# BULLETIN OF FRIENDS OF MINERALOGY

Volume 47 No. 1 ISSN 2471-7932 January 2017


*to promote, support, protect and expand the collection of mineral specimens and to further the recognition of the scientific, economic and aesthetic value of minerals and collecting mineral specimens.*

## Inside This Issue



## President's Message
## By Clyde Spencer

Greetings and a Happy New Year to all of you;

First of all, I want to make you aware that there is a ballot included in the newsletter for selecting a new slate of Directors for a three-year period. Please follow the directions and vote for the candidates.

There is extensive remodeling being done at the Hotel Tucson City Center, where we have held our meetings for years. I was told initially that they would not be able to accommodate us next February. So, I have arranged for a room at the Golden Corral Buffet* for breakfast on Saturday morning for the business meeting. Subsequent to that, Regina Aumente got back to me and offered to allow us to use a tent outside for our general membership meeting on Tuesday February 7th, from 4-6 pm. Parking may be tight because the dirt lot that we previously used has been sold.

The vendor tents that were formerly in the parking areas will be removed. However, plan to get to the meeting early in case you have to find a satellite parking area and take a shuttle to the hotel. If you are a chapter representative, please be prepared to give a chapter report at the membership meeting.

I have had extended correspondence with several of our affiliated organizations. To the best of my knowledge, we have never had an *ex officio* Director from the American Geosciences Institute (AGI) attend a business meeting. The conclusion of the correspondence was that, Allyson Anderson Book, the Executive Director, felt that it would be unfair to be on the board of a Member Society unless AGI had representation on all the Member Society boards. So, I think that we can forget about inviting anyone from AGI in the future.

Speaking of AGI, I just received a request for nominations for open AGI officer positions. If you have any interest in serving, please get back to me. I received confirmation from Tony Nikischer of Excaliber Minerals that *Mineral News* is still an affiliate and that we are eligible for a ¼ -page advertisement in each edition of the Mineral News. I don't think that has been kept up -to-date, in part because we haven't had a publicity chairperson this year. I have recently appointed Gail Spann to fill that position. Tony indicated that he probably won't be able to attend our business meetings, but I will at least send an invitation reminding him that he is welcome.

The Mineralogical Association of Canada (MAC) was a little tougher to verify because the person with whom the relationship was arranged is no longer

(continued on page 3)

## NATIONAL OFFICERS

**PRESIDENT: Clyde Spencer**, 1858 Robin Hood Drive, Fairborn, OH 45324; c_spencer123@att.net
**VICE PRESIDENT: Mark Jacobson,** 1714 S. Clarkson Street, Denver, CO 80210, markivanjacobson@gmail.com
**SECRETARY: Sue Liebetrau**, 11822 SW Lodi Court, Powell Butte, OR 97753; liebetrauam@msn.com
**TREASURER: Gloria Staebler,** PO Box 234, Arvada, CO 80001; gastaebler@aol.com
**WEBMASTER: Jim Etzwiler,** 19011 312th Ave NE, Duvall, WA 98019; kd7bat@arrl.net
**PUBLICITY CHAIRPERSON: Gail Spann**, bikingail@aol.com
**EDITOR: Beth Heesacker,** 4145 NW Heesacker Rd., Forest Grove, OR 97116, heesacker@coho.net

## NATIONAL BOARD OF DIRECTORS

**Term expires 2017**:
**Allan Young**; allanyoung@msn.com
**Gloria Staebler**; gastaebler@aol.com
**Nelson Shaffer**; shaffern@indiana.edu
**Alex Schauss;** alex@aibmr.com

**Term expires 2018:**
**Clyde Spencer;** c_spencer123@att.net
**Jim Etzwiler;** kd7bat@arrl.net
**James Houran;** jim_houran@yahoo.com
**Sue Liebetrau;** liebetrauam@msn.com

**Term expires 2019:**
**Bob Meyer,** pyrite111@hotmail.com
**Virgil Lueth;** vwlueth@nmt.edu
**Mark Jacobson;** markivanjacobson@gmail.com
**Linda Smith,** vanegas3@charter.net

## CHAPTER REPRESENTATIVES (ALSO BOARD MEMBERS)

**COLORADO CHAPTER: Jeff Self;** selfawareminerals@gmail.com
**MIDWEST CHAPTER: Kenneth Bladh;** kbladh@wittenberg.edu
**PACIFIC NORTHWEST CHAPTER: Bruce Kelley;** bruce.kelley@gmail.com
**PENNSYLVANIA CHAPTER: Joe Marchesani;** Jmarch06@comcast.net
**SOUTHERN CALIFORNIA CHAPTER: Dr. Don Buchanan;** dbuch7326@aol.com
**MISSISSIPPI VALLEY CHAPTER: Larry Nuelle;** LNuelle@gmail.com
**NEW JERSEY CHAPTER: KC Dalby;** fluoriteguy@gmail.com

## EX-OFFICIO BOARD MEMBERS

***ROCKS & MINERALS*: Marie Huizing;** rocksandminerals@fuse.net
***THE MINERALOGICAL RECORD*: Wendell Wilson;** minrecord@comcast.net
**MINERALOGICAL SOCIETY OF AMERICA: Alex Speer;** jaspeer@minsocam.org
**Mindat: Jolyon Ralph; jolyon@mindat.org**
**MINERALOGICAL ASSOCIATION OF CANADA: Paula Piilonen;** ppiilonen@mus-nature.ca
***MINERAL NEWS:* Tony Nikischer;** tony@excaliburmineral.com

Deadline for the next FM Newsletter is
March 7, 2017

working with the organization. The only records that we have been able to come up with was an announcement in the minutes of a 2008 newsletter, by then-president Bill Dameron, that he had worked out an agreement. I have corresponded with the current president and vice-president of MAC to see if they could provide any additional information about the nature of our relationship. The VP, Paula Piilonen, has exchanged a number of emails with me and spoken with Julian Gray. I thought that we were going to be able to negotiate a Memorandum of Understanding, but she indicated in the last email that she was quite busy and would like an opportunity to talk face-to-face with the Board and interested Directors. She will be attending the TGMS show to award the Pinch Medal at the awards banquet. Therefore, she should be able to attend our business meeting. I will send her a reminder as the time nears.

Our bylaws specify that a representative of the American Federation of Mineralogical Societies (AFMS) is supposed to be an *ex officio* Director. I don't think that anyone from AFMS has attended our annual business meeting, at least not in recent years. I sent an email to the current president of AFMS; however, I have not heard back from him.

On another issue, at our last business meeting, Jolyon Ralph had told us that he was willing to host FM websites. Kenton Dalby (KC), president of the New Jersey chapter was looking for an inexpensive way to host their chapter's website. I suggested that he take Jolyon up on the offer. There was considerable correspondence between KC, Jolyon, and me. Unfortunately, nothing happened. I spoke with Jolyon in Denver last September, and he told me he would address the issue. Unfortunately, nothing came of that either. KC has given up on trying to make it happen after several months of trying.

The shuffling of officers and loss of committee chairs at the beginning of the year was very disruptive. After the turmoil, the newly-constituted Symposium-Funding Selection Committee finally posted a list of recommended 2016-2017 recipients. It was narrowed down to only two from the original 10 because the guidelines discourage funding FM chapter symposia, and the request from the Rochester Mineralogical Symposium (RMS) was formally withdrawn. When I enquired as to why it was withdrawn, Steve Chamberlain told me that they had been receiving questions about why their request had not been funded. Those asking were apparently hearing (or creating) rumors that either FM doesn't think highly of RMS, or that Steve had written a poor request letter. I assured Steve that the RMS high reputation was secure. I also assured him that the letter was well-written and clear, but that what the Board had been asked to vote on when Alex Schauss presented the ballot was not in the letter of request and Alex refused to explain just what the $500 was to go towards. I subsequently reviewed the minutes of the business meeting and realized that a motion was passed that directed the Executive Committee to deal with RMS as a special consideration, instead of being put to the Board. I have been trying to talk with Steve, but he has not responded to my last email. I hope that those responsible for the rumors haven't permanently poisoned the well.

Because of all the turmoil, the 2016-2017 award to the New Mexico Symposium received Board approval after the conclusion of the 2016 Symposium. We received a request from the Tellus Science Museum for $850 for early-2017, which was considerably more than our guidelines recommend. It was reduced to $500, with the understanding that we can't continue to fund it at that level. There were requests from several chapters that were not acted on. However, after the recent Funding Committee ballot went out, we received an inquiry from the president of the Pennsylvania Chapter asking about a request submitted shortly after the 2014 business meeting. It looks like it may be a worthy exception to the guideline for chapter support. Incidentally, the guidelines that evolved over a period of months, with input by the Funding Committee and the Executive Committee, is available below.

I'm disappointed at the poor response to my call for volunteers for the Nominating Committee. Four requests went out and only two directors (out of seven that were eligible) stepped up to their responsibilities. An organization of this size cannot run effectively, nor even survive, if those who volunteer to serve on the Board of Directors are not willing to share in the workload! In order to have a committee of three, as required by the bylaws, it was necessary for me to fill the third position. That was not

desirable, but the only solution to a difficult situation. I'm again reminded of the quote plagiarized by John F. Kennedy; paraphrasing it: "Ask not what your organization can do for you, but what you can do for your organization!"

In reading through the operating regulations, I see that we are required to have a California address for the corporation, and it must be the address of a National member. Michael Kokinos is named as the contact person at the address. Unfortunately, he is not currently a member. However, he was instrumental in dealing with a lot of the original paperwork founding our organization and has continued to file our tax forms free of charge for all these years. Therefore, I'm going to strongly recommend that we provide him with a lifetime membership in FM to be sure that we are in compliance with our operating regulations (for as long as he is willing to continue to serve), and as recognition for his long service.

I had mentioned in the last newsletter that Virgil Lueth and Allan Young had agreed to co-chair the TGMS/FM symposium after this year. However, I attended the Cincinnati Mineralogical Society Xmas dinner to hear Joe Dorris, of the *Prospector Show* fame, give a talk on his amazonite mining in Colorado. John Rakovan (MSA *ex officio* Director) was there and he talked with me after the presentation. It seems that Virgil, Allan, and John are of the opinion that FM should discontinue the symposium after next year. If the Board agrees with them, we will need to amend our operating regulations.

**I will be sending an agenda and meeting address separately to the Board of Directors for the business meeting.*

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

## 2016 Friends of Mineralogy Elections

The Friends of Mineralogy National Board of Directors is composed of twelve members chosen by the general membership to serve three-year terms plus the elected presidents of each local chapter. Each year, four Board positions are up for membership vote. A nominating committee chaired by Clyde Spencer has placed three candidates on the ballot to fill this year's positions. Members also have the option of voting for write-in candidates.

### Nominated Candidates:

**Gloria Staebler : Bio not submitted.**

**Allan Young** is a registered professional mining engineer with over 30 years experience in the mining industry in the western U.S. and Latin America. Allan is currently employed by Bureau of Land Management as a member of the National Mineral Examiner Team. He has worked for several mining companies as a laborer, shift boss, mining engineer, general manager, and vice-president. Allan has had an interest in minerals since high school, but it was during his during his time at the Idarado mine where his collecting interests really matured. His focus is on thumbnail size minerals. He has served on the FM Board since 2005 and is a past FM President.

**Randy Marsh** is originally from Canada, being born in Ontario and growing up in Alberta. He completed his Bachelor's degree in Zoology and Master's degree in Cell Biology at the University of Alberta in Edmonton. He moved to Cincinnati in 1995 and completed his PhD in Cell and Molecular Biology in 2000. Upon completing his Doctorate, Randy joined Procter & Gamble in the Baby Care business unit. He has worked on understanding how various ingredients protect infant skin from irritation and on developing technologies for baby care products. Randy is a treasure
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

hunter at heart and loves being outside searching for minerals. He started his first mineral collection when he was 6 years old, digging in road cuts in Ontario. His collection contains specimens from all over the world, but he has developed a passion for Midwest minerals (especially fluorite) and is currently focusing on them. Randy has served as Vice President Programs of Friends of Mineralogy Midwest Chapter since Jan 2014. He welcomes the chance to serve National as Secretary and to help the organization achieve its objectives.

## YOUR FOM BALLOT

Please take time to support Friends of Mineralogy by voting. You may vote for up to four positions from the nominated candidates or by writing in candidates of your choice who would be willing to serve. Ballots should be sent to Clyde Spencer either by email at c_spencer123@att.net or by postal mail at 1858 Robin Hood Drive, Fairborn, OH 45324. Ballots must be received by Friday, February 3, 2017. The new directors will be announced at the general membership meeting on the 7th.

Ballot for Friends of Mineralogy Board of Directors: Term 2017-2020
Vote for up to four positions.

____ **Gloria Staebler**

____ **Allan Young**

____ **Randy Marsh**

____ Write in_____

____ Write in _____

____ Write in _____

____ Write in _____

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# FRIENDS OF MINERALOGY 2017 ANNUAL MEETING

**All Members Welcome**
**Tuesday, February 7, 2017, 4:00 pm**
**Hotel Tucson City Center Restaurant**
**475 N. Granada, Tucson, Arizona**
**Refreshments will be provided**
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# Mineral Collecting in the White Mountain National Forest - A Letter from the Forest Service

USDA United States Department of Agriculture Forest Service Saco Ranger District
33 Kancamagus Highway
Conway, NH 03818
603-447-5448

**File Code:** 2800; 1910
**Date:** November 1, 2016

Dear Interested parties,

The White Mountain National Forest (WMNF) is in the process of improving the management of the minerals resource across the Forest. This change is under consideration because of the significant increase in mineral collecting on the Forest in the last several years. While we welcome the interest in mineral collecting, the increase has brought some adverse impacts to the majority of the existing collecting areas. We are also finding new collecting sites growing in frequency and size across the Forest. Given the disturbance at these sites, it is apparent that some collectors do not follow the Forest Service standards and guides for mineral collecting. At this time, we are concerned about the steady expansion of the collecting, its impact to the resource, and the sustainability of the collecting program. To address these concerns, we are exploring different strategies for the management of our mineral resource with the goal of providing collecting opportunities that will be sustainable into the future.

At this time, we are seeking input from the minerals community and other interested members of the public to better understand the resource issues we are observing and to discuss how we could manage mineral collecting more effectively. The information we collect will better inform our management decisions during the planning process. The WMNF will hold three public meetings to engage with collectors and other interested parties as a focus group and create a dialogue about mineral collecting on the Forest. The dates and times are listed below. If these meeting dates cannot be attended comments can be sent to Elaine Swett eswett@fs.fed.us or in writing to the Saco Ranger District, 33 Kancamagus Hwy, Conway, NH 03818. There will be an additional public comment period once the formal planning process begins. Additional questions concerning the meetings can be directed to Elaine Swett or Austin Hart at the Saco Ranger District 603-447-5448.

6:00 PM Tuesday, November 29, 2016
Location: Pemigewasset Ranger District
Weeks Room
71 White Mountain Drive
Campton, NH

6:00 PM Thursday, December 1, 2016
Location: Androscoggin Ranger District
300 Glen Road
Gorham, NH

2:00 PM Saturday, December 3, 2016
Location: Salyards Center for the Arts
110 Main Street
Conway, NH

Sincerely,

JAMES INNES
District Ranger

Caring for the Land and Serving People

Printed on Recycled Paper

# New Mexico's Biggest Mineral Party – The 37th Annual New Mexico Mineral Symposium

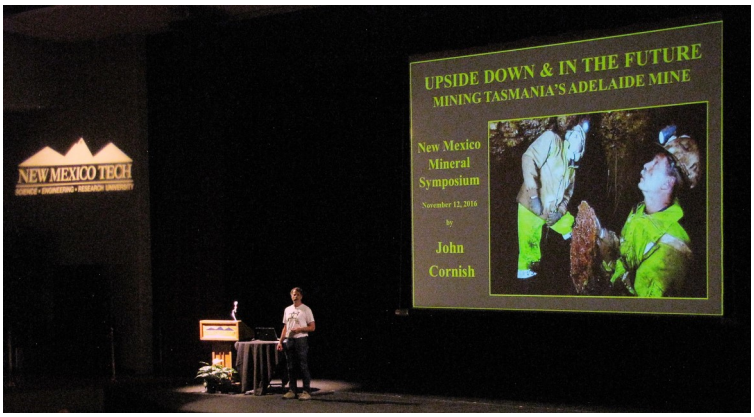
**By Virgil W. Lueth and Kelsey McNamara**

Two hundred and forty-five mineral enthusiasts from around the world gathered for the 37th Annual New Mexico Mineral Symposium in Socorro on November 11-13, 2016. The event started with a field trip to the Copper Flat deposit near Truth or Consequences. Approximately 60 people participated in the trip to the property led by Dr. Virginia McLemore, senior economic geologist at the New Mexico Bureau of Geology and Mineral Resources. Later that evening, a reception for the "Friends of the Museum" was held at the New Mexico Bureau of Geology - Mineral Museum with an abundance of appetizers and a cash bar. The reception is sponsored by John and Maryanne Fender of Richardson, Texas, for the benefit of the museum. The "Friends" launched their first funding projects: 1. Additional lighting for the museum and 2. A hands-on "Pet"trified Log project that will bring large petrified logs to place around the museum facility for the enjoyment of visitors. After the reception, most retired to local motels to buy and sell minerals and enjoy visiting with friends, old and new.

Kelsey McNamara, curator of the NMBGMR Mineral Museum, greeting guests to the Friends of the Museum reception in the atrium of the museum building.

Saturday the symposium was opened by an address from the new President of New Mexico Tech, Dr. Steven Wells. He was followed by a welcome from the new Director of the NM Bureau of Geology, Dr. Nelia Dunbar. The presentations were started by Barbara Muntyan of Tucson, Arizona, speaking on the fluorite localities of Arizona. Larry Havens and Jack Thompson from Denver and Colorado Springs, respectively, gave a fascinating overview of pyrite in their talk titled, "All the glitters." Michael Spilde of Albuquerque (with a host of coauthors), gave a mineralogical update on the famous New Mexico pegmatite deposits at Petaca. Tom Rosemeyer (Calumet, MI and Magdalena, NM) reminisced on his days collecting in the San Juan Mountains of Colorado. Jane Bardal, mining historian and mining artifact collector, presented a talk on "What ever happened to the mineral specimens from Captain Jack's Black Queen Mine" in Colorado. Mark Jacobson of Denver, Colorado, presented an interesting talk on cultural aspects of mineral collecting in China. Following the international theme, Herwig Pelckmans of Belgium gave a talk about an unrightfully unknown mineralogist. Nathalie Brandes presented an overview of the mining history of Falu Gruve, Sweden-- A mineral deposit allegedly discovered by a goat named Kåre. The highlight of the day was the excellent presentation given by this year's featured speaker, John Cornish. John is a well-known collector-dealer from the Pacific Northwest. His entertaining delivery of his adventures collecting crocoite at the Adelaide Mine in Tasmania was well received.

Following the talks, many in the group participated in the banquet and silent auction to benefit the symposium. Donated minerals, books, and artifacts were offered to the highest bidders. Following the dinner, a live auction of a few larger items completed the evening.




John Cornish, featured speaker at the 37th Annual New Mexico Mineral Symposium, starting his presentation in the auditorium of the Macey Center on the New Mexico Tech campus.

The following morning the talks resumed with the first presentation by the hosts (Virgil Lueth and Kelsey McNamara) on "The evolution of uranium mineralogy in New Mexico." Philip Simmons and Mike Sanders of Albuquerque spoke on the "Fabulous fluorites and other minerals from Cooke's Peak" New Mexico. Les Presmyk of Gilbert, Arizona, gave a review of quartz from Arizona. Michael Michayhuk, a graduate student from New Mexico State University in Las Cruces, gave a presentation on a new red beryl find at Paramount Canyon, New Mexico. The final talk of the symposium was by Ray DeMark (Albquerque) and Virgil Lueth on a new find of sidwillite and other molybdenum minerals from Cooke's Peak. A silent auction to benefit the NMBGMR Mineral Museum completed the festivities.

Attendees enjoying refreshments and conversation during one of the breaks in the foyer of the Macey Center. Publishers set up tables of publications for the symposium visitors to peruse and perhaps purchase. Display cases also line the walls showing off specimens that pertain to the talks or just to share their collections.

The New Mexico Mineral Symposium is hosted by the New Mexico Bureau of Geology and held annually on the second full weekend of November. Next year the symposium is scheduled for November 11-12, 2017. The symposium is sponsored by the Albuquerque Gem and Mineral Club, Chaparral Rockhounds (Roswell, NM), Los Alamos Geological Society, New Mexico Geological Society, Grant County Rolling Stones, Friends of Mineralogy (National), White Mountain Gem and Mineral Club (Show Low, AZ), Friends of Mineralogy – Colorado Chapter, and the City of Socorro, New Mexico.

# National Energy Foundation Newspaper

### An editorial by Clyde Spencer

While at the Denver Mineral show in September, I picked up some literature in a small newspaper format. It was titled, "*Act Responsibly: Stay Out – Stay Alive*." The National Energy Foundation (NEF) published it as a resource for teachers in 2003. It contains classroom exercises for primary or secondary-level students. However, my personal opinion is that the tone of the class lessons was more indoctrinal than educational. This is somewhat incongruous because the text contains some good advice about the safety hazards one might encounter in mines and quarries.

The following statement might explain this incongruity: "**Adults** [my emphasis], teens, and children…are lured by the prospect of collecting minerals, activities that may tragically end in serious injury or death." It seems to me that the unstated bias is that mineral collecting is not a worthy avocation and that any level of risk precludes collecting in abandoned mines. This ignores the fact that living is not risk free. Just crossing the street or driving to work carries risks.

We don't tell people not to walk or drive, but instead, society tries to mitigate the risks by discouraging J-walking and establishing 'Rules of the Road.' It seems to me that NEF is doing a public service in pointing out the hazards in visiting abandoned mines. However, I think that they are over-stepping their bounds in implying that the **only** "responsible" behavior is to stay out of old mines.

Responsible behavior is learning what the risks are, personally assessing the risk/benefit ratio, and being prepared to deal with the risks. I'm offended that anyone thinks that they know what is best for me and others. The declaration of independence cites "The pursuit of happiness" as an unalienable right. To me, that means I should be as free to go where I want as someone is to engage in mountain climbing, sky diving, white water kayaking, or similar high-intensity sports, which are not without risk. Mineral collecting is one way I pursue happiness in life!

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# Upcoming Symposia

If has been suggested that this newsletter contain a list of upcoming mineral symposia. Due to length of the list please use the following links to see what is available. My hope is to include a more complete list in the next newsletter.

http://www.friendsofmineralogy.org/symposia.html
http://www.fommidwest.org/announcements/5th-annual-mineralogical-symposium/

Also note the following article:

Rocks & Minerals, Sept-Oct 2015, v 90, no. 5, p. 468 to 480 "*The Year in Micromounting*"
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# The Changing Landscape of Mineral Collecting: A Colorado Perspective

**By Daniel Kile** (From the *Midwest Chapter newsletter, January 2016)*

I've been collecting throughout Colorado for more than 45 years. Over this time, increasing government involvement pertaining to land use, mining and collecting activities, as well as detrimental activities of some amateur and professional collectors, have resulted in access to collecting localities becoming increasingly restricted, with a consequent and real threat to the future of the mineral collecting hobby. Broad categories of such threats are:

1. Government regulation and oversight
2. Mine remediation and mined land reclamation
3. Land closure (state and federal)
4. Commercial collecting activities

Unfortunately there is little voice within the mineral collecting community to counter the rising tide of regulation and land closures, especially in comparison to off-highway vehicle (OHV) organizations with hoards of area members and far greater numbers of activists willing to appear at land use hearings; they are also, as noted by a U.S. Forest Service (USFS) officer, heavily financed by Japanese manufacturers. Mineral collectors are simply far fewer in number and much less financially endowed. However, quite frankly, some of the land closures and regulations are a result of the conduct of a few of the mineral collectors themselves.

The following article addresses some of the issues noted above.

***Government regulation and oversight***.

One used not to hear much about state or federal regulations governing recreational collecting except as pertained to large commercial enterprises. This scrutiny has in recent years descended down to the level of the hobby collector. By contrast, in the 1960s and 1970s, if one had a backhoe and wanted to excavate in the National Forest, one simply went about collecting. The USFS pretty much ignored what was going on. Not any longer.

There were no restrictions enforced at that time, and no required or enforced prerequisite to locate a mining claim, file a Notice of Intent or a Plan of Operations, or post a reclamation bond prior to collecting. Since then the USFS has become increasingly vigilant in regulating land use of all sorts. These regulations have become increasingly stringent, and any activity, including casual collecting (i.e., for personal use) with hand tools on a non-patented mining claim, now requires at a minimum filing a Notice of Intent.

Regulations for mining claims in the 1970s were limited to filing appropriate documents in the county courthouse; the papers were often piled into an un-collated basket for storage, and one needed an exhaustive search through these records to assess the status of a parcel of land one might wish to claim. The Bureau of Land Management (BLM) now has all these records archived in an electronic database that is searchable via the Internet. That's certainly an improvement over earlier era of papers “stuffed into a shoebox at the courthouse”, but it comes with layers of concomitant regulations, fees, and filing deadlines.

In defense of the seemingly heavy-handed actions of the government, many of these regulations have been in response to egregious behavior by a few irresponsible collectors. I have seen numerous huge holes abandoned by weekend rockhounds, and even worse, piles of trash left behind. In one instance, the USFS has issued a Cease and Desist Order to a prominent Denver area rock club, whose mining claims had been hand dug for many years by countless numbers of club members as well as many other unauthorized collectors; the increasing numbers of unfilled holes finally led the USFS to respond by requiring remediation and a bond posted for reclamation. In the case of another Denver area rock club, illicit high-graders had left an enormous pit on a non-patented club claim that attracted government attention, again resulting in a Cease and Desist Order that required the club to reclaim not only their own work, but also the massive excavation left by the high-graders.

Some years before that, a prominent California collector/dealer had operated a mine in the Crystal Peak area with power equipment under a USFS permit and bond. However, when the claimant was finished with the operation, he simply walked away from the property, which now featured a massive open pit on a hillside that was visible for miles, leaving the forest service with an extensive reclamation project funded by additional taxpayer dollars. As a result, bonds set for mining activities in the area are now set higher than ever before.

Moreover, the State of Colorado has recently added another layer of bureaucracy to the situation by invoking their own set of requirements for posting reclamation bonds. This requirement was formerly limited to big mining companies, but has now trickled down to small-scale miners and weekend recreational collectors, in part on account the attention drawn by the crass commercialism shown on the Prospectors Show that has been broadcast on The Weather Channel (see below). Accordingly, although recreational collectors can still casually collect in Colorado, those selling even a small fraction of their finds may find themselves subject to additional state scrutiny, paperwork, and attendant reclamation fees.

The situation represents a "Catch-22": If one wanted to systematically dig in an area, one would theoretically need to file a non-patented mining claim with the Bureau of Land Management (BLM), and also file additional paperwork with both the USFS and relevant County office. If you sold a specimen, you'd also need a state reclamation permit. Alternatively, with a recognized mining claim, if you didn't sell anything, you'd be technically in violation of the "prudent man" theory of the 1872 mining laws, which would effectively invalidate the claim. The hobby collector, not wishing to deal with government entanglements, is caught in the middle, inasmuch if a claim on a productive area is not filed, the collector may well be pre-empted by someone else filing a claim on that spot.

***Mine remediation and reclamation***.

Activity by the Bureau of Mined Land Reclamation in Colorado first came to my attention in 1988, with the filling in of the Alice mine, a large open-pit mine last operated in the 1930s that was an exceptional locality for sulfide minerals, including chalcopyrite and pyrite, with siderite and quartz, with the occasional micro-gold crystal. It took 500,000 cubic yards of earth to accomplish this feat, creating two manmade lakes in the area. This agency is funded by 'invisible' taxes on mined coal; the original intent was to remediate eastern coal strip mines, but the remediation was extended by the agency to encompass hardrock metal mines in the western states as well. Bureau managers (as well as environmental groups) have thus diligently gone about convincing the public that every mine is dangerous and in need of reclamation for the safety of all. My take: It's all about job security.

***Alice mine in the 1970s, before remediation***

***Alice mine, after remediation, 1988***

There is no doubt that past activities by large profit-minded mining companies has led to environmental problems, a textbook example being the Summitville mine debacle where a Canadian company abandoned the property leaving massive contamination of waterways. However, the pendulum now seems to have swung too far the other way, with remediation and reclamation being carried out on a scale that is rapidly erasing our western mining heritage, which is sometimes troublesome considering that there are few or no data recorded that document contaminant levels *prior* to mining activity.

Area mines in Leadville were designated some years ago as a superfund site, which resulted in an exhaustive remediation of countless mine dumps. Remediation included removal or relocation of entire mine dumps, or capping the dumps with landfill, the latter of which in one case resulted in an idiotic terraced pyramid, locally called the "wedding cake", in a misguided attempt to artistically render the new cap "realistic". In addition to eradicating much of the mining heritage of the area, numerous collecting localities were completely destroyed.

The Gold King mine spill in the summer of 2015, resulting in contamination of vast stretches of the Animas River, was caused by ill-advised EPA work at the portal. The railing from various environmental organizations and lawyers created a level of adverse publicity (fueled by newspaper editorials and articles) sufficient to induce the Silverton town board to consider applying for superfund status. If implemented, it will doubtlessly result in a massive reclamation project that will again eradicate mining history and obliterate numerous mine dumps and collecting localities in the area, much as they were in Leadville.

I recently discovered, in August of 2015, another assault on a collecting locality, this time by the USFS. The Santiago mine, located at ca. 12,000 feet above timberline above Georgetown and operated as late as the 1940s or early 1950s, contained small but collectible pyrite crystals in the dump, and though not spectacular, constituted another interesting mineral locality in the state. It is now targeted for remediation, which means the mine dump will be covered or removed, compromising the mining heritage of the area and eliminating any further opportunity for collecting minerals.

Warning signs, intended to intimidate visitors, were posted about the horrific dangers of arsenic, mercury, and lead, all of which is intended to intimidate the uninformed public by stating that these toxic compounds will be carried home in dangerous quantities on one's shoes just by walking on the dump (see documents below; it brings to mind the Wizard of Oz … "arsenic, mercury and lead, Oh My!"). In earlier years I risked life and limb nonetheless and searched the purportedly incredibly toxic dump anyway, with imminent death awaiting from exposure to toxic metals. Luckily, I am still alive. However, with no visible Pb-bearing minerals in the dump, one wonders from where the lead originates!

Order No. ARP-CCRD-2015-03

FOREST ORDER

USDA Forest Service
Arapaho National Forest
Clear Creek Ranger District

NATIONAL FOREST OCCUPANCY AND USE REGULATIONS

Entry Restriction – Santiago Mill Site

Pursuant to 16 United States Code (U.S.C.) § 551 and 36 Code of Federal Regulations (C.F.R.) § 261.50(a), the following acts are prohibited on National Forest System lands within the Clear Creek Ranger District of the Arapaho National Forest that are located in Clear Creek County (the "Restricted Areas").

The Restricted Area known as the Santiago Mill includes any structures or improvements associated with the Santiago Mill site, including, but not limited to the mill building, bunkhouse, trestle, ore bin, water tank and any other accessary structures. The Restricted Area is located at the junction of the buck and pole fence and National Forest System Road #248.2D and surrounds the Santiago Mill Site at T5S, R75W, Section 3, 6th P.M. as depicted on the attached map, hereby incorporated into this Order as Exhibit A.

The purpose of this Order is to provide for public safety during the containment and capping process of the heavily contaminated soils as well as property and resource protection.

PROHIBITIONS:

1. Going into or being upon the restricted area. 36 CRF § 261.53 (e) and (f).

EXEMPTIONS:

Pursuant to 36 CFR § 261.50(e), the following persons are exempt from this ORDER:

1. Person with a permit specifically authorizing the otherwise prohibited act or omission.
2. Any Federal, State or local officer, or member of an organized rescue or firefighting force in the performance of an official duty.

This ORDER will be in effect when signed and will remain in effect until rescinded.

Done at Fort Collins, Colorado this 4th day of August.

/s/ Thomas A. Ford — August 4, 2015

THOMAS A. FORD — DATE
Acting Forest Supervisor
Arapaho and Roosevelt National Forests
Pawnee National Grassland

Violations of these prohibitions are punishable as a Class II misdemeanor by a fine of not more than $5000 for an individual or $10,000 for an organization, or imprisonment for not more than 6 months, or both. (16 U.S.C. § 551 and 18 U.S.C §§ 3559 and 3571).



AREA CLOSED FOR PUBLIC SAFETY

- Recent soil sampling in and around the Santiago Mill site revealed **very high levels of lead, arsenic and mercury**, well above what is safe for humans and animals
- Walking around the area or in the mill kicks up **dust that contains dangerous levels of these toxins**, releasing them into the air. They also get on your shoes, shoelaces and clothing.
- The **open mine shafts and the mill are unstable and unsafe**. Do not go near the opening of the mine. The shaft could collapse and the unventilated air inside could expose you to undetectable fatal gases.

"This is an important part of Colorado's history and its mining heritage. Our goal is to make the site safe for visitors so that this history can be shared with future generations.

Sue Struthers, U.S. Forest Service Archeologist

HISTORY OF THE SANTIAGO MILL

The Santiago Mill is an increasingly rare example of an early– to mid–twentieth century American floatation mill located on National Forest System lands. It is one of the last complete depression-era mills standing.

Built in 1935, the mill was used for concentrating locally mined gold, silver and lead ore, utilizing the floatation process. Designed to save on power costs, the mill utilized gravity to process ore extracted from the Santiago Mine and surrounding dumps.

Floatation was a cost effective way to process heavy mineral particles out from lighter waste particles by "floating" the waste from the mineral using water.

Prominent features of the mill site include the 1935 mill and sampling shed, 1948 water tank, and 1911 ore bin. The mill is a shed-roofed, wood-framed building with four steeped bays. On the northeast side of the mill is a single story gable-roofed with a shed-roofed addition called the sampling shed.

The mill itself contains remnants of milling equipment from the 1930s through the 1950s. The 3,700 gallon water tower, critical to the floatation process is found northeast from the mill. This tower was filled by a piping system from snowmelt collection higher up the slope and another welded pipe, a half-mile long that pumped water from the town of Waldorf below.

Cu Hg Zn As Pb

WHY BE WORRIED?

- **Arsenic** contamination in soil is of public health concern due to its toxic effects as a cancer causing carcinogen When arsenic is present in soil, small amounts can be ingested by swallowing soil through hand-to-mouth actions and breathing in dust.
- Even the small amounts of **lead** can cause harm to the body. Symptoms of lead poisoning include headache, abdominal pain, memory loss, kidney failure, and weakness, pain, or tingling in the extremities.
- Less than a gram of **mercury** can produce toxicity or death. Effects include damage to the brain, kidneys and lungs. Common symptoms of mercury poisoning include itching, burning, skin discoloration, swelling and peeling.

***Recently posted warning and closure signs at the Santiago mine, August 2015***

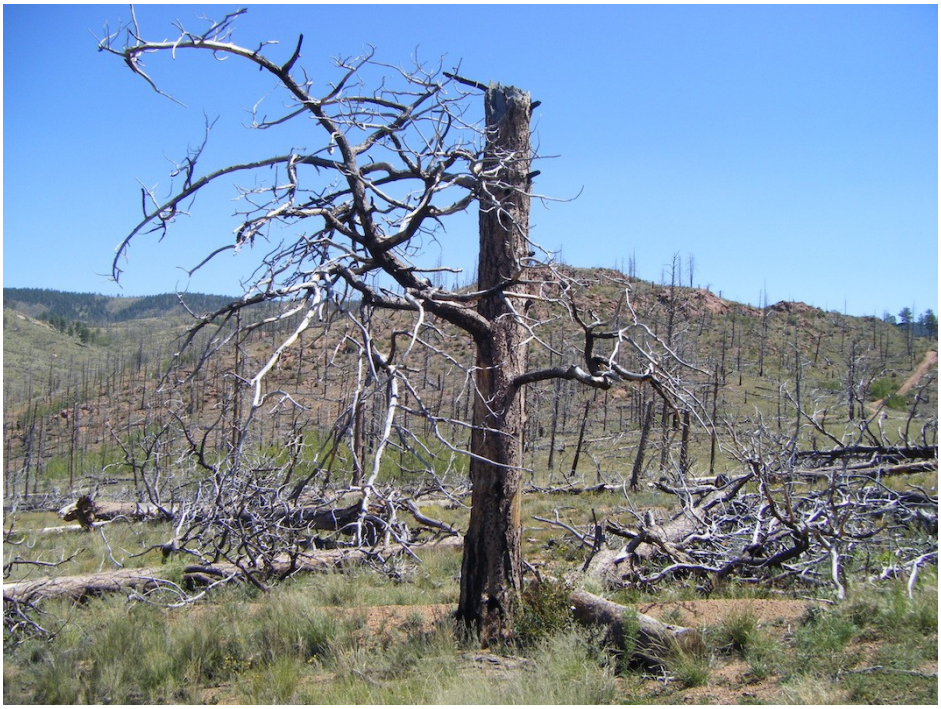
Recent headlines in The Denver Post have now reported a proposal to further tax mine operators (Denver Post, 12-3-2015): "Western senators including Michael Bennet this month launched legislation to reform the nation's 1872 mining law and require companies to pay fees to create a cleanup fund for abandoned inactive mines." This amounts to a royalty on all minerals extracted, and one now wonders if this will be extended down to the hobby collector level and pertain to all non-patented claims.

***Land closure***.

Aside from closure of land encompassing mineral localities due to remediation, access to many other localities (i.e., road closure) has been either eliminated or otherwise compromised for both public and private property, largely on account of reckless ATV off-road traffic, but too often due to egregious activity by commercial or hobby collectors.

Road closure has long been championed by various environmental groups, and such groups have effectively influenced government responses to issues such as cited above. As an example, the U.S. Forest Service has closed numerous roads in the Crystal Peak-Lake George areas, even those that were originally created by the Forest Service, in response to an increasing amount of ATV traffic and consequent degradation of the of the terrain; access to mineral collecting localities thereby became 'collateral damage'. The tenacity of environmental groups is evidenced by a posting on the Internet listing the names and addresses of all non-patented claim owners of record in the Crystal Peak area as being "enemies of the South Platte watershed".

Note that while I don't appreciate the increasing layers of bureaucracy affecting the hobby, I recognize the necessity of regulating the excesses of a few irresponsible individuals (ATV owners, large-scale mineral collectors, litterers, et al.). However, despite the government's attempts to control reckless use of the national Forest, nothing has degraded the region to a greater extent than the massive Hayman fire of June, 2002, which burned more than 138,000 acres, and was started (some say intentionally) by a USFS employee. Almost all of the pegmatite districts in the Pikes Peak batholith were devastated. This event, on account of the considerable number of downed trees, has rendered auto and even foot travel in many areas difficult to impossible.



***View of the Crystal Peak-Lake George area following the Hayman fire of 2002***

Road closures in the Crystal Peak area and many others affect prospecting to the extent that long hikes with heavy packs and tools are now required to reach many localities hitherto easily accessible by road. Needless to say, such closure affects more the older collectors, many of whom are no longer able to easily hike long distances over rough terrain. So much for the concept of universal access (and here I thought that Federal regulations precluded bias against the elderly and handicapped!). The net result is that all travel in the Crystal Peak area is now restricted to a few major arteries, funneling increasing numbers of people into a smaller and smaller area – not a pleasant outcome for those seeking a bit of weekend solitude. Non-system roads that formerly accessed claims can now only be used by claim owners who post a reclamation bond, even if the Forest Service originally put in the road! The road closure situation is compounded by the fact that it is now illegal to camp more than a vehicle width off the road! Thus, on a weekend one can enjoy a front-window view of all the ATV traffic.

In another part of Colorado, a collecting area for calcite and barite in the southeastern part of the state was temporarily closed some years back when a rock club sponsored a field trip to the area, which is on National Grasslands (surprisingly, despite few trees on the landscape, the USFS administers such grasslands). Local ranchers, generally used to few people in the area, were apparently alarmed to see numerous travel trailers and a dozen or more vehicles driving off road everywhere. Forest Service authorities were notified, who responded by closing the area to collecting except by permit. As far as I am aware, the dust has since settled, and some years later regulatory mandates were apparently no longer being enforced. The conclusion here is that large groups of collectors can indeed attract unwanted attention of local landowners or authorities; discretion is always recommended in uncertain areas.

Another interesting discovery is that in Colorado collecting minerals in an area designated as a State Wildlife Refuge is illegal. This affects any state refuge, but most notably those in several localities in Ouray and Montrose counties. Of special note is that while one cannot disturb any geological feature, one can hunt wildlife in a wildlife refuge!!! Go figure.

A proposed road use plan, due to be implemented in the near future (if not already) will affect access to mineral collecting in some areas of the Book Cliffs north of Grand Junction – a locality long noted for world class water clear barite crystals. Some of the network of roads and trails is being left open for ATV use, but much of the area is designated for road closure, making access to these areas far more difficult.

Another example of a recent land closure is the Stoneham locality, world famous for blue barite crystals, some of which are on a contrasting matrix of pale-yellow calcite. For many years collectors have been intermittently getting permission to collect from a nearby property owner. I was surprised to read in a recent rock club newsletter, however, that the locality has been closed by the State of Colorado Land Board. A long phone conversation with the regional manager revealed that much of the collecting locality was on or accessed through state school section land. Largely on account of extensive unremediated excavations, and in order to bring more money into the state school fund, the manager has closed the property unless someone is willing to lease the mineral rights from the state, and continually monitor the area for unauthorized collecting.

As a parting comment, numerous mines, quarries and other private properties are being closed at an increasing rate, not only in Colorado but also in the Midwest, where collecting localities can be hard to come by. Although such closure is often due to government or OSHA regulations, much is our own fault ….we now live in a highly litigious society, willing to blame anyone but ourselves for our own misfortunes. We have also have become a zero-risk tolerance society. The confluence of too many lawyers as well as a lack of personal responsibility has led many property owners to conclude that it is simply not worth the risk to allow collectors onto a private property.

***Commercial collecting activities***.

*Disclaimer 1: These comments pertain mostly to individual part-time collectors, not to some of the responsible full-time professional collectors operating with power equipment.*

*Disclaimer 2: I have never watched the Prospectors Show; I would probably become physically ill if I attempted to do so. But I have heard numerous accounts from a lot of collectors about this show, none of which was favorable.*

In earlier years, I recall some rock club members condemning the chase for the "almighty dollar" by the hobby collector. Point well taken. However, commercial mineral collecting has been around since before the California Gold Rush. On a large-scale commercial basis, such activity has provided the collecting community and museums with exceptional specimens that would not otherwise have been brought to light (the Sweet Home mine near Alma and the Smoky Hawk operation in the Crystal Peak area come to mind, among others worldwide). Too often, however, when a profit-only motive extends down to the 'hobby' level, it becomes problematic.

Before about 1990, when the price of amazonite specimens skyrocketed due to the influx of wealthy collector/investors, one could freely hike many areas of the Crystal Peak-Lake George area in search of solitude and minerals without being molested. Now, especially after the airing of the Prospectors Show, with exorbitant claims of high mineral values and emphasis on the ostensible monetary rewards of collecting, legions of profit-minded and mercenary collectors have been inspired to file mining claims or high-grade existing claims in the Crystal Peak-Lake George area (as well as other localities in the state), seeking their fortune based on unrealistic specimen appraisals and fantasies of easy finds. Almost all the ground in the Crystal Peak area is now covered by mining claims, with new claim stakes sprouting like mushrooms. Incidents of claim jumping and poaching have become commonplace. In my opinion this show has promoted the influx of undesirable elements to the hobby.

Mine swindles and nefarious activity are nothing new in the Crystal Peak area of Colorado – they have been going on since I arrived on the scene in the early 1970s, and undoubtedly before that. I have encountered my share of scoundrels, claim jumpers, high-graders, and other nefarious individuals of questionable character in my years of collecting in this locality.

The situation is indeed reminiscent of tales from the gold rush days in the western U.S.! In the 1970s a con artist (who may be still operating in the area) erected an illegal cabin at the old Whitmore Gem Mines site and proceeded to tell prospective collectors that public access to the road passing through was closed, and worse yet, proceeded to sell mine claims to unsuspecting individuals, including to a retired military person that I met, who told me that he was assured he could build a house on his new claim, and that there was even gold on the property (!) – he showed me a handful of "rich ore" that he was going to take to an assay office in Cripple Creek to have analyzed for gold. The "ore" contained distinctive flakes of weathered biotite! He had even erected an elaborate wood fence along the road to block public access to the land. The Forest Service eventually disassembled the fence, as well as a cabin built elsewhere by another individual who purchased a property from the same swindler. He also had been told that building a cabin in the National Forest was perfectly legal, and that one indeed had more property rights on a mining claim than on private property. The USFS eventually removed this cabin as well as the hovel built by the swindler.


***"A prospector defends his claim at the Comstock Lode, 1861."***
***Lithograph from Harper's Monthly Magazine, January 1861***

In more recent years, wire fences and 'Private Property/Keep Out' signs were erected by a non-patented claim owner near the Forest Service entry gate near Crystal Creek in the Crystal Peak area. Owning mineral rights on a non-patented claim does not extend to surface property rights; the USFS had to resort to armed intervention and legal action to settle this and other issues with the claimant.

Ongoing conflict in the area is evidenced by a large sign that was erected last year (2014) near the entry gate on the USFS public access road to the Crystal Peak collecting area, implying that it was a private road. Someone apparently disputed this assertion and responded by vandalizing the sign shortly thereafter by painting two skull and crossbones over it, with the words “Bite Me.” It was certainly entertaining, but also an indication of the heightened tension in the locality. The sign was soon thereafter torn down, apparently by another disgruntled collector.

In a last example of restriction of access to formerly productive collecting areas caused by a few irresponsible mineral collectors, continued trespass by a few individuals in recent years who insisted in using a metal detector to search for gold in a restricted mine dump east of Leadville resulted in closure by the company of the entire Ibex mine complex area to all.

***Conclusions***.

Many collecting localities have been eradicated by government sponsored road closures, remediation, and other activities. Some of this can be traced back to destructive actions of the general public, as well as some of those in the mineral collecting community, and also to a heightened emphasis on profit-making versus simply enjoying scenery and solitude in the field and the beauty of a crystallized mineral.

The decline of field collecting opportunities may in the future result in fewer active participants at the rock club level. Accordingly, mineral collecting will increasingly evolve toward collectors whose only option will be to purchase mineral specimens.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# The Future of Field Collecting in the United States: Repercussions from the Prospector's Show

**By Daniel Kile**

*Disclaimer 1:*

> *The opinions expressed herein are solely those of the author, and not in any way representative of, or endorsed by, The Friends of Mineralogy.*

Lawyers and government regulations have long been the bane of mineral collecting, especially in recent years. Both entities have served to limit field collecting opportunities for both hobbyists and commercial interests throughout the U.S. Unfortunately, in the past several years, the airing of the Prospector's Show, a melodramatic "reality" television show produced by High Noon Entertainment for the Weather Channel, has greatly magnified the problem. In my opinion, the Prospector's Show is the worst thing that has happened for serious mineral collectors and the mineral hobby in general in the past 45 years that I've been actively collecting; it has brought a whole legion of profit-minded mercenaries into the field hoping to find their fortune based on grossly inflated specimen appraisals on this show, along with vastly increased government regulations.

*Disclaimer 2:*

> *I have not personally viewed any episode from this series (I would likely require medication if I attempted to do so); my assessment is based on accounts, by numerous knowledgeable collectors and dealers, of the Prospector series broadcasts.*

As described in a Denver Post article (September 8-2013):

> *"The show has put a new spotlight on prospecting with stories of 'a ragtag gang of prospectors' that includes sometimes a bikini-clad fashion model, a hot-tempered digger nicknamed Rambo who is known to carry a loaded AK-47 while mining … (who) all escape being killed by lightening … in nearly every episode ... to get to gems ... 'more valuable than gold'." "This kind of excitement … has inspired some other … prospectors to ... hunt for gemstones."*
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Some collectors and dealers have strongly supported the show, with comments that it would "bring more people into the hobby". The show was indeed successful in bringing more collectors into the field, but mostly those seeking commercial gain and not interested in the hobby *per se*; I have not seen evidence that the show has led to an increased membership in the local amateur Earth sciences organizations that appeal to the hobbyist interested in minerals for their own sake.

Indeed, I have seen firsthand evidence in the past few years of an increased level of claim jumping, high-grading, illegal road construction, and erection of unauthorized structures in the Lake George/Crystal Peak area in central Colorado. In fact, I have had to take a claim jumper (inspired by the riches alluded to by the Prospector's Show) to court to evict the interloper from the property (and yes, I do have non-patented mining claims in the Crystal Peak area – try collecting there unmolested without one!). Most of this activity as far as I can tell is due to relative 'newcomers' to the area.

In the past, collecting activities have been monitored by the U.S. Forest Service (USFS), which has issued permits (based on an Operating Plan filed by the collector) for road construction and mining, and collected reclamation bonds for extensive (mechanized) operations. Hand digging operations with minimal surface disturbance for the most part required only a Notice of Intent, which required excavations to be filled at the conclusion of the operation. There are no application fees for either of these forms. And up until a few years ago, the State of Colorado Department of Natural Resources concerned themselves with only with large-scale commercial mining operations, i.e., those utilizing mechanized equipment. However, primarily as a response to the Prospector's Show, the Colorado Mined Land Reclamation Board (CMLRB) has opted for a strict interpretation of the January 2015 Colorado Mined Land Reclamation Act (Title 34 Article 32), Rules and Regulations for Hard Rock Metal, and Designated Mining Operations. A "mining operation" is defined in the Act [34-32-103(8)] as the development or extraction of a mineral from its natural occurrences on affected land:

> *"As defined in the Act (34-32-103(8)), 'mining operation' means the development or extraction of a mineral from its natural occurrences on affected land. These activities would need an approved mine reclamation permit with the Division."*

In 2013 the CMLRB stated that

> *"Rockhounds don't need a permit if they are only engaging in 'casual use' of land and don't disturb more than 1,600 square feet" (Denver Post, 9-8-2013).*

Unfortunately, the State is no longer drawing a distinction between commercial large-scale operations, and those conducted by hobby or recreational collectors. An on-line CMLRB document titled, "Is It A Mine?", can be downloaded and filled out and sent to the agency, leading one to believe that small and hand-dug operations might indeed be exempt. However, the agency has now extended their interpretation of the Act to consider *any* work done by hand, no matter how minor, to constitute a 'mine', which encompasses all non-patented mining claims in the State; such activities would now need a costly mine reclamation permit with the Division. Accordingly, the State is now systematically sending out notices to all non-patented claim owners. With approximately 10,700 such claims in the State, the income derived from permit application fees (costing from nearly $300 to more than $1,000, with subsequent ca. $80 annual fees) for *each* location would run well into the millions of dollars.

Thus, collectors using *only hand tools* to remove *any* amount of minerals, and no matter how minor the surface disturbance, will be required to obtain a non-refundable reclamation permit (with fees ranging from ca. $300 to more than $1,000 *per claim*), with subsequent annual fees and potentially a costly reclamation bond. Moreover, an "environmental protection specialist" at the CMLRB stated that in order to acquire the lower-cost permit, one must restrict collecting to one specific 40 x 40-foot area. Because the State assumes that prospecting throughout an 20-acre claim (even with a minimal total surface disturbance) could potentially disturb the *entire* property, the higher permit fee would be required *even if the*

*USFS previously adjudicated that no bond was necessary on account of minimal environmental impact*! These fees and bonds are in addition to any bond that might be required by the USFS; State regulations thus only add another layer of costly fees to the process.

Some collectors and hobbyists may feel that the impact of these new regulations for non-patented mining claims wouldn't affect their own interests. But in the long run, these regulations could easily extend to *all* levels of mineral collecting activity. This same individual at the CMLRB revealed that their revised interpretation of State law considers even a casual rock collector *with no mining claim* to be included in these regulations. More importantly, numerous rock clubs that have maintained non-patented claims in years past (of which there are at least 12 such claims in the South Park Ranger District of Colorado) to assure that their numerous members would have areas in which to collect minerals, will now find that the reclamation fees are too onerous to maintain the claims; the fees will doubtlessly be high for these groups since the regulators assume that large numbers of club members can disturb the entire 20-acres within a given claim, thus incurring the maximum permit fee. Rock clubs not able to cover the permit fees and associated reclamation bond would no longer be able to maintain access to important collecting areas for their members.

Of note is that the individual State counties are now becoming increasingly involved, at least as regards to mechanized operations in Teller County, where much of the active collecting for amazonite occurs. At this point it appears that their involvement is limited to those operating mechanized equipment (however, I don't want to make an inquiry and potentially open another Pandora's box), but as with the State MLRB, this could easily be extended to hobby collecting activities as well. And, the county permit fees and volume of paperwork are significantly higher and more onerous than even that of the State.

Thus, at present mineral collecting activities by individual collectors and rock clubs in Colorado may be governed and regulated (with attendant fees) by *four* governmental agencies: the BLM, USFS, CMLRB, and County. To reiterate: Discussions with three of these government agencies have unanimously pointed to a singular event that initiated vastly greater commercial collecting activities and consequent increased regulations – The Prospector's Show.

The good news (if there is any): My experience with the USFS has thus far been positive; they require only a Notice of Intent form for hand digging (in contrast to a Plan of Operations for more extensive disturbances), and indeed have refunded a reclamation bond posted with the U.S. Treasury when it was shown that surface disturbance was minimal. Reclamation bonds for mechanized mining have, however, substantially increased in recent years, largely on account of abuse by one mining operation (the Rocket claim in the Crystal Peak Area), whose owner(s) abandoned the claim, leaving the USFS to remediate a massive open pit that was left.

Those living outside of Colorado thinking that such regulations would not affect them are mistaken. A letter sent out by the U.S. Department of Agriculture/White River National Forest in New Hampshire (November 1, 2016) indicates that this agency is also in the process of limiting mineral collecting activities:

> *"The White National Forest is in the process of improving the management of the minerals resource across the Forest. This change is under consideration because of the significant increase in mineral collecting on the Forest in the last several years … the increase has brought some adverse impacts to the majority of the existing areas. We are also finding new collecting sites growing in frequency and size across the Forest. Given the disturbance at these sites, it is apparent that some collectors do not follow Forest Service standards and guides for mineral collecting. At this time, we are concerned about the sustainability of the collecting program. To address these concerns, we are exploring different strategies … ".*

Regrettably, even recreational mineral collectors are partly responsible for this situation, and to some extent I can sympathize with the need to address excesses of collecting, no less than that of ATV use, which has trashed much of the western U.S. Mineral collectors (evidenced by some enormous hand-dug excavations throughout the Pikes Peak region), and especially the recent influx of commercial collectors as exemplified by the Prospector's Show "actors", have left their share of unfilled holes, and I have myself picked up too much litter left by thoughtless rockhounds. Alas, in many cases the profit motive of the hobby has extended even to the rock club level.

Conclusion

Largely on account of the influx of commercial collectors inspired by the Prospector's Show, various government agencies have extended their stricter regulations down to the hobby level, ensnaring even those who were not a part of the problem to begin with. This surely may compromise the future of casual and recreational non-commercial mineral collecting. And I am very concerned that this in turn can impact the future of amateur mineral clubs in the U.S. Unfortunately, there seems to be no unified voice from the mineral community to defend itself from over-regulation. *The end result may be the disappearance of amateur and hobby collectors from the National Forests, along with a decline in earth sciences organizations, replaced only by large-scale commercial operations and Prospectors Show miscreants.*

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# The Joint AGI/GSA Societies Meeting

On Monday, September 26, 2016, the Joint AGI/GSA Societies Meeting was held from 8 AM to 12 noon in the Centennial G Ballroom of the Hyatt Regency Hotel, Denver, Colorado. This meeting coincided with the National Geological Society of America meeting in Denver, the meeting included representatives of all the associated earth science related societies that have chosen to be affiliated with the American Geological Institute.

The meeting had two major presentations. The first was regarding harassment - sexual, gender, or other in professional, organizational situations such as meetings, research environments or geologic field work. The emphasis was more board brush - firstly creating or having an organizational code of conduct and secondarily have recommended procedures for dealing with harassment complaints. The need for these discussions is in recognition of major complaints occurring in universities and during geologic field work. These complaints reflect that the diversity of participants in earth science activities is increasing and if all participants are not made to feel welcome and safe, the science, and our organizations will suffer. At universities the increase in diversity is so huge that making any segment of the student body feel unwelcome and cease to attend those schools, could cause those department to close. In volunteer based mineral organizations, such behavior could similarly cause the organization to cease to exist.

The second presentation regarded other academic concerns, the chief two being plagiarism and copyright issues. Both of these are of high concern with material being posted on the internet in Facebook, websites and downloadable websites. The two currents flowing on these issues are those who want control and restrictions and those who more widespread access and sharing of information. FM national has not created nor agreed to any policy regarding copyright that has been printed or posted anywhere. It is also clear that there is no organizational consensus as to what our policy is or should be. Plagiarism similarly within the mineral sciences is something that most people agree is undesirable but how is it defined and complaints resolved within our organization.

This summary was prepared simply to inform our membership that these issues are being discussed by other earth science related groups.

(The meeting was attended by Gloria Staebler and Mark Jacobson and the summary submitted by Mark Jacobson)
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# Guidelines for FM Funding of Activities

## Friends of Mineralogy Support of Activities
## Timeline and Procedure for Funding Activities

July 1: Start of Funding Year. FM President notifies not-for-profit mineralogical organizations of availability of funds to help sponsor symposiums and other related activities or projects and instructs those interested to apply for funds by letter (or email) to the FM President by October 31. The application shall be for funding during the 12-month period beginning July 1 of the **following** year.

Included in the application shall be the name of the organization, a description and history of the upcoming event or activity, the date(s) and duration, expected attendance, the amount and proposed use of the funds, any special circumstances justifying the request, and proof of the organization's not-for-profit [501(c)(3)] status. Deadlines for applications shall be October 31.

October 31: Applications forwarded to activity-support Selection Committee for review. Selection Committee accepts only those applications that meet the selection criteria set forth by the Executive Committee.

January 1: Determination of level of support. Executive Committee determines maximum amount of funding to be recommended for disbursement to qualified applicants during the Funding Year and informs Selection Committee of the amount.

Ranking of requests. Selection Committee prepares a ranking evaluation request for each Board member to evaluate and the Selection Committee chair person sends this request to each Board member by email. The evaluation will list **all** qualified applicants, and each Board member will be asked to rank the applications in order of their preference, with a "1" being the most preferred. Once complete, each Board member will return their request ranking by email to the Selection Committee members.

Mid-February: At the annual Board meeting, the Selection Committee Chair will present the Selection Committee's results and recommendations to the Board. It will then be up to the Board to vote to approve the recommendations as is, or modify them with amendment(s). The successful (and unsuccessful) applicants will be notified as soon as possible following the Board meeting. Funding will be provided to the successful applicants prior to the beginning of the succeeding Funding Year.

June 30: End of Funding Year.

## Friends of Mineralogy Support of Activities
## Guidelines for Selection of Recipients

Applicants must have 501(c)(3) not-for-profit status.

Applicants should apply for funding by submitting a written request by letter (or email) to the FM Executive committee by October 31. The application shall be for funding during the 12-month period beginning July 1 of the **following** year. Included in the application shall be the name of the organization, a description and history of the upcoming event or activity, the date(s) and duration, expected attendance, the proposed use of the funds, any special circumstances justifying the request, and proof of the organization's not-for-profit [501(c)(3)] status.

Except under special circumstances, funding will not be provided to FM chapters.

The maximum amount funded for conferences and symposia will be $200 per day, up to a maximum of $600 for three days or more.

All applicants satisfying the above criteria shall be listed on the ranking evaluation request provided to each Board member.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

## Reviewers Needed

AGI american geosciences institute
connecting earth, science, and people

Dear Colleague:

AGI has been asked to help recruit reviewers for teaching materials developed by the NSF-funded Interdisciplinary Teaching about Earth for a Sustainable Future (InTeGrate) project, which is operated by the Science Education Resource Center (SERC) at Carleton College. The InTeGrate project has developed innovative teaching materials, primarily for college classrooms that link teaching about the Earth to grand challenges facing society. The materials are being made available on the internet without cost for use in geoscience instruction. Cathy Manduca, Director of SERC, has asked AGI to spread the word that there is a need for geoscience professionals to volunteer to review the scientific content of the InTeGrate materials as they are prepared to be published on the InTeGrate website.

This seems like a very worthwhile project that will benefit the geoscience community, so AGI is pleased to support it by sending this information to our member societies. The attached letter from SERC explains details. We hope that you will feel comfortable sending that letter to some or all of your members.

Individuals can sign up to review materials on line at http://serc.carleton.edu/integrate/participate/courses_modules.html. If you have questions, please contact Stuart Birnbaum (stuart.birnbaum@sbcglobal.net).

Respectfully,

Walter Sisson
Acting Executive Director
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# Pennsylvania Chapter Update

## BREAKING NEWS:
## Celestine for Pennsylvania State Mineral

Pennsylvania House of Representatives has passed Bill 564, which would adopt celestine as Pennsylvania's official state mineral. Most of the story transpired since our last issue. Progress in the House can be seen at <http://www.legis.state.pa.us/cfdocs/legis/home/bills/>; in "By Bill Number" enter HB564. The bill next needs to be introduced and passed in the Senate, and then signed by the governor.

Chapter member Mike Dunton alerted us to an article in the Pocono Record published September 24: <http://www.poconorecord.com/news/20160924/rock-hounds-push-for-celestine-as-state-mineral>. It describes how members of the Che-Hanna Rock & Mineral Club in Sayre, PA, encouraged their state representative, Tina Pickett, to introduce the House bill. This followed activity several years ago which was championed by sixth grader Royce Black. The article also mentions support from Lancaster County Fossil and Mineral Club, and mineral collector and radio personality RJ Harris. *-Editor*

# MIDWEST CHAPTER UPDATE

## Hammer on Hammer



Clyde Spencer

At a recent MSHA safety training session conducted by Scott Kell, he showed the picture of me below as an example of someone well prepared. Afterwards, an individual in the class approached him and stated that a hammer to hammer blow was a violation of OSHA standards. He claimed that chisels are non-hardened steel and are designed purposely to mushroom rather than splinter. He claimed to have seen serious injuries caused by flying steel splinters from a hardened steel hammer striking a hardened steel wedge or hammer. Scott told him he was unaware of the claims, but would look into it. Scott told me that he has not found an applicable OSHA standard; however, a number of websites by hammer manufacturers advise against the practice.

Incidentally, in the photo of me to the left, the rock had a large crack that went all the way through the boulder. I wasn't hitting my hammer as hard as I would a chisel because I was just trying to get the point in deep enough to use the curved point to pry the two pieces apart. Obviously, the design of the typical geologist's hammer is such that it is intended to be used to pry. Whether or not it can be hit hard on the face safely remains an open question unless we can learn more detail about how Estwing heat-treats their hammers.

I'm aware of the risk of hardened steel against hardened steel. That is part of the reason I wear eye protection, long-sleeve shirts, and gloves. Some of my chisels, but not all, are hardened throughout. Considering that geology hammers are intended for use on hard rocks, and observing the nature of the deformation on the heads, I had to question just how hard they are. What I observe when I dress them on a grinding wheel is that they are deforming, and not spalling or splintering. Besides, there are different degrees of hardening. I imagine that the lawyers for Estwing and other geology-hammer manufacturers have advised them to use steel of a hardness that isn't highly prone to splintering.

The reason that some chisels are hardened is because the job they are required to do (such as cutting a bolt) couldn't be done with a soft chisel. One has to hit the hardened-steel chisel with a hammer to do the job! So, if such a claimed OSHA regulation exists, it was either created by a bureaucrat with no experience working on machinery, or, hopefully, recognizes that there are situations where one **has** to hit a hardened steel object with a hardened steel hammer. If there are indeed OSHA regulations about just what can be hit with a hammer, I would imagine that they would have to be specific, such as specifying the Rockwell hardness, or malleability difference between the hammer and object being hit.

If you discover that such a regulation exists, I would like to know about it and I will certainly be careful to observe it while in a commercial operation under OSHA control. However, in something like 60 years of pounding on rocks, the only hazards I have personally experienced are from quartz or chert spalling and cutting me. Hopefully, OSHA won't tell us we can't hammer on siliceous rocks!

I spent some time investigating OSHA hand tool standards. Following are some things that I think are pertinent to concerns about the danger of hitting one hammer with another:

**1915.133(c)**
Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

**1915.133(d)**
The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

**1915.152(a)**

Provision and use of equipment. The employer shall provide and shall ensure that each affected employee uses the appropriate personal protective equipment (PPE) for the eyes, face, head, extremities, torso, and respiratory system, including protective clothing, protective shields, protective barriers, personal fall protection equipment, and life saving equipment, meeting the applicable provisions of this subpart, wherever employees are exposed to work activity hazards that require the use of PPE.

**1915.153(a)(1)**

The employer shall ensure that each affected employee uses appropriate eye or face protection where there are exposures to eye or face hazards caused by flying particles, molten metal, liquid chemicals, acid or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

**1915.155(a)(1)**

The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects.

I did a search for "hammers" and "chisels" on the OSHA site. I found a slide-show wherein one of the slides was "Hammer Rules." [Note that they are not Regulations.]

- Make sure the handle of the hammer fits tightly on the head.
- Do not strike a hard steel surface with the steel hammer.
- Do not use the hammer handle for striking and never use it as a pry bar.
- Always strike the surface squarely – NO glancing blows.
- Always wear safety goggles.
- Never strike any hammer with or against another hammer.
- Discard a hammer with a chipped or mushroomed face.
- **Do not use steel hammers on concrete, stone or hard metal objects.**
- Replace loose or cracked handles.
- Discard hammers with cracked claws or eye sections.

Note that the third from the bottom advises against what we routinely do in collecting! I will conclude (this was for shipyard workers) that they don't have experience with geologist's hammers. These rules are, again, probably most appropriate for machinist's and carpenter's hammers.

**MythBusters:** If two hammers strike each other, at least one of them will completely shatter with lethal force.

Busted

"Using a custom rig, the MythBusters repeatedly struck pairs of hammers together, but none shattered. Hammers with wooden handles merely snapped in two and hammers with metal handles bent. The MythBusters then decided to make the steel hammers harder and more brittle by adding more carbon, and through heat treatment. In particular, they attempted to case harden the hammers, however it is questionable if this was done correctly. They heated the hammers to high temperatures and then coated the hammer heads in used engine oil. They also decided to have the hammers strike a more sturdy anvil instead of each other. However, during testing, the carbonized hammers merely bent at the handles without shattering. Furthermore, an anvil is generally not made of particularly hard steel, and so that test may have been doomed from the beginning. An anvil with a hardened tool steel insert would have been more appropriate. Though the myth was busted, some hammers come with warnings not to use them to strike another tool or hardened nail with excessive force; although no hammerhead shattered or chipped, high-speed footage showed particle dust flying in all directions, which presents an eye hazard."

(This myth was revisited in episode 75 and it was re-busted.)

There is a tendency for people to get Urban Legends embedded in their minds and never question the origin, or circumstances under which there might be an element of truth. One rarely, if ever, sees a carpenter's hammer with a mushroomed face. From my reading, it is apparent that things like claw-hammers have differential heat-treating to make the face of the hammer and the V-groove harder than the body in between. That is probably why there is concern about hitting a hammer on a hammer. The face is very hard to keep it from getting indented. Most people only have experience with the kinds of hammers that carpenter's or machinists use. Rules of Thumb can be useful, but one should know when they can be broken safely.

I know someone, a man I used to work with, who's daughter and neighbor girl were breaking geodes with a carpenter's hammer. A metal splinter flew off the hammer and lodged in the neighbor girl's eye! While I have not heard of, or observed such things happening with geologist's hammers, it points out the necessity of always wearing eye protection.

I'm concerned about getting this issue right, so I spent some more time looking for information on the internet. The other side of the argument is addressed pretty well here: http://www.finewoodworking.com/item/17562/reader-says-mythbusters-missed-on-hammer-strikes However, other than a lot of anecdotal stories about Murphy's Law in the comment section, I think that the best summary is the following:

> "I am a retired metallurgical engineer with a lot of failure analysis experience. Those are my credentials for adding the following comment.
>
> There are a lot of valid comments about chips flying off the faces of hammers (and other heat-treated tools) in this string of postings. The technical reason for this is that high impact can cause some of the steel in the tool to transform to "martensite", which is the hardest and most brittle form of steel. When you heat treat a tool to make it hard, you first quench it from an elevated temperature to transform all

(or most) of the steel to martensite. In that condition it is hard, but it is too brittle to be useful. The next step is to heat the tool to a moderately high temperature to transform the martensite into something called "tempered martensite." The higher the tempering temperature, the lower the hardness and the less brittle the steel. OK, that's the end of the lecture - but I'll be happy to answer questions about steel heat treatment from interested folks.

The key is that hitting a hammer can transform some of the head to brittle martensite, and that is where the danger lies. The next time you hit that spot a chip can break off - as was well attested in precious comments. Probably the most common occurrence is with wood-splitting wedges. They get pounded hard all the time, and they often produce flying chips. Always check your wedge heads before use and grind off any split or cracked areas.

Having said all that, I really doubt that hitting a ball-peen hammer to dimple a miter bar is going to cause a flying chip UNLESS the hammer head already has some martensite from previous abuse. It is just not a hard enough blow. Just be sure to check your hammer heads frequently for chipping and cracking and grind off the chipped area or get a new hammer."

Another poster wrote,

"Steel is Steel. If you look up what the hardness is on a typical claw hammer, you'll find it to be Rockwell 50-60. A ball peen hammer may be hardened to 57R. Brick chisels are hardened to 60-61R. What do you hit a brick chisel with? A driving or mash hammer (also hardened to 57R). So what is the difference? I saw the Mythbusters program and they went far beyond the typical tapping. (typical, but that's what Mythbusters does.) You should always wear safety goggles when hitting steel, but unless the hammer is defective, I don't see any difference in using the hammer instead of a drift, but my preference would be to use the correct tool. (the drift)"

This may be getting to the essence of the problem:

"**Case hardened** claw hammer heads are very wear resistant against relatively soft nails. BUT the process leaves a brittle layer that is prone to fracture by impact with a thoroughly hardened surface."

A couple of points to be made is that, again, these remarks are largely about claw-hammers and ball-peen hammers that probably start out a lot harder than a rock hammer. However, bear in mind that splitting wedges are **intended** to be struck by a mall or sledge hammer. I'm reasonably sure that star drills are pretty hard or they wouldn't work. Although, they may be differentially heat-treated. There is always some risk when hitting something with great force, and that ranges from glancing blows that can hit the person swinging the hammer, to failure of the steel head even when hitting a rock. If we want to be totally safe, we should stay home and watch TV.

I wrote to Estwing for their official position. The following is what I received back:

"Thank you for your email. The general safety rule is that you should never hit another object that is as hard as (or harder than) the steel tool itself. Some types of rock are softer than others. Nail hammers are engineered and designed specifically for hitting common, unhardened nails. Any other use could cause the steel to break which could result in injury. Rock picks are engineered a bit differently as you

> can tell by the solid rectangular structure. All of our tools use the same steel (1055 Special Bar Quality) and are heat treated to ASME Safety requirements of 45-60 Rockwell C Standard.
>
> The drilling hammers are much sturdier due to their size and weight, but should still not be used to strike hardened objects directly. The safe way to use these hammers would be in combination with a chisel or punch that has a **struck face that is no more than half the diameter of the striking face of the drilling hammer** [emphasis added: CHS] (such as our rock chisels). Rock picks are best used for prying rock from the ground. The hammer end can be used for light duty work, but again should not be used to strike any object that is harder than the steel itself."

My response to her was, "How is one supposed to know if a rock might be harder than the steel hammer before hitting it? If rock hammers can only be used for 'light duty work,' they would be practically useless for what a mineral or rock collector needs to break a rock. I'm a graduate geologist and I have been using Estwing (and Plumb) rock hammers since the 1960s and have never encountered a problem with a hammer despite hitting rocks with as much force as my six-foot frame will allow me. Yet, there numerous horror stories about people being seriously injured from nail hammers. You suggest that a nail hammer is engineered differently, but you don't provide specifics. As to being 'best used for prying rock from the ground,' it is obvious you have never personally used a geology hammer or observed the typical user of a geology hammer. The typical use by a geologist is to break off a sample from a large boulder or cliff face with multiple blows from the hammer face, and perhaps use the curved-pick end to widen a crack in an exposed outcrop."

I got a call from the Estwing VP of Engineering and we talked for about a half hour. He himself carries a piece of steel in his hand – from a claw hammer!

He assured me that all Estwing hammers are heat-treated and tempered the same, to ASME standards. What that means is that the bodies and shanks (if steel) are tempered to <40 HRC (Rockwell hardness, C-scale); the striking faces to low-50s HRC. Gad-pry bars, and typical chisels, such as mineral collectors might commonly use, are tempered to about 45 HRC on the striking surface. A brick-chisel cutting-edge is tempered in the range of 35-55 HRC

Metal-cutting chisels, what are commonly called 'cold chisels,' are heat-treated and tempered to 48-60 HRC on the cutting edges, while the struck heads are tempered to <45 HRC. However, I own a Chinese-made cold chisel that I bought at Harbor Freight and Tools that I am certain is of the same hardness throughout! So, one has to take into consideration that not all chisels may be as safe as the Estwing products.

Lastly, after the conversation with the Estwing VP of Engineering, I took a file to my Plumb nail hammer and could hardly touch the face! However, I was more successful in removing some of the burrs on my long-handled Estwing rock hammer. That may be in part because I have never dressed the face of the nail hammer after 30 years; however, I have dressed the face of my rock hammer on a grinding wheel several times and may have gotten down through a harder surface layer. Indeed, throughout my life, I have worn out several rock hammers; usually the pick end has become so short as to no longer be useful.

We want to be safe, but we have to be practical in that our objectives are to turn big rocks into small rocks and no amount of chisel work is as effective as hitting a rock with a rock hammer! Being unnecessarily conservative or cautious defeats our purpose.

I'm at a loss to explain why nail hammers seem to be the implement commonly responsible for serious injuries from shrapnel, while I've never experienced the problem with a rock hammer, and don't know anyone who has experienced it. Perhaps it's just that there are far more people using (and misusing) nail hammers than rock hammers. Another

consideration is that, except for quartz veins and chert boulders, there are very few rocks that are truly harder than heat-treated tool steel. Some rocks can be unbelievably tough and difficult to break even with a large sledgehammer, but are not actually harder as measured by resistance to indentation. Also, polymineralic rocks and even monomineralic rocks with a 'felted' texture (like jade) are less likely to fail by brittle breakage than are monomineralic rocks like quartz and chert.

Apparently, the key to safe use is to use a hammer and chisel combination where the chisel is much smaller than the striking face of the hammer. (Although, this isn't possible when hitting a gad-pry bar unless one uses a drilling or engineers hammer. And, we don't always want to carry the extra weight when working our way over a blast pile.) This minimizes the chance of a flake coming off the edge of the hammer face and flying in the direction of the user if the blow is off-center. That is, it minimizes the chance of a glancing blow similar to what flint knappers try to achieve to make flint tools. From what I have read, I would strongly advise against using a nail hammer for mineral collecting!

While at the recent Denver mineral show, I noticed a new Estwing rock hammer that one of the dealers had on display. To my surprise, there was a warning in yellow letters, on the side of the head, not to strike anything with the pick end of the hammer. That is interesting because the recent Ward's Science catalog I received contains the following description of the long-handled Estwing rock hammer: "Pointed tip for hard-rock geology work."

Obviously, a corporation has to be careful as to what it publicly recommends out of concern that the kind of person who sues McDonalds for spilling hot coffee on themselves might sue them for not telling them to use caution in the use of hand tools. I think that the message in our safety classes should be to use common sense and try to use tools in the manner recommended by the manufacturer, which are probably conservative rules. Note that striking a nail hammer with another nail hammer violates the rule of having the striking head twice as large as the object being struck. [Note that in the photo above, the striking hammer has a face larger than the hammer I'm hitting.] Unfortunately, if the boulders we are commonly trying to reduce in size were smaller than the striking face of the hammer, we wouldn't need to hit them! So, sometimes we have to 'live on the edge.'

# SOUTHERN CALIFORNIA CHAPTER UPDATE

**Adapted from their newsletter**

## Spring Symposium 2017

SCFM's Spring Symposium and field trips will be set up for weekend of March 25-26th, 2017, location TBD. Please place the date on your calendar and let us work on updating you.

---

## Spring Symposium

March 19, 2016 symposium was conducted in BLM's Jawbone Station Visitors Center, western edge of Mojave Desert, with field trips to western slopes of Inyo Mountains in a world class metamorphic region. Darwin Mine dumps on Saturday March 19th was the highlight of the weekend with 57 participants. Sunday Dr. Robert Housley led 15 collectors to Fernando and Custer mines while Dr. Don Buchanan took a separate group of 15 to Betty Jumbo Ore Bin east of Independence, then SSS Mine, Dolomite Loop, and Talc City.

Image 1: Jawbone Station



Image 2: SCFM's symposium was overflowing with 57 attendees, some standing to left behind fundraiser stationery and books tables set up by Friends of Jawbone Foundation.


Image 3: Wildflowers at Jawbone Station prepared us for a colorful display throughout the weekend.

Our morning symposium highlighted two presentations: "Contact vs Regional Metamorphism" by SCFM/VP Ty Schuiling to create the setting for mineral collecting in the Great Basin region; followed by "Darwin Lead/ Silver Mine & Inyo Mountain Metamorphism" by Paul Skinner, Darwin Mining Geologist. Serious mineral collectors, photographers, and novices participated in the morning symposium until noon before driving north and east into the Inyo Mountains for afternoon collecting at Darwin Mine dumps.

"The Darwin lead-silver-zinc district comprises the area of the Darwin Hills within the Darwin Plateau of west central Inyo County, California. The district has produced over $29 million in lead, silver, zinc, tungsten, and copper. Ore bodies occur as structurally controlled replacement and fissure filling deposits within a contact metamorphic calc-silicate aureole developed within Keeler Canyon Formation limestones surrounding the intrusive Darwin quartz monzonite stock." (Mindat.org) Avid collectors found a wide variety of minerals during our 4+ hours of dump collecting using picks, shovels, sledge hammers, normal rock hammers, and UV lights.

Paul Skinner informed us that there have been over 120 different minerals discovered in these Darwin mines during the decades. Our collecting members walked away with the following specimens in their bags, buckets and boxes during the afternoon: calc -silicate schist, calcite, pyrite, chalcopyrite, fluorite, scheelite, argentiferous galena, sphalerite, pyrrhotite, bornite, among other minerals. Most of these minerals came out of the Radiore Adit.


# COLORADO CHAPTER UPDDATE

Reflections on Being President of
Friends of Mineralogy, Colorado Chapter
By Mark Jacobson

Many people before me have been president of the Chapter. They, and other members, not all chapter officers, put a lot of effort, time and mental energy into the task of running the chapter. The results have been many exceptional symposia since 1978, great speakers at chapter meetings, bimonthly newsletters with articles of historic value, with information not repeated anywhere else and people to people relationships that have enabled a high level of mineralogical knowledge to be transmitted from generation to generation. Ultimately, what FM creates is knowledge and a culture of working with people to transmit information about minerals, specimens and history and physical mineral specimens to others and frequently younger generations. I have worked to continue that tradition, hopefully as well as my predecessors.

People do get tired and burned out. Some just need a rest, others want to move onto different things, sometimes different aspects of mineral collecting or completely different fields. This is as expected and should be planned for.

During the last ten years in Colorado, large numbers of people have moved from hiking in the mountains to prospecting for reputedly valuable minerals. Unrealistic dreams of wealth have been propagandized by the media and many have been trapped by the enchanting siren's song. With education, age and experience a minority of these people will escape their songs and become mineral collectors. Some may become geologists, mineralogists or scientists in other academic fields. All of these paths are good. Friends of Mineralogy chose in 1970, to be good Samaritans on the roadway to guide

pilgrims to a promised land, populating the middle ground between the scientists and the newly interested amateur whose only goal might have been to amuse his children. Certainly, we have successfully done that, as well as having done a great job of amusing ourselves.

During my three years as president I have tried with my colleagues to advance the goals of the Colorado chapter as well as to enjoy myself. The chapter now owns a portable speaker sound system and a Powerpoint projector. The Chapter's website is up-to-date and provides free pdf copies of most of the past chapter newsletters and some of its symposium proceedings. Our membership, thanks to our supporters, has regained its numbers back to the middle of 2000.

We still have a long road ahead in fulfilling the activities our members feel we need to do a better job at: providing mineralogical identification at the annual Denver Gem & Mineral Show, leading field trips to unusual, remote or rarely visited localities and planning future mineral symposia and mineralogical publications. I also considered it part of our role to provide a forum for new mineralogical speakers, speakers from outside Colorado or speakers that rarely give presentations. This aspect I believe we fulfilled over the last three years.

During the year 2017 with new officers and our present direction we should be able to provide activities of mineralogical importance to our members.

Mark Ivan Jacobson
Past President, Colorado Chapter of Friends of Mineralogy.

# PACIFIC NORTHWEST CHAPTER UPDATE

### President's Message

Greetings, mineral lovers! It is symposium wrap-up time, but also time to announce what's coming in the next couple of years.

**So Many Volunteers!**

I would like to thank all the volunteers who made our "Minerals of the Northeast US and Fluorescent Minerals" symposium such a successful event:

Scott Ankenbrand – Registration table, All things money related
Roger Beck – Setup
Bill and Diana Dameron – Setup and Registration Table
Dan Evanich – Setup
Barb and Julian Gray – Projector, General support
Beth and Paul Heesacker – Registration table, Case liner maintenance
Karen and Gary Hinderman – Auctions, Storage Coordinator, Case transportation and setup.
Madison Hinderman – Auction helper
Bruce Kelley – Facebook presence, Procure awards, etc...
Al Liebetrau – Dealer liaison and Hotel room wrangler
Tom Menzel – Night security, Setup, Helping wherever needed
Doug Merson – Publicity, Packets, Setup
Bob Meyer – Facilities liaison, Display coordinator
Allan Young – Speaker recruitment
All of the FM members who set up displays
All four of our speakers: Richard W. Graeme, Bruce Kelley, Dr. Pete Knudsen, and Chris Stefano
And probably half a dozen I'm forgetting…

I say this exactly the same every year, but it is still true: the sheer number of volunteers and the many

hours of work you each put in speak proudly of your devotion to FM. It is a pleasure to work with such a committed group. Thank you all!

**Awards**

We skipped the contests at this year's symposium, but look for some fresh new ideas in 2017.
We did, however, have a Noble Witt Award winner this year. Congratulations to Robert Woodside! You can read my induction speech later in this newsletter.

**Symposium 2017-2018**

2017: October 13–15: For 2017, we have selected "***Minerals of Morocco"*** which should be spectacular!

2018: Dates TBD. The theme will be one of ***"Pacific Northwest Minerals"*** or ***"Minerals of the Himalayas"***

**Member Participation: So many ways to get involved!**

Write an article or send in a few photos for the newsletter. Went to Tucson? Send us a trip report! Find a weird fuzzy green mineral you'd like to share? Send us a photo whether you can positively identify it or not; I think mysteries are as fun as scholarly certainty. Thanks to Wes Gannaway, Beth Heesacker, Karen Hinderman, Al Liebetrau, Tom Menzel, Bob Meyer, Don Newsome, Lanny Ream, Alexander Schauss, and myself for providing newsletter content so far this year.

Plan to attend our 2017 symposium:

**October 13-15**, 2017 *Minerals of Morocco*

"Like" our official Facebook page: facebook.com/PNWFM

Visit the Rice NW Museum of Rocks and Minerals in Hillsboro, OR. PNWFM members get free admission and store discounts. ricenorthwestmuseum.org

Send me ideas for how PNWFM can better serve you and the mineral collecting community.

Until next time,

-- Bruce Kelley, President, PNWFM

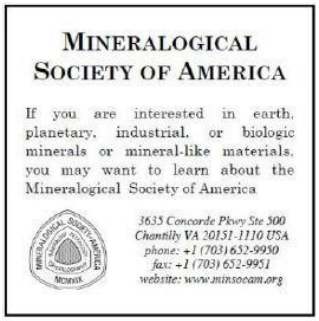
[Editor's Note - Contained in the most recent PNWFM Newsletter was a beautiful article by Bob Meyer on the displays at the last PNWFM symposium. Many pictures and descriptions. I wish I could have included it in this newsletter but this edition was already quite lengthy. To see that article use the following link: http://www.pnwfm.org/newsletters.html and click on the December edition.]

# FM AFFILIATES

The Friends of Mineralogy is a long-time affiliate of The Mineralogical Record magazine. The magazine was founded in 1970 by John White, who was at that time a curator in the Mineral Sciences Department of the Smithsonian Institution. With the initial help of a financial backer, Arthur Montgomery, White succeeded in launching and bootstrapping the fledgling publication to the point where it was marginally self-sustaining. After seven years as editor and publisher, White stepped aside for a new Editor, Wendell Wilson.

Since then the Mineralogical Record has grown steadily in size, quality and prominence, thanks to the contributions of over 700 authors, photographers, artists, advertisers and donors. It has become a collective labor of love on the part of the entire mineralogical community worldwide. It is the only journal to have a new mineral species named in its honor (minrecordite), and it is the only journal to have received the Carnegie Mineralogical Award. Subscriptions, back issues, books and a variety of free databases are available online at www .Mineralogical Record .com.






Mineralogical Association of Canada