on huge ice sheets from Canada and finally ended up in Michigan—after the glacial ice melted—as glacial till.

Today Michigan's puddingstones are quite popular. These beautiful rocks are quickly leaving the Wolverine State to find new homes in collector's cabinets. Although they are occasionally found in Michigan farmland just after spring plowing, they can also be purchased in most Michigan rock shops.

References :

Door, John A. and Eschman, Donald, 1970, Geology of Michigan: The University of Michigan Press, Ann Arbor.

Heinrich, E., 1976, The Mineralogy of Michigan: Michigan Department of Natural Resources, Lansing.

Mineral Cleaning for Amateurs

Part 2: ***Muriatic Acid***

John Betts

Now we are going to get more aggressive with our mineral cleaning technique. Hydrochloric Acid is available in most hardware stores as Muriatic Acid. It is sold in one gallon containers and is used to clean masonry and as a rust remover, which is what we will use it for. In spite of it's availability, it is dangerous. Do not inhale the fumes or get any on your skin or in your eyes. Always wear gloves and eye protection and old clothes. Keep your arms covered even if it is a hot day. And always observe the safety precautions on the container.

There are two main uses for hydrochloric acid: removing carbonates like calcite that often are the last minerals to form in a pocket and therefore obscure other mineral crystals, and the more aggressive removal of iron oxide rust stains (faster than oxalic acid). The former use is the most common and often produces staggeringly beautiful specimens because the calcite being dissolved protected the minerals underneath. Specimens of almandine from the Trumbull, Ct. diggings, or vesuvianite from the Goodall Q. in Sanford, Maine, or spinel or franklinite crystals in Franklin Marble are all cleaned in hydrochloric acid. If hydrochloric is being used to remove iron oxides you should be careful that there are no carbonates in the specimen that you want to keep. The acid will dissolve them. Which is why, no matter what minerals you are cleaning, always test your cleaning agents on lesser pieces to make sure you will not ruin your best pieces. The basic procedure is: First wash your minerals carefully in water to remove any

Continued on next page

MSDS Muriatic Acid (Hydricloric Acid)

Below is an extremely condensed version of Material Safety Data Sheet (MSDS). Muriatic Acid is an extremely toxic chemical and should be treated with great respect. If you plan on using it, please read an entire MSDS first. If you need a copy Email me at CSMSpickANDpack@msn.

Health Rating: 3 - Severe (Poison)
Flammability Rating: 0 - None
Reactivity Rating: 2 - Moderate
Contact Rating: 3 - Severe (Corrosive)
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES
Storage Color Code: White (Corrosive)

Potential Health Effects:
Health hazards given on this data sheet apply to concentrated solutions of hydrochloric acid. Hazards of dilute solutions may be reduced, depending upon the concentration. Degree of hazard for these reduced concentrations is not currently addressed in the available literature.

Inhalation:
Corrosive! Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases, pulmonary edema, circulatory failure, and death.

Ingestion:
Corrosive! Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. May cause nausea, vomiting, and diarrhea, and in severe cases, death.

Skin Contact:
Corrosive! Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and discolor skin.

Eye Contact:
Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:
Long-term exposure to concentrated vapors may cause erosion of teeth. Long term exposures seldom occur due to the corrosive properties of the acid.

Continued on next page Side Bar

MSDS Muriatic Acid *Continued*

Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

First Aid Measures

First aid procedures given apply to concentrated solutions. Exposures to dilute solutions may not require these extensive first aid procedures.

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:
If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

It's a Gas

by: Bob King

What gas is given off when you put calcite ($CaCO_3$) in a weak solution of Hydrochloric Acid (HCl, Muriatic acid)? When those two are put together you really get a lot of bubbles. Here is the chemical equation for this reaction:

$$2HCl + CaCO_3 \longrightarrow CaC_{l2} + CO_2 + H_2O$$

From this equation we see that the gas CO_2 (Carbon dioxide) is given off. You could do a little experiment. Put a small amount of Muriatic acid in a small jar and drop in a piece of marble or calcite, wait a minute then lower a small flame down into the jar and the flame will be extinguished. I recommend doing this experiment outside in the fresh air. CO_2 is used in many types of fire extinguishers.

loose sand and dirt and to make the acid last as long as possible (sand and dirt contain iron oxide and will exhaust your acid quickly). Place your minerals in a large plastic container with a lid that can be tightly sealed. Again, I prefer a five gallon joint compound bucket found at construction sites.

Let your specimens dry and move the container outdoors to an area with good ventilation. Pour in enough acid to cover the specimens. Always wear heavy rubber gloves and be very careful not to splash any acid on yourself.

Depending on what you are removing with the acid, you will want to leave it in from 5 minutes to 5 days.

If you are etching carbonates/calcite off a specimen then you should check it after five minutes. Be careful not to inhale any fumes when checking the progress. When removing calcite or marble from specimens the action is very fast and active. Your bucket should be large enough to prevent the bubbling foam from overflowing.

If you are removing rust stains from quartz the action can take up to a day and is less energetic. When removing the "sphalerite" crust on quartz crystals from the Spring Glen Mine in Ellenville, it is not uncommon to repeat three-day sessions removing any loose material between each session. You can place the lid on the bucket to prevent children and animals from exposure, but provide a small vent hole for relieving gas pressure.

According to Jerry Call, a commercial mine owner in Brazil and North Carolina, you should not leave the bucket in the light. He says this results in a yellow stain. Whether light is the source of the stain I cannot tell, but it is not uncommon for some residual acid/rust stain to remain after your first treatment. Then you need a second treatment in fresh, clean acid reserved for such a purpose. You will see the stain disappear quite quickly and you can remove your specimens for neutralizing and washing. This final batch can be diluted 1:1 with water. When diluting always add acid to water, NOT WATER TO ACID.

People neutralize the acid many different ways. I prefer to dissolve ordinary household baking soda in a bucket of warm water then immerse your specimens in it (after a brief pre-rinse). Let them sit in the baking soda solution for 15 minutes, then proceed with washing.

Because the acid has penetrated the specimen it is best to wash very thoroughly. I prefer the rule of thumb of washing three times the time the duration the specimen was in acid. If you just briefly dipped it for 5 minutes to remove some calcite then a 15 minute wash will be adequate. But, if you left your quartz specimens in for removing rust stains for a full day, then you should wash them for at least three days. The washing is essentially placing them in clean water and keeping the water clean as the acid diffuses out of the specimens. It is best if you can set a water supply on a slow trickle into the bucket to constantly provide clean water. Otherwise changing the water as often as possible will work. If you are washing for a full day then a water change schedule like this would be appropriate: change water every 15 minutes for an hour; then every hour for four hours; then every four hours for the rest of the day.

As the acid is used up it will eventually turn yellow/green/brown. It can be used until it no longer is effective or until it starts to stain your specimens. If you are using it to dissolve carbonates/calcite the acid will exhaust itself long before the color changes. You will see that it no longer actively dissolves the calcite. It should then be discarded. You can fully neutralize your old acid with crushed limestone or marble or with more baking soda. When it no longer fizzes then you can dispose of the acid safely. The limestone gravel found at the Limecrest Quarry in New Jersey is great for neutralizing the acid.

A last warning: if you are removing calcite from a specimen, do not dissolve all calcite. Often it may be the only thing holding the specimen together. A little calcite can provide a nice contrast and make it more aesthetic. In the case of the spinel crystals from the Limecrest Quarry, there are often alternating layers of spinel and calcite. They will crumble to powder if cleaned too long in hydrochloric acid. Also fluorescent willemite may turn powdery on the surface if cleaned in acid resulting in the loss of fluorescence.

This is the second installment of three. The final installment will cover Mechanical Methods.

This article and others can be found at Mr. Betts' web site: http://www.johnbetts-fineminerals.com

Editor's Notes

Since Muriatic acid is used to clean concrete for painting, it is readily available. It can be purchased at every Home Depot and most hardware stores and paint stores. Check in the paint department. Muriatic Acid costs about $6 a gallon.

FRA Merit Badge Program for Youth is Up-And-Running

ENROLL YOUR CLUB'S KIDS TODAY!

Jim Brace-Thompson: Juniors Activities Chair AFMS

It's official! Thanks to the generosity of the AFMS board, which has approved funding, we now have a merit badge program for our clubs with youth members enrolled in the AFMS Future Rockhounds of America (FRA). I've placed an order with a badge manufacturer, and by September, we should have a supply of badges to begin awarding to kids. To enroll your club's kids, contact me (call 805-659-3577 or email jbraceth@adelphia.net). All you need is a group of kids (up to the age of 18), a sponsor, a name, and an application to FRA. Your group must be a member of your regional Federation, either through a sponsoring club or through an independent application into your local Federation. The number of youth is not important: you can have as few as 1 or 2 and as many as you can handle.

The new program consists of an FRA membership badge, 9 merit badges, and a "Rockhound Badge" that will go to youth members who earn 6 of the 9 merit badges. A 100-page guidebook describes and outlines requirements for each of the 9 badges. There are 52 activities, in all, to choose from, or about a half dozen activities per badge, with kids required to complete only 3 activities to earn any particular badge. Checklists in the guidebook make it easy for youth leaders to sign off on activities as a junior member completes them. In addition, brief back-up pages and suggestions help leaders guide their kids through each activity. The guidebook is available in both hardcopy format (photocopied) and on the AFMS web site (www.amfed.org). To save on costs to the program, which is being provided entirely free to members, we encourage you to download a copy from the web. If this is not possible, contact me for a copy.

A few words of advice to anyone implementing this program with your club's kids...

First: ***Don't feel obliged to do each activity precisely as described in the guidebook. You should adapt each activity and adjust its level to best match the ages and abilities of the kids within your club.*** For instance, Activities 1.1 and 1.2 are on learning how to identify minerals using various characteristics and tests, such as color, streak, hardness, luster, crystal shape, cleavage, fracture, etc. If you have very young children, you may wish to focus on just a handful of easily identifiable minerals, using only a couple characteristics (for instance, color, hardness, and crystal shape). The older the kids, the more characteristics you should expect them to learn. Again, the main message: be flexible and adaptable in how you implement the recommended activities.

Second: ***Try to do as many of the activities as possible as group projects***. Many were designed with the thought in mind that they could be done during a club meeting or as a group outing. It makes it more fun for the kids and easier to set up and to monitor for the youth leader.

Third: ***Involve your adult club members in helping to oversee activities and to provide supplies and materials, and involve your kids in selecting the activities they want to try.*** Make this a true club project! Kids should have choices about which activities they participate in, and they should have a chance to help shape those activities. It's through youth voice and participation that we engender empowerment and a social commitment and sense of belonging. It's often said that our clubs and societies are declining and, therefore, that we need to attract more young people in order to keep our clubs alive. But saying it this way puts the cart before the horse. Instead, the focus needs to be on what is best for our youth. Only then will we fire the interest of kids in ways that engender a sense of belonging, with meaningful opportunities from which a lifelong interest and commitment will emerge naturally. Let's not put our clubs first—let's put kids first! If we can find ways to make youth responsible and fully engaged participants, not just recipients, the long-term health of our clubs will follow as a natural result.

It's my hope that this program proves useful and successful. To help ensure its success, I welcome feedback from youth leaders and kids alike on the existing activities and suggestions for creating new activities that will help us all learn and grow while—as always—having fun!

Colorado School of Mines Open House

An Invitation

The Colorado School of Mines has issued an invitation to an open house reception at their new Geology Museum in Golden, on Wednesday, September 15 from 7 to 10 PM, on the eve of the Denver Gem and Mineral Show. The School of Mines hopes to make this an annual event.

The reception will feature hors d'oeuvres, a cash bar, and the fabulous School of Mines String Quartet, new displays on the Colorado uranium rush, as well as new display cases and special exhibits. Some phenomenal new specimens donated by Bruce and David Oreck and Marty Zinn will be on display. There will be special displays of borates recently donated by Dawn Minette and spectacular Chinese minerals donated by Marty Zinn, as well as new special exhibits by Dave Bunk, Bryan Lees, and Bill Larson. In addition, there will be a newly installed, magnificent stained-glass window. Named *The Call*, it came from a nineteenth-century Scottish church and features two miners receiving wisdom and enlightenment from an angel of the Lord.

Last but not least, there will be a silent auction to benefit the Museum. Last year's auction was a great success, with many marvelous pieces. Donations of items for this auction are solicited. Contact Paul Bartos at the Museum (pbartos@mines.edu).

source: The Flatirons Facets, Sept. 2004

CSMS Members ONLY
Classifieds

Minerals for Sale, Wide Selection: I have a wide selection of low- and medium-priced self-collected pegmatite minerals, as well as many world-wide specimens from my collection. Call for an appointment to spend a few hours in my shed for bargains! - Ray Berry, CSMS, FM Phone: See CSMS Membership Directory

For Sale: Barranca Diamond Cab Machine with 6 inch saw. Excellent condition; used only 6 months. $800 OBO. Bob Bernard 351-9584

Used Lapidary Equipment for sale. John White is offering a selection of used equipment. For a list of equipment and prices, please contact John at 630-0300.

The CSMS is offering the opportunity to publish your classified ad. It is open only to current members. Ads must include ONLY mineralogical specimens, equipment and related items. No continuosly running ads, please. To place an ad, see sidebar on page 2.

School Needs Your Help

Columbia Elementary School, a D-11 downtown-area school, has implemented a science focus and established a science lab, which needs to be furnished. We are requesting items, such as rock and mineral specimens, books, tools, or other materials, that could be used by students to learn about earth sciences. Please call Cindy Bronner for more information, 448-9949.

Steven Veatch Presents:

Cripple Creek's First Rock Collection

The Western Museum of Mining and Industry, October 13, 2004, 7 p.m.

Cripple Creek was a brawling mining camp when two U.S.G.S. geologists arrived to survey the mining district in 1894. The samples they collected served as the basis for a U.S.G.S. report that brought increased interest in what would become the "World's Greatest Gold Camp." Join Steven Veatch for an evening of minerals, mines, rare photographs, and a look at one of the most important rock collections in Colorado! This program will be at the Western Museum of Mining and Industry. Reservations required: 719-488-0880. CSMS members do not pay admission.

Note: Steve presented this program at the annual installation banquet. If you missed this program in January, you can see it in October at the mining museum.

"Remember, we agreed. I'd carry the canned good in if you'd carry the rocks out."

Ebners from Dust & Grit 2/00

Board Meeting: 1st Wednesday @ 7:00
Bob Landgraf: 687-3195

405 East Colorado - parking in back.

Camera Club: 4th Tuesday @ 7:15
1514 North Hancock, C/S
Roger Pittman: 683-2603

The Camera Club competition for August was trains. Pat & Roger Pittman tied with two first place slides. One of the Durango Silverton Rail Road and the other a narrow gauge engine from the Golden train museum. Pat and Roger then gave a program of their trip to five California redwood forests earlier this summer. Competition for September is Camera Club Members past and present, October competition is "pumpkins." Camera club meets on the fourth Thursday of each month except December at the Senior Center at 7:15.

Crystal Study Group: 2nd Friday @ 7:30
1514 North Hancock, C/S
Kerry Burroughs: 634-4576

I hope everyone has had a great summer. The next Crystal Group Meeting is Friday, September 10th. The meeting theme is summer acquisitions. Please bring in your summer finds, both field-collected and purchased. We'll also discuss programs for the winter months.

Faceting Group: 4th Monday @ 7:00
Dave Wilson: 635-7891

The faceting group will meet Monday, September 27 at Lou Severini's house, 746 North Pine, Woodland Park at 7 pm.

Fossil Study Group: 4th Thursday @7:30
John Harrington: 599-0989

Fossil Group will meet at Jim Bo's Thursday the 23rd of September for a picnic potluck, 116 Ithaca Street in Fountain.

Lapidary Group: 1st Saturday @ Noon
3085 Rhapsody Drive, C/S
Drew Malin: 531-7594

The rains have been very good to those who walk the rivers looking for lapidary rough. Bring your finds. We look forward to seeing them.

Jewelry Group: 3rd Saturday @ Noon-4:00
6608 Gambol Quail Drive East, C/S
Rick Copeland: 594-6293

The Jewelry group will meet Saturday, September 18, from noon to 4:00, at Rick Copeland's. This meeting's subject is inlay. Rick's address: 6608 Gambol Quail Dr. E. Phone: 594-6121.

Micromounts: 2nd Tuesday @ 7:00
1514 North Hancock, C/S
Phil McCollum acc@frii.comm
Moyra Lyne: 442-2673

President	Robert Landgraf	687-3195	RMLWP74@aol.com
Vice President	Drew Malin	531-7594	advanceone@adelphia.com
Secretary	Sidney Benda	488-9751	sid470@adelphia.net
Treasurer	James Bushnell	598-9262	bushy@pyramidpeak.com
Membership Secretary	Lorrie Hutchinson	382-3503	lorriehutchi@wmconnect.com
Managing Editor	Ethan A. Bronner	448-9949	CSMSpickANDpack@msn.com
Member-at-Large	Louis Severini	687-9491	
Member-at-Large	John White	630-0300	bluski2222@msn.com
Past President	Kaye Thompson	636-2978	
Show Chairperson	Manny Sanchez	495-7858	sandstonegemtec@msn.com
Field Trip Director	Roger Pittman	683-2603	roger_pittman@tmc.com
Librarian	Mary O'Donnell	689-7209	mod4185@compuserve.com
Camera Club	Roger Pittman	683-2603	roger_pittman@tmc.com
Crystal Study	Kerry Burroughs	634-4576	kburroug@adelphia.net
Faceting Group	Dave Wilson	635-7891	dlwilson@pcisys.net
Fossil Group	John Harrington	599-0989	haringtон1@mindspring.com
Lapidary Group	Drew Malin	531-7594	advanceone@adelphia.com
Micromount	Phil McCollum		acc@frii.com
Jewelry	Rick Copeland	332-7915	rick.copeland@covad.net

Events

1 **Sept - Wednesday, 7:00**
Board Meeting

4 **Sept - Saturday, Noon**
Lapidary Group

10 **Sept - Friday, 7:30**
Crystal Study Group

13 **Sept - Friday, 7:30**
Micromounts Group

16 **Sept - Thursday, 7:30**
General Assembly

18 **Sept - Saturday, Noon**
Jewelry Group

23 **Sept - Thursday, 7:30**
Fossil Group

27 **Sept - Monday, 7:00**
Faceting Group

28 **Sept - Tuesday, 7:15**
Camera Group

2 **Oct - Saturday, Noon**
Lapidary Group

6 **Sept - Wednesday, 7:00**
Board Meeting

8 **Oct - Friday, 7:30**
Crystal Study Group

17-19 **Sept - Fri - Sun**

DENVER, COLORADO: Annual show, "Denver Gem and Mineral Show," Denver Merchandise Mart–Expo Hall, 451 East 58th Ave. (I-25 & Exit 215), in conjunction with the Colorado Fossil Expo in the adjacent Plaza Annex. Friday, 9 am - 6 pm; Saturday, 10 am - 6 pm; Sunday, 10 am - 5 pm. Admission: Adults, $5; Seniors & Teens, $3; Children under 13 free with an adult. www.denvermineralshow.com

Ethan A. Bronner, Editor

Non-Profit Org.
U.S. Postage
PAID
Colo. Sprgs., CO
Permit No. 66

P.O. Box 2
Colorado Springs, CO 80901-0002

Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are the third (3rd) Thursday of each month, except August, 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: Camera Club, Crystal Study Group, Faceting Group, Fossil Study Group, Lapidary Group, Jewelry Group. For details of Satellite Group meetings, see page 9.

Yearly Dues include the 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 and Industry*, a year of learning and enjoyment, plus a lifetime of memories. Individuals - $15.00 Family - $25.00 Juniors - $2.00

If you are interested in joining the CSMS or would like more information, we encourage you to attend our next General Assembly meeting (see page 2 for details of the next meeting) or visit our website: www.csms.us