



# PICK & PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

**OCTOBER 2004**

**Volume 44 Number 8**

## Robson Eames

### CSMS Life Member Passes

Urban Turzi

The Colorado Springs Mineralogical Society lost a long time Life Member on September 18, 2004 as Robson Eames, age 86, passed away. Rob was one of the most dedicated and conscientious members our Club has ever had. He served as Treasurer for more years than I can remember. In fact, he invested and controlled our club's funds as if it were his own money with the highest degree of integrity. Rob also was our Vice President and President. Serving our Club in many capacities in our annual shows, Rob was ever present as an exhibitor, show committee person and demonstrator for the micro mineral table. He volunteered a major amount of his time to our Club and we owe him a big debt of gratitude for his efforts.



Rob Eames President 1994-1995. Eames family photo

I always held Rob in high esteem. I was lucky enough to collect with him and Jane on many occasions. On one of our trips to Leadville, Rob, Jane and myself were forced to seek shelter in their 4x4 as the snow that Fourth of July day was too much for us to bear as the ground was covered by the white stuff in a matter of minutes. On that same trip, I was walking up the side of a mine dump near the Sherman Tunnel and was amazed at how spry and quick Rob was as he ascended the path that led us up to a number of other dumps. What made me admire Rob's agility and stamina was the fact he was 70 years old at the time and I felt like I was in pretty good shape but had to

See *Rob Eames* on page 3

### FEDERATION NEWS

## Lawsuit to Challenge New Forest Service Regulations

Robert Cranston

The Forest Service has been busy lately, promulgating rules and regulations that will negatively impact small miners and prospectors. Public Lands for the people (PLP) is taking action to put a stop to it.

In "Forest Service Decision Stands - US Forest Service Withdraws Appeal," (January 2004), we reported on the Lex-Waggenger decision (US v Ronald O. Lex and Ken Waggenger, CR S-01-559 LKK; May 14, 2003).

In this case, Judge Lawrence K. Karlton, US District Court in Sacramento, reversed

a lower court decision which wrongfully concluded that the miners were required to file a Notice of Intent for occupying their mining claim for more than 14 days in California's Klamath National Forest.

Judge Karlton said that section 36 of the Code of Federal Regulations (CFR), subsection 261, does not apply to miners who are camping on their claims while engaged in activities related to mining, rather it was meant to cover recreational activities. He stated, "As the regulations are currently structured, so long as no

See *Lawsuit* on page 4

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.

|                          |                             |
|--------------------------|-----------------------------|
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American Federation of Mineralogical Societies (AFMS)

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Colorado Federation of Mineralogical Societies (CFMS)

Colorado Springs  
Mineralogical Society

Founded in 1936



Lazard Cahn

Honorary President



*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.

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PRESIDENT'S CORNER

# CSMS Board of Directors

## Show Chairman Needed

Robert Landgraf



It is that time of the year again when we have to look at the changing of the guard. This year we have a slate of nominees for CSMS officers for the year 2005. They are as follows:

- President ..... Drew Malin
- Vice President ..... Rick Olson
- Secretary ..... Rick Copeland
- Treasurer ..... James Bushnell
- Editor ..... Ethan Bronner
- Member at Large ..... John White
- Member at Large ..... Louis Severini

The membership chairman position was vacated this year and has been handled by the editor. That shortens the path to get new members to the mailing list but leaves a board position vacant. We are presently discussing options on how to handle this position.

I want to thank people for being willing to volunteer for the club positions necessary to keep our organization alive. We are presently working on filling the committee chairs for the 2005 Show. We have just a few openings to fill. Presently, Drew and I are sharing the Show Chairman position and are looking for a volunteer to head the show. If you would be interested, please get in touch with either Drew or myself.

## October Program: The Florissant Story

### A History of Scientific Study at the Florissant Fossil Beds National Monument

Steven Wade Veatch

The fossils from Florissant have been known and studied for more than 130 years. Join Steven Veatch for a presentation on the remarkable Florissant fossil bed story from the days of discovery to the first scientific collection made by a 19 year-old college student in 1871. The adventurous expeditions of 19<sup>th</sup> century scientists to the Florissant fossil beds were extraordinary. Rare photos will show these early scientists, their work, and their fossils. New information about Charlotte Hill and her pioneer family reveals she supplied fossils to scientific expeditions and paleontologists. The period of time when the petrified forest was in private hands will be chronicled, including the bitter rivalry between two commercial operations that erupted into a gunfight. Current research will be reviewed.

**October 2004 General Assembly**  
Thursday, October 21, 2004, 7:30

Colorado Springs Senior Center  
1514 North Hancock Blvd

*October's refreshments courtesy:*  
**Crystal Group**



*Bear on a stump taken by the expedition*

## Rob Eames continued from page 1

force myself to stay up with him. Another trip on the dumps in Creede saw me again breaking rocks next to Jane and Rob. As my three pound crack hammer hit my knee and not the boulder I was working on, Rob said: "that was a funny sounding noise coming from that rock as I never heard a rock cry before."

Rob was an avid collector of minerals, be they micro size or larger. He was also

skilled at lapidary work. But the thing I admired the most about Rob was his relationship with Jane, his wife of over 50 years. They both enjoyed laughing and each other's company. Always together, it seemed, at club meetings, satellite group meetings, field trips, trips to foreign countries, club banquets, Thursday lunches, they were a great loving couple and Jane's loss is also a great loss for our Society.



## 2004 RMFMS Bulletin Contest Winners

### Small Bulletins:

5th Place—*Pick & Pack*, **Ray Berry**, Colorado Springs Mineralogical Society

### Adult Article—Advanced:

3rd Place, "Leaving Montreal for Pyrite Country" by **Steve Willman**, Colorado Springs Mineralogical Society

4th Place, "That 'Common' Mica" by **H.H. "Tom" Odiorne**, Colorado Springs Mineralogical Society

## Gold Camp Road Plan Update

Here is a timeline for the Forest Service's Gold Camp Road project.

*December 2004* — Draft Plan/EIS Released  
*January 2005* — Public meetings on Draft Plan/EIS

*February 2005* — Public comment period on Draft ends

*June 2005* — Final Plan/EIS Released.

The website for more information is: <http://www.fs.fed.us/r2/psicc/pp/> and click on "Gold Camp Road Issues."

## Minutes...

*September 16, 2004*

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

**Treasurer's Report:** Skipped.

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

### Show Report:

- The 2005 CSMS show will be held on June 17-20.
- Postcards were made available for distribution by members at the Denver show.

**Old Business:** None

**New Business:** None.

The general meeting was adjourned at 7:15 P.M., followed by two programs, "A Mammoth Find in Florissant," presented by Steve Veatch and "The Petra Placer: A Topaz Bonanza," presented by Rich Fretterd and Steve Veatch.

## Museum Receives Recognition

The Western Museum of Mining & Industry has again achieved the highest recognition for a museum, accreditation by the American Association of Museums (AAM). Initially accredited in 1979, the museum must undergo a subsequent review at least every ten years to maintain accredited status.

AAM accreditation signifies excellence within the museum community. It is a seal of approval and indicates a museum's commitment to accountability, high professional standards, and continued institutional improvement.

Of the nation's nearly 16,000 museums, only 752 are currently accredited. In the Colorado Springs area, The Western Museum of Mining & Industry is one of three museums accredited. The museum is dedicated to educating the public, including over 15,000 school children a year, about the history and continuing contributions of mining in the American West.

Stop in anytime to go gold panning and to meet our most popular staff members, our burros, Oro and Nugget.

Western Museum of Mining & Industry offers daily tours at 10 a.m. and 1 p.m. The museum, located at 1025 North Gate Road, is open Monday through Saturday, 9 a.m. to 4 p.m. For more information please call 719-488-0880 or visit [www.wmmi.org](http://www.wmmi.org).

## Member in Hospital

Bob Berry, son of Ray and Eloise, was in a motorcycle accident on Friday evening, Sept 10th. He is in room 824 (Rehab) at Penrose Main Hospital. He has a broken neck, broken right arm, and broken rib. Thankfully, he has no paralysis. Ray says Bob is very fortunate to be alive!

## Splashing Silver

by LaVone Ames

Splash-casting (sometimes called drop casting) can be a fine and fun way to utilize scrap silver, gold and even some of the base metals such as copper, brass and bronze. The technique is simple and requires a minimum of tools: a crucible to hold the metal as it is heated, tongs to hold the heated crucible, water in an unbreakable container, and a bit of borax. The drop-castings are unique, no two are alike. The dropper has a bit of control as he/she varies the depth and temperature of the water, but the castings are mostly unpredictable. How does one splash-cast? Heat an ounce of metal in the crucible until it liquefies. Add powdered borax as a flux to minimize oxidation. When the metal is liquid, dump it (do not dribble) into the water. The castings may be drilled for stringing as a pendant, or fused to another surface. They can also be drilled and attached to the ends of bola tips so that they somewhat imitate showy crystallization of silver.

From Cedar Valley Gems, 4/2000

## Gold Facts

A lump of pure gold the size of a matchbox can be flattened into a sheet the size of a tennis court.

An ounce of gold can be stretched into a wire 50 miles long.

via the Santa Clara Valley Gem and Mineral Society Breccia 12/2003

## Lawsuit

*continued from page 1*

earth moving equipment or tree-cutting is involved, a miner can camp on his claim indefinitely..."

The Forest Service, fearing a loss of control that they never legally possessed, published an interim rule to address the above issue, under 36 CFR 228, in the Federal Register on July 9, 2004. The Federal Register Notice is entitled, "Clarification as to When a Notice of Intent and/or Plan of Operation is Needed for Locatable Mineral Operations on National Forest System Lands."

According to the Federal Register notice, the emergency rule will be effective August 9, 2004, though comments will be accepted until September 7, 2004.

The Forest Service states they will soon require a Notice of Intent "in any situation in which a mining operation causes a surface disturbance, regardless of whether that disturbance is caused by mechanized earth moving equipment or the removal of timber."

"After a Notice of Intent is submitted, the District Ranger determines whether the proposed operations will likely cause a significant disturbance of surface resources. If the determination is that the proposal will likely cause a significant disturbance of surface resources, the operator is notified that a plan of operations is required."

It is our opinion that the emergency rule would place severe restrictions on small operators if it were allowed to stand. Small miners, at the very least, would be subjected to the time and expense involved with the filing of a Notice of Intent for a minimal disturbance. The Forest Service cannot currently respond to applications in a timely manner, and delays would be inevitable if they receive hundreds or even thousands of notices. Worse yet, some miners could be subjected to the long delays and excessive costs involved with a Plan of Operation and financial guarantees (bonding) for minimal disturbances, all at the direction of a District Ranger who may or may not be favorable to mining. Merely bringing camping equipment onto a mining claim could be considered a significant disturbance in the mind of a District Ranger.

We have reviewed the emergency interim rule with Public Lands for the People (PLP). Jerry Hobbs, president of PLP, stated there are numerous avenues open to challenge the interim rule. These include non-compliance with the Administrative Procedures Act, National Environ-

mental Policy Act, Regulatory Flexibility Act, Paperwork Reduction Act, and others. After much discussion, it appears the best course of action is to file suit against the Forest Service to stop the interim rule, and a mining attorney has already been retained.

This should be a concerted effort on behalf of miners and prospectors, rather than a disjointed effort involving lawsuits filed by small entities with limited funds. Several mining and prospecting companies have already started the fundraising effort, including ICMJ's Prospecting and Mining Journal, donating thousands of dollars to PLP to pay for the legal fees that will be incurred in this case.

Special thanks go to Keene Engineering for starting the ball rolling with a \$5,000 donation.

Much more will be needed. I encourage you to support this effort personally, and by bringing it to the attention of any clubs or associations to which you belong.

I have personally met with the PLP board on several occasions. I have been very impressed with their knowledge of rules and regulations, and the ability of their members to apply this knowledge to successfully litigate government agencies. I encourage all miners and prospectors to support their efforts on behalf of all of us.

Contributions can be sent to: Public Lands for the People, 3700 Santa Carlotta St; La Crescenta, CA 91214.

A direct link to the Federal Register notice can be found on our website ([www.icmj.com](http://www.icmj.com)) under the Pending Rules, Regulations, Projects section. The Federal Register notice can also be located online at [www.regulations.gov/freddocs/04-15483.htm](http://www.regulations.gov/freddocs/04-15483.htm).

Concerned readers in need of further information can contact Sam Hotchkiss, Minerals and Geology Management Staff, at 703-605-4852.

*Comments can be sent to:*

e-mail: [35cfr228@fs.fed.us](mailto:35cfr228@fs.fed.us)

fax: 703-605-1575

or mailed to:

**Forest Service, USDA**  
**Attn.: Director, Minerals & Geology**  
**Management Staff (2810)**  
**Mail Stop 1126**  
**Washington, DC 20250-1125**

Source: AFMS Newsletter 9/04



# Mineral Cleaning for Amateurs

## Part 3: Mechanical Methods

John Betts

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This month we are reviewing mechanical methods of cleaning and preparing mineral specimens. By mechanical we mean using force of some sort to remove unwanted minerals or encrustations. Obviously, this method has the potential of damaging the specimen by scratching or fracturing the crystals. As usual, care should be taken to test the methods on lesser specimens to see if there is any damage resulting from the process.

The mechanical cleaning of minerals ranges from a toothbrush to dental picks to ultrasonic cleaners to water guns to sand blasting. I am not going to discuss the more ordinary use of chisels and saws to trim a specimen.

### Brass Brush and Dental Picks

The first thing we do after a field trip is to wash the specimens and pray that they will clean up like the minerals sold by dealers. And they never do. Dirt and pocket mud are often very tenacious and require

more than running water. The first mechanical tool to try is a brass brush. They are available in hardware stores for use as a cleaning tool and for wood refinishers. Make sure you get brass bristles because brass is softer. Brass is between 3.5 and 5 on Moh's scale of hardness. In theory, you can scrub a specimen of any mineral harder than 5 and not damage the specimen. In reality though, you should always perform a test to make sure. I have used brass brushes

on quartz successfully for many years without any damage. Occasionally, a burnished appearance results on etched crystals, but this usually disappears in later chemical treatments.

With this first wash there will always be sand and dirt deep in the crevices be-

tween crystals. These can be loosened with a set of dental picks. They come in a variety of shapes and sizes. Often a friendly dentist will give away his old ones. If you are not friendly with your dentist (who wants to be friends with their dentist?) and you cannot find them at your hardware store you can purchase them mail order from Woodworkers Supply (1-800-645-9292), item no. 862-028, set of four utility picks for \$8.95. These picks are steel and, therefore, harder. So be careful not to use a scratching stroke. Just loosen the dried, caked dirt in the crevices.

### Ultrasonic Cleaner

Obviously with delicate crystals scratching is not the problem, they will simply break off from the force. With delicate specimens we need to use an ultrasonic cleaner. These are simple stainless steel basins with piezoelectric drivers attached to the bottom. They often have built in timers and heaters. When turned on they vibrate the solution a ultrahigh frequency causing cavitation, the formation and collapse of bubbles. This cavitation scrubs off dirt and soluble minerals very fast without damaging delicate crystals. I can hear the skeptics out there saying that some minerals can be damaged, like herkimer diamonds (after all, aren't we supposed to pack them in temperature shielding sand or sawdust). Well, this may be true, but in my experience (and this article is nothing more than one person's methods learned through trial and error) I have only had one herkimer diamond damaged. (There was a large stress fracture in a 2" crystal that "popped" during cleaning.) But in terms of odds, I have cleaned thousands of herkimers and only that one broke.

The ultrasonic cleaner is the best way to clean zeolites from New Jersey, especially delicate natrolite sprays or terminated pectolite. Unfortunately, they are expensive. If you shop around for the best price, you will pay around \$150.00 for ev-



Continued on next page

## Changes Coming to AFMS Uniform Rules

Several rule changes were adopted by the Rules Committee at this summer's AFMS Convention and will become effective January 1, 2005. A brief description of the changes follows. Complete, updated Uniform Rules will be on the AFMS website, [www.amfed.org](http://www.amfed.org), sometime after January 1, 2005.

### Item #1, Labeling Change

"In all instances where rules require labeling the labels shall be in English (U.S. spelling), except for fossil names. The exception being in education division where the subject matter may require the use of some foreign words."

### Item #2, Nationwide Judges List

A list is being compiled of judges in each region.

### Item #3, Cabochon Changes

Several changes are being made in this category, including definitions, judging on variety of work and variety of material hardness.

### Item #4, Division A., Class A-2

Additions to the lapidary scoring sheet and instructions on page A-2-2003.

## Mount St. Helens

From Pete Modreski: The current activity at Mount St. Helens (who knows what will happen?) can be monitored "live" or near-live, through websites of the Pacific Northwest Seismograph Network (PNSN), USGS, and Mt. St. Helens National Monument. Of particular interest are the real-time and past week "Webicorder" seismograms, on which you can view all the recorded tremors as they take place. Also, there's a live volcano cam, and the Time-Depth Map of earthquakes at MSH for the last decade, is really fascinating too. Check them out at: PNSN home page: <http://www.pnsn.org/welcome.html> PNSN's "Webicorders": <http://www.pnsn.org/WEBICORDER/GREEN/welcome.html> Live Mount St. Helens Volcanocam: <http://www.fs.fed.us/gpnf/volcanocams/msh/> Time-Depth Earthquake Map: <http://www.fs.fed.us/gpnf/volcanocams/msh/> USGS Cascades Volcano Observatory: <http://vulcan.wr.usgs.gov/News/framework.html>

## Curator Retires

Jack Murphy, Curator of Geology since 1970, retired on September 30. Jack, grandson of former museum director Alfred M. Bailey, began his career at the museum in 1962 when he volunteered with the reconstruction of the Naica-Potosi Crystal Cave from Chihuahua, Mexico. Jack earned his B.A. in 1967 and a M.S. in Earth Sciences in 1994 from the University of Northern Colorado. In 2000, he received an honorary Doctorate of Humane Letters from the University of Colorado, Denver. In honor of his 35 years of dedicated service, Dr. Murphy will be given the title of Curator of Geology Emeritus.

In his 35 years of employment at the museum, Dr. Murphy has been responsible for a number of significant exhibition initiatives, including the Coors Mineral Hall and the installation of the rhodochrosite wall from the Sweet Home Mine. He has published more than 60 popular and technical articles on rocks, minerals, gemstones, and meteorites.

As curator, Jack was responsible for the acquisition of a number of world class specimens, including Tom's Baby, Colorado's largest gold specimen; the Alma King, a giant rhodochrosite crystal considered to be one of the finest non-gemstone mineral specimens known; several specimens from the Oreck family tourmaline collection; and a number of meteorites, including the recently discovered Elbert County pair. Dr. Murphy is also known for his tours, field trips, classes, lectures, and for his highly successful participation in the All-Sky Camera outreach project.

His research activities have resulted in publications, including *Geology Tour of Denver's Capitol Hill Historical Buildings* (1997), *Geology Tour of Denver's Buildings and Monuments* (1995), and *Minerals of Colorado* (1997).

Dr. Logan Ivy will assume the position of interim Curator of Geology on Oct. 1. Dr. Ivy has a Ph.D. in Geology from the University of Colorado at Boulder and has 12 years experience with the geology collections as the collection manager. The museum has an ongoing commitment to the study, collection, interpretation, and display of rocks, minerals, gemstones, and meteorites and will be opening a nationwide search for Dr. Murphy's successor within the next few months.

ery quart of capacity. I have a three quart unit that is more than adequate. Unless you collect a lot of large specimens, a 1-1/4 quart unit will suffice.

I highly recommend getting a built-in heater. It is well worth the extra expense. It will heat the solution to just below boiling and keep it at that temperature. That is perfect for cleaning with oxalic acid (see Part 1: Pick and Pack, July 2005). The heat accelerates the action of the acid, but prevents the acid from boiling.

### Sand Blasting

Sand blasting sounds exotic but is more common than you would think. All of the pink tourmaline in purple lepidolite sold has been sandblasted to expose the harder tourmaline. The sand blasting removes the softer lepidolite very quickly and leaves a more natural appearance than chisels or scrapers. The new pink chalcedony from New Mexico being sold by Ray DeMark is all sandblasted. In its natural state it is rough and encrusted. A quick sandblast and only the harder quartz chalcedony remains. Amazonite from Colorado is also cleaned with sand blasting. These crystals often have a late growth without the blue-green amazonite color. The outer coating is blasted off with glass beads and then the surface is "polished" by sandblasting with a soft limestone powder.

A sand blasting unit is not expensive. The basic setup can be purchased for around \$50.00. However, the air compressor to drive the sand blaster is expensive. Unless you already have access to a 3.5 HP air compressor, then sandblasting is not for you. There are many different media that you can use in a sandblaster. Anything the consistency of table salt can be blown through the gun, wet or dry. Glass beads are readily available and are the hardness of quartz. But you can purchase many different hardnesses down to 3.5 on Moh's scale. The goal is to choose a media softer than the mineral you want to keep but harder than the mineral you want to remove.

I have found it works great for removing schist matrix from almandine garnet and



Bench top blasting cabinet

stauroilite crystals. There has been much discussion regarding the effects of sandblasting minerals including an article in *Rocks and Minerals*. The article points out that chalk dust with a hardness (H) of 3 has been found to abrade periclase (H: 5.5). The article points out that the force that you drive the media can result in damage to the specimen and recommends testing on a sample until you get the right balance of air pressure and correct media hardness.

### Air Scribe

This is a miniature reciprocating impact chisel commonly used by fossil preparers to expose fossils. ARO air scribe Model 8315 costs \$289.00 and comes with a medium carbide tip. Additional tips are available in fine to coarse for \$31.00 each from Main Tool Supply, 55 Lafayette Ave., North White Plains, NY 914-949-0037. These tools reciprocate at 36,000 cpm and are very efficient at locally removing matrix. Fluorescent collectors find these are the best tools for removing calcite from willemite specimens because acid will etch willemite.

### Water Gun

Similar to a sand blaster, the water gun is used in the dry cleaning industry as a stain remover (they blast cleaning agent right through the fabric). The Krebs Albatros 5000 costs \$350.00 and is available from Aurora Mineral Corp. at 516-623-3800.

The action is a combination of sandblasting and ultrasonic. The gun creates a fine, high-powered jet of water that will loosen most clays or dirt. It is very forceful though and not suitable for delicate minerals. The advantage is that you can put solutions other than water in the gun. In theory you could shoot oxalic acid through it. But since oxalic acid requires time to work the value is questionable. And, remember the toxicity of oxalic acid. The last thing you should do is create a fine mist of oxalic acid that you could accidentally breathe.



Albatros 5000

Continued on next page

A simpler and cheaper alternative to the water gun is to take your minerals to a do-it-yourself car wash. Lay out all of your minerals and for \$1.75 in quarters you can blast away almost anything the water gun can, plus you can get a hot wax at the same time.

In conclusion, you do not have spend lots of money to clean your minerals. In many cases the brass brush is all that you need. Remember also that these mechanical methods are often the first in a many step process. You may start with brass brush then use hydrochloric acid and finish with oxalic acid.

### The "Waller" Solution

This method of mineral cleaning was first introduced to me by Roland Franke as a simple method of cleaning iron stain from minerals. Further research reveals different methods of using the basic solution. As originally described by Roland, the solution is made by dissolving in one liter of distilled water:

8.4g Sodium Bicarbonate  
17.4g Sodium Dithionite  
5.9g Trisodium salt of Citric Acid (sodium citrate)

Once mixed, the minerals are immersed in the solution. The cleaning action can be accelerated by placing in an ultrasonic cleaner. This solution is not appropriate for indoor use because, once mixed, there is a strong odor of rotten eggs. Use only outdoors or in an area with proper exhaust venting. As usual read all precautions on the individual component packages.

The solution is good for only about 24 hours and should be discarded after that. Since a liter of solution may be more than you need, the Geological Museum of Copenhagen (Hansen, 1984) suggests a variation - you can prepare a stock buffer solution of one liter water, 28 g sodium bicarbonate and 59 g sodium citrate (citric acid). Then when ready place your specimens in a container, pour in buffer solution to cover the top, then carefully sprinkle on top 1 g sodium dithionite for every 30 ml of buffer solution. After five minutes another 1 g of sodium dithionite is added in the same way. They also recommend sealing tightly with a lid and keeping at room temperature to avoid the formation of sulfides and sulfur.

If you have heavy iron stain, a specimen may require several treatments in succession as the solution becomes saturated and loses effectiveness. After your piece is clean, wash in distilled water for

an equal amount of time that the specimen was in the solution, then in running (or regularly changed) tap water.

Apparently the solution works by reducing Fe+3 to Fe+2 and then dissolving Fe+2 in the Citric Acid. The Sodium Bicarbonate balances the pH to be neutral. This last point means that theoretically you can clean any mineral in it without worrying about etching it. Practically, though, caution should be taken by testing on samples prior to immersing your best piece.

This is the conclusion of the articles on cleaning minerals. But it is not all that can be said on the subject. I have stayed clear of the more hazardous hydrofluoric, sulfuric, nitric acids and treatments for specialized uses such as cleaning native copper. If you are looking for more information, I highly recommend starting with John Sinkanka's books *Field Collecting for Gemstones and Minerals* (originally published as *Gemstones and Minerals: How and Where to Find Them*) and *Gemstone and Mineral Data Book* both published by Geoscience Press.

#### References

Hansen, Mogen, *Cleaning Delicate Minerals*, Mineralogical Record, March-April 1984, pg. 103

*This is the third installment of three. For the first and second installments see July and September 2004.*

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

### Editor's Notes

Many of the items described in this installment can be purchased reasonably at our local Harbor Freight store. They have by far the largest selection of sand blasting cabinets in town. They are also very reasonably priced. The blasting cabinet on the previous page sells at Harbor Freight for \$69.99. They also sell a wide variety of dental picks and brass brushes.

You can purchase glass bead locally at Remco Equipment, 632-462, 2210 West Bott Ave. For a greater variety of media United Western Supply in Denver, (303) 388-1224, 4401 East 46 Avenue, Suite B, has almost every type.

Several members of CSMS use the Krebs Albatron 5000 as listed in this article. Ray Berry recommends purchasing the direct feed attachment. This allows you to spray longer without having to stop and refill the container frequently. 

## AFMS Land Use Policy

1. Adherence to the AFMS Code of Ethics assures compliance with most statutes and regulations governing collecting on public lands and encourages respect for private property rights and the environment. Clubs are urged to read the AFMS Code of Ethics in at least one meeting every year, to publish the Code frequently in the club newsletter, and to compel compliance on club field trips.

2. Individuals and clubs are urged to write their elected representatives and land use management agency supervisors regarding issues of rule making, legislation and enforcement affecting field collecting of minerals and fossils.

3. Individuals and clubs are urged to join and support activities of the American Lands Access Association (ALAA), a sister organization with responsibility for advancing the interests of earth science amateurs with legislatures and land use management agencies.

4. The AFMS will receive a report from ALAA at its annual meeting.

5. The AFMS endorses the principle of multiple use of public lands as a guarantee of continuing recreational opportunities.

6. Wilderness and monument designations are inconsistent with the principle of multiple use. In view of the vast amount of public land already designated as wilderness and monuments, future such designations should be minimal, taking into account the increased demand for recreational opportunities, including rockhounding, created by a growing population.

7. In furtherance of the principle of multiple use, the AFMS believes that laws, regulations and rules established by relevant governmental authorities should be designed to allow freest possible access to all public lands, coupled with minimal restrictions on the recreational collection of minerals, fossils, gemstone materials and other naturally occurring materials.

8. A right to collect minerals and fossils on public lands should be protected by statute.

9. The AFMS urges its members to work with any or all government authorities to achieve a good working relationship in order to improve the "Public Image" of recreational collectors.

## CSMS Members ONLY Classifieds

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 continuously running ads, please. To place an ad, see sidebar on page 2.

## Upcoming Events

**Tues., Oct. 12, North Table Mountain Geology & Natural History Hike, 4 p.m.**  
USGS Geologist Pete Modreski will lead a hike for the public up the west side of North Table Mountain, Golden, 4-7 p.m. (until dusk). Anyone is invited; we'll see and talk about volcanic rocks, local geology, mining and quarrying history, Open Space, local plants, animals, and ecology, and how the present landscape developed. No registration is necessary, but for courtesy if expecting to come you may leave a message at pmodreski@usgs.gov, or 303-202-4766. Meet at 4 p.m. at the trailhead parking lot off Wyoming Circle (about 1 block from the intersection of Ford Street and Highway 93 at Pine Ridge Road). Going north from Golden on Highway 93 or on Ford St., turn right on Pine Ridge Road, then left on Wyoming Circle, and the parking area is about a block further, on the left. This will be an easy, uphill hike up a dirt trail and dirt road to the top of the mesa—64 million-year-old lava flows. **INCLEMENT WEATHER ALTERNATE DATE, WED. OCT 13 OR FRI. OCT 15—CALL OR EMAIL ME TO CONFIRM.**

**Wed., Oct 13, Free GPS, Map, and Compass Class at USGS**  
USGS continues to offer these free classes (mornings 9-12, map & compass; afternoons 1-4, hands-on practice with GPS) the second Wednesday of each month, through November 2004. Held at Building 810, Denver Federal Center (Lake-wood CO). To register please call 303-202-4640.

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.



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(in the penny arcade)

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This map says there are supposed to be geodes around here.  
via Gneiss Times 6/02

**Steve & Peggy Willman - Minerals Sangre de Cristo Gallery**

114 Main Street, Westcliffe, CO 81252  
email: gallery@ris.net      719-783-9459  
Fall Hours: Friday & Saturday 10:00 to 5:00

Collectable minerals, fossils, crafts & local artists

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

Board meeting at Drew's office, Wahsatch & Colorado at 7PM on Wednesday, Oct. 6.

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

The camera club competition for September was won by Roger & Pat Pittman. Our next meeting is October 26th at the Senior Center, 7:15. The competition subject for October is "Pumpkins," November's subject is "Lightning."

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

For details contact Kerry at the number above.



From British Columbia Rock & Gem  
via T-Town Rockhound 797 & others

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

No information received. Please call Dave at the number above for location on the next meeting.

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

Our October Fossil Meeting will be at Jerry Suchan's, 9603 Westcliff Court in Bijou Basin at 7:30, 28 October, weather permitting.

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

Every month the lapidary group meets at Drew's lapidary workshop. For directions or any questions give Drew a call at the number above.

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

The Jewelry Club will meet Saturday, October 16, from noon to 4:00 P.M. at Rick Copeland's house, 6608 Gambol Quail Dr. Subject matter has not yet been determined.

**Micromounts:** 2nd Tuesday @ 7:00  
1514 North Hancock, C/S  
**Phil McCollum** [acc@frii.com](mailto:acc@frii.com)  
**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@pcsisys.net       |
| Fossil Group         | John Harrington   | 599-0989 | harrington1@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

- 2 Oct - Saturday, Noon**  
Lapidary Group
- 6 Oct - Wednesday, 7:00**  
Board Meeting
- 8 Oct - Friday, 7:30**  
Crystal Study Group
- 12 Oct - Tuesday, 7:30**  
Micromounts Group
- 16 Oct - Saturday, Noon**  
Jewelry Group
- 21 Oct - Thursday, 7:30**  
General Assembly
- 25 Oct - Monday, 7:00**  
Faceting Group
- 26 Oct - Tuesday, 7:15**  
Camera Group
- 28 Oct - Thursday, 7:30**  
Fossil Group
- 3 Nov - Wednesday, 7:00**  
Board Meeting
- 6 Nov - Saturday, Noon**  
Lapidary Group
- 12 Nov - Friday, 7:30**  
Micromounts Group
- 25<sup>th</sup> Annual**  
**New Mexico Mineral Symposium**

**November 13 & 14, 2004**  
**Macey Center**  
**New Mexico Institute of**  
**Mining & Technology**  
**Socorro, New Mexico**

The general registration fee for the symposium is \$25.00, the fee for seniors over 55 is \$20.00, and the fee for students is \$10.00 (with student ID). Registration includes a copy of the abstracts, two continental breakfasts, and coffee breaks. A cocktail hour and dinner will be held on Saturday, November 13, 2004. An auction to benefit the symposium will conclude the evening's activities. For more information, see the website:

<http://geoinfo.nmt.edu/education/museum/minsymp/home.html>

Ethan A. Bronner, Editor



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## 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](http://www.csms.us)