
THE 737th MEETING
of
THE MINERALOGICAL SOCIETY
OF SOUTHERN CALIFORNIA

7:30 p.m., Friday, June 11, 1999
Geology Building E Lecture Hall
Pasadena City College
Pasadena, California

Featuring An Interactive Talk With

Dr. Janet Gordon

on

"Professor Mohs and the Hard and Soft Minerals"

JUNE PROGRAM

This will be a hands-on program exploring the hardness and softness of minerals. We get acquainted with Professor Mohs of hardness scale fame and will investigate why some minerals are very soft and others are extremely hard. Kids of all ages are especially welcome, and participants are encouraged to bring a small pocketknife and their fingernails. Hardness sets will be provided.

Dr. Janet Gordon has been an MSSC member since the early '70's. She earned a PhD in geology from the University of Southern California where she specialized in igneous petrology and magmatism related to continental rifting. Janet has taught geology, mineralogy, and petrology at Pasadena City College since 1986. Janet can be reached at Pasadena City College by email at: jggordon@paccd.cc.ca.us.

PRESIDENT'S COLUMN

by Bob Housley

I am happy to be able to report that our move to Pasadena City College and switch to meeting on the second Friday of the month is off to a good start. Attendance was good at our May meeting and discussion was lively. There were no parking problems and everyone found the geology building without too much trouble.

Among the expected nice display of smoky quartz from the recent field trip to Crystal Ridge there were

several crystals this year coated with shiny black rutile needles. There are also several other highlights of the Field Collectors Forum worth mentioning. Carolyn Seitz had some really nice garnets from a recent trip to the Bishop area. Bruce Carter showed a bone specimen and described a fossil site in northern Mexico where he had recently led a geology class field trip. He said petrified wood was abundant there. As a special treat a new members Bill and Jackie Stutz showed a good set of SEM micrographs of micro minerals associated with the smoky quartz at Crystal Ridge.

The May program on fluorescent minerals was truly excellent. The discussion was clear and easily understandable, yet had enough depth that even the experts learned new things. The demonstrations were also outstanding and I am sure everyone there saw some things concerning fluorescent minerals that they had never seen before. We have another fine program with something for everyone planned for the coming meeting.

Even before the next meeting we have two big events scheduled that should be lots of fun for everybody. First we have a case repair day and potluck on Saturday June 5th at Rock Currier's, and then we have an open house at Casey and Jane Jones' shop on Sunday, June 6th. I know I have been looking forward for some time to a good chance of looking through material from some of their recent mining adventures. I also hope this will be the first in a series of club open houses.

CASE REPAIR DAY

The Great Exhibit Case Repair, Exhibit Case Liner and Riser Making, and Potluck Day is Saturday, June 5 from 9 a.m. until after the potluck. We need to repair some cases, make new liners and risers, all in preparation for our November show. Ron Pellar and Bill Besse will tutor on how to make your own attractive displays. Bring food and drinks to share and your folding chair to Rock Currier's.

OPEN HOUSE AT GEOPRIME MINERALS 1:00ish P.M., SUNDAY, JUNE 6

Join Casey and Jane Jones at Geoprime Minerals and Earth Material Company, 120 E. Colorado, Monrovia. In addition to the opportunity to view some brand new material, we should get an education on photographing specimens using a digital camera.

How to get there: Take the Myrtle exit off the 210 freeway. Drive north about one half mile to the third stoplight at Colorado. Turn right. Geoprime is one-half block down the street on the south side. Parking in the back, or on the street in front. Several nice restaurants nearby to dine afterwards.

Other information pertaining to the open house: "We just picked up a 3,100 piece species collection in Salt Lake City, very well documented. We are going to try to have at least one cabinet ready for the open house. This material should not have been seen elsewhere before that. We also just collected at the Murray Mine, and may have some new specimens prepped. But will also try to have out some material from Flambeau, Meikle, and Murray which we haven't had time to process before. There will be a 20% discount for the evening on items, excluding consignment pieces and those marked net."

Editor's Note: Our Open House at Geoprime Minerals gives me the opportunity to introduce an addition to your Bulletin by profiling our dealer members. Because of their demanding schedules which include a lot of time on the road, many are unable to regularly attend meetings, making it difficult to get to know them as well as we would like. It is hoped this feature will be helpful for both new

and long-time members.

MEET CASEY AND JANE JONES

Casey and Jane Jones, owners, Geoprime Minerals and Earth Material Company

120 E. Colorado, Monrovia, CA 91016

Voice/fax: 626-358-3422 store: 626-358-6186

Website: www.geoprime.com E-mail: xlmine@geoprime.com

Geoprime focuses on fine mineral specimens for collectors and museums and quality earth science materials for schools, educators and researchers. In the past five years they have begun collaborating with mining companies to collect and preserve non-ore asset minerals encountered while mining. Their most visible projects are the Flambeau mine in Ladysmith, Wisconsin (chalcocite), the Barrick Meikle mine near Elko, Nevada (barite and calcite), and the AngloGold Murray mine also near Elko (stibnite and barite). They also preserve educational minerals from these mines for use in educational assemblies and state fairs in conjunction with other science companies so that hundreds of thousands of students across the country learn something about extracting minerals from the ground via these samples.

Originally from Monrovia, Casey's early mentor was George Burnham who first brought such minerals as diopside and hopeite out of Africa, starting Casey's quest for new mineral localities before he was a teen. Stories of some of George's "lost localities" and his world trip still ring in his head. His family moved to Scottsdale, Arizona and his junior high teacher Bob Jones became another lifelong mentor, getting him involved in display competitions and helping him refine his sense of what was and was not "the best." Casey also began avidly collecting at well-known mines such as the Red Cloud and the Apache, sharing that time frame with other field collectors such as Dick Jones and Wayne Thompson, and has never lost his passion for Arizona minerals. He became a mineral dealer at the age of thirteen, his mother driving him with a card table to set up at shows. He sold Apache vanadinite to young dealers including Bill Larson.

The mineral quest led him to work at such mines as the Stewart Tourmaline mine, Sunnyside gold mine in Silverton, Colorado and the Climax molybdenum mine in Leadville. In response to an offer from George Burnham, he returned to Monrovia in the early 1980's and worked with George in the educational rock and mineral business for over a decade. His mineral passion vies with his passion to surf, but he sometimes can combine the two, surfing and collecting gold in Costa Rica, or surfing and collecting siltstone near Pt. Magu.

Jane Jones grew up in Wisconsin and like many collectors in that area began collecting Lake Superior agates and hiking the pre-Colombian trails of the Blue Hills. The themes of education and promoting others' good ideas permeated most of her schooling and career path, beginning as a music educator with a minor in geology. That path included stints with the national credit union trade association (educational development); a physical chemistry journal (editorial); biochemical institute (grant writer); state of Texas, universities coordinating arm (public relations and research) and Japanese and Chinese history teacher. Throughout this period she pursued her interest in Asian and Chinese history, language and literature in programs at the University of Wisconsin, National Taiwan University, and the University of Texas. Receiving a research fellowship at USC she spent the next few years between Asia, Los Angeles and the Hoover Institution for War and Peace in Palo Alto, doing research in such areas as the history of mineral use and development in Chinese medicine, the Kaiping coal mines, and the founder of the Chinese Geological Society. Receiving a newspaper published by the Ojibwa tribe in northern Wisconsin primarily because of its information on native earth medicines, she kept up to date with a proposed copper mine near her hometown in Wisconsin that was having trouble getting permitted - the Flambeau mine.

When Jane and Casey met their lives changed quite quickly and dramatically. On a rock collecting trip in 1994 they also attended Jane's sister's wedding where a family member mentioned the opening of the Flambeau mine. The first visit to the mine indicated something very exciting: Casey thought there very well might be extraordinary chalcocite specimens there. It could be described as serendipitous - the timing of the right general manager, the right geologist serving as the screener, Casey's mining experience, Jane's local connection and background in promoting educational programs, and Kennecott's interest in preserving the minerals in a way which benefited the community. They signed a contract for specimen recovery at the Flambeau. At that moment their professional and personal lives began to converge. The Flambeau witnessed their courtship but was also a geographical barrier. Jane attempted to fill Casey's shoes at Burminco, a crash course in mineral and rock education, which freed Casey to move full time to Jane's native state to service the Flambeau contract. Jane's frequent flier miles added up in the attempt to share the digging "fun" as much as possible, although Casey would argue that standing and watching a backhoe in thirty degree below zero weather isn't his idea of fun. Days after the final blast at the Flambeau mine in 1997, they were married on the top of a hill in Chimney Rock, Wisconsin. The mine provided them a barbecue pit for the reception, and John Barlow sold thirty-eight of his mineral books to the Kennecott-Flambeau financial comptroller. Two days later they headed to Elko, Nevada, in response to an invitation from Barrick Goldstrike and spent their honeymoon at the Meikle mine collecting golden barite crystals. That summer they named their new business Geoprime, and began negotiations for a specimen collecting contract at the Meikle mine. New mines have presented opportunities since then. Intertwined with trips to the mines they also do mineral shows, science teacher shows and other educational shows such as the GSA conventions, geo-educational assemblies, and maintain an educational and research rock and mineral business, mostly over the internet. The retail location in Monrovia is open by appointment and has both geo-instructional rocks and minerals and collector specimens.

Their most recent one-week trip in May included two educational assemblies and fifteen workshops to 1,500 students and 80 teachers in Elko, Nevada. Driving to Salt Lake City, an opportunity to view a collection turned into an acquisition. Returning to Elko to retrieve their trailer, they were informed "something good was hit" at the Murray mine, so they drove to the mine for a night shift of collecting, then Tonopah, Nevada and Bishop, California for a client doing research on the dry drilling technique needed for a Mars landrover. Back in Monrovia they recalled they had agreed to host an open house for the MSSC; they look at the rock they have just unloaded, the uncleaned and unpacked specimens and think, "Maybe we could turn it into an unpacking party and convince people they're having fun and hi-grading us.? Would they really believe that?" Naw, wouldn't work. Well, maybe it would.

Insurance Update

By Ken Kruschke, CFMS President

The insurance problems we have are not going to go away quickly. It all started with changes in our new insurance policy near the expiration date of last year's policy. We (the Exec. Comm.) decided that at that late date we had little or no choice of what to do. Ever since then there has been much activity going on in many directions to resolve the situation. The insurance policies of the other regional federations are being checked on, insurance agents are being asked to give quotes and our insurance policies (old and new) are being gone over by our attorney. Unfortunately there is nothing of substance to report at this time.

During this time the field trip picture has been very cloudy and has not really shown any improvement. However, we do have field trip insurance available to us for most trips for an additional cost. As this is being written, I was informed there is a new Field Trip Questionnaire in the pipeline. I am waiting for its arrival and it will be published in the CFMS Newsletter.

The available options for our insurance problems will be presented to and looked at in detail at the directors meeting in Turlock in June. I hope all of the Federation Directors will be there, as this is a very important meeting. There will be a lot of very important information presented at that time, and some important decisions to be made. Assembling the material for this meeting is a slow process with much to do yet and we are trying to do it right.

Over the years there have been many misconceptions of what our insurance was all about. Perhaps this was because there was a lack of communication and we wound up with misinformation and even some bad information. Some of us, myself included, were and are victims of this problem. Being patient while waiting for this problem to be corrected is very difficult. If some rumors or misinformation haven't surfaced already I'm sure they will before this is resolved. I am attempting to have the insurance policies explained in lay terms to everyone at our Directors Meeting in June. This includes what we can expect from the insurance carrier and what they expect from us. In this day and age being insured is a must, and we must know what our insurance coverage is.

In the time period we have till this is resolved the best thing to do is to follow the direction of our insurance carrier. The programs they have given us may not be to our liking but I think we can live with them until a decision is made on how to handle this. We are looking at all options available to us. We do have options, but there are no quick fixes.

IMPORTANT INFORMATION ABOUT CFMS INSURANCE

From CFMS Newsletter, May 1999

Here are some guidelines regarding the coverage from our insurance agency--- CAPAX GIDDINGS, CORBY, HYNES on club sponsored field trips.

1. There should be a statement confirming there will be no exposure to the following hazards: Caves, fissures, excavation/digging more than 3 feet into the ground or into hillsides/cliffs, rope climbing, or slidepits, etc.
2. The pricing for a one day trip would be \$15 for 1 to 20 people and \$25 for 21 to 50 people. Refer parties larger than 50 people to the agency. Fill out application and send check.
3. Price for two-day trips, subject to the above-mentioned exclusions, would be \$23 for 1 to 20 people and \$38 for 21 to 50 people. Refer parties larger than 50 people to the agency. Fill out application and send check.
4. Any trips longer than 2 days of collecting must be referred to the agency. Travel time to and from the collection area does not count as collecting time. For example: Travel on Friday, collecting on Saturday and Sunday, traveling home on Monday, is still a 2 day collecting trip.
5. We would require you still send in the information you gather for the request. Confirmation that the above-mentioned exposures will not be allowed should be documented.
6. Please list the State on the desert trip requests, as we do not know if the trip is to an area outside of California.
7. The Underwriter may request a more detailed description of your trip at any time. They are

trying to work with us on handling these requests and they are expecting that these guidelines will allow coverage for 80% to 90% of the field trip forms filed.

8. Fill out your application, include your check, and send a copy of your "Hold Harmless" form, if you use one, to: G.C.H. Insurance Agency, Attn: Shirley Poulter.

ATTENTION CLUB PRESIDENTS, EDITORS AND FEDERATION DIRECTORS:

Please pass this information on to your club members don't keep it a secret.

Editor's Note: Last month we published the first of Lanny Ream's articles on "Rock Pounding." This month Lanny concludes on the following pages with "Pry Bars and Other Tools."

ROCK POUNDING - PRY BARS AND OTHER TOOLS

by Lanny Ream

Pry bars, lots of options here. Bars are available at many hardware stores and those that cater specifically to construction work. However, finding those made for breaking rock is difficult. Generally, most good quality pry bars will work, but they may not be designed properly for rock. Most will probably be strong enough, but strength does vary. You can bend some fairly easily, but others will not bend or break under the pressure the average human can apply to them.

The biggest problem is the amount of the kick on the business end. You want the most leverage you can get, so you want the kick or kink to be only about one inch from the end. If it is longer, you greatly reduce your leverage ratio, and that can make a tremendous difference in the amount of work you can do. Naturally, the longer the "handle" and the shorter the working end (what do they call that end?), the greater the leverage and the more work you can do. Unfortunately, most common pry bars have a kick 2-6 inches back. So, find a blacksmith, and have the bar re-shaped so that there is only about one inch from the kick to the "chisel" edge.

Some people (including me) like a bar that has a point on the opposite end. It can be quite useful to drive into a crack to widen it enough to get the chisel end in deep enough to be able to pry off more than a chip of rock.

A popular tool in the Northwest is a common 3 foot nail bar (the one with the small kick on one end and a "U" shape on the other). A lot of people use these, I've borrowed them on occasion, and one can do a lot with it. Obviously, it won't do what a 5-6 foot, or longer, bar will do, but it can move a lot of rock.

One person recommended a miner's scaling bar with the aluminum handle. These are good bars, and have the advantage of being lighter in weight; a real advantage if you have to carry it very far. However, the two I've seen have the kick several inches back from the business end, so they don't provide the leverage we need.

As to the screw driver, definitely a very useful tool. It is best for working in cavities, but actually can be useful for a small amount of prying too. Again, buy a good one, not a cheap one. If you are not wild and crazy over using your tools, you will soon learn how much abuse you can give it without breaking it. A good screw driver (Craftsman, Snap-on, etc.) will take a lot of prying, some hammering, and other abuse without bending or breaking. I'm on only my second one in the last 20 or so years. The first was a cheap screw

driver, and it worked fairly well, but made a lousy pry bar--it bent quite easily, but didn't break.

Some people also add to the tool supply a small scoop and wood "skewers" to supplement the pocket robbing process. For dirt and rubble moving, shovels of all sizes, including the small folding shovels are quite useful at times. I've also seen a couple collectors use a common garden hoe. This can be useful to pull rocks and dirt up out of a hole.

Don't forget the Estwing hoepick. It works great for starting a hole, digging out small quantities of dirt, prying out loose rock, and probably protecting yourself from bandits. You might be surprised how much dirt and rock can be moved out of a hole (especially if not too much uphill out of the hole) with a hoepick.

My father was into rockhounding activities, collecting agate, pet. wood, etc. He made his own slide hammer. He used a section of about 3 inch pipe, welded a cap on one end and dumped in several pounds of lead. The lead was then melted into a solid mass by putting the closed end in a large fire with a good bed of coals. He made a couple of these and used them for several years to drive in large "chisels" 3-4 feet long. My brother has these now, and I've never used them, so can't offer any information on how useful they are, or how tiring they are!

Another useful tool on certain occasions is a small hydraulic jack. There is that occasion where there is room to place it to move a large rock or even split a piece off the outcrop. It can save a lot effort in those situations, because there probably is no place to use a pry bar if there is enough room to place a jack. Perhaps I should shut up and actually carry one with me.

Almost forgot: wedges. Someone mentioned wedges made from truck springs. I've heard many good and bad comments about them, too hard too soft, bend easy, break easy, work great..... I don't know. What I have are wedges made out of a soft steel, they can bend. The size is about 7 inches long with a continual taper from about 0.1 inch thick to 0.5 inch thick, and they are about 1 1/2 inches wide. They work very well for wedging off rock where there is only a thin crack to start. Being soft, they can't make a crack, but can bend and follow a curving crack that might break a brittle wedge or chisel. Sometimes, I only use one to widen a crack enough to insert the pry bar. On other occasions, the rock won't really break with a pry bar, so 2 or 3 wedges are driven in until the rock breaks, then it is moved with a pry bar. These are especially good in basalt, and in the Northwest are called "Walker Valley Wedges" because they got the biggest use at that locality of very hard basalt.

Add to this a couple small chisels for those spots where a large chisel won't do, a small screw driver for the cavity that is really too small for the big one, and one should be able to do most collecting within our abilities of using "hand tools" only.

Personally, I'm getting to the point where I think a backhoe would be most useful....

Editor's Note: MSSC is indebted to Lanny for permission to publish this article, originally published on the Rockhound's e-mail list. Lanny is the Owner/Publisher of L.R. Ream Publishing, publisher of Mineral News-The Mineral Collector's Newsletter. He can be reached at lream@comtch.iea.com or at his web site at <http://www.iea.com/~lream>.

THOUGHTS ON ACTINOLITE

by John Schwarze

A recent conversation with Jim Schlegel reminded me of the mineral Actinolite and its tragic

relationship to the town of Wrightwood in the San Gabriel Mountains.

The mineral **Actinolite** is a member of the **Amphibole** family or group of minerals. This is one of the most complex and diverse group of minerals known. Recently a sub-committee of the Commission on New Minerals and Mineral Names (How else do you think these things get named?) met and, over a period of years, attempted to sort out all the various minerals in the group. When they were finished they had established that 65 different "amphiboles" exist in nature and an additional 21 are suspected to exist but have not yet been discovered.

Actinolite, however, is an oldie but a goodie and it and its' chemical formula survived the scrutiny of the subcommittee intact. The name is, typically, Greek in origin and means "ray" since its' frequent habit is to form in bundles of radiating needles. There are two known uses for the mineral: The first is as a form of the much discredited asbestos. The second is as the variety Nephrite, or as more commonly recognized, the semi precious stone called Jade.

The chemical formula is, are you ready?, $\text{Ca}_2(\text{Mg},\text{Fe}^{2+})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$, or Calcium Magnesium Iron Silicate Hydroxide. As a result it is further classified as a **Silicate**, along with Quartz, the feldspars, etc. The color is typically green and as the Nephrite or Jade variety can be quite attractive. Incidentally all Nephrite Jade is typically green or white with a greenish tinge. The Jade that comes in reds, yellows, etc. is typically the mineral Jadeite (that figures). Jadeite is a member of the **Pyroxene** family, an equally diverse and complicated group of minerals.

Actinolite is a monoclinic mineral, meaning that its most common habit is, as stated above, long radiating needles. Its cleavage is perfect in two direction, so if you were to measure the angles present on each crystal, they would measure 60 and 120 degrees respectively. When it fractures, the result is splinters. It is a very tough mineral, takes a pounding well, and is hard to break; but its hardness is only 5.5 to 6, softer than Quartz for example.

The small town of Wrightwood sits on the boundary between Los Angeles and San Bernardino Counties on the northern slopes of the San Gabriel Mountains. The commercial center of town is in San Bernardino County, while most of the cabins and residences are in Los Angeles County. Most of us familiar with the town gained that familiarity by going skiing at one of the seasonal resorts west of downtown. The community sits at an elevation of roughly 7,000 feet and, as a result, typically has some snow every year.

Two other characteristics of the town is that it sits in the fault zone of the San Andreas Fault and the mountains to the south are unstable metamorphic rocks that have been further shattered by activity along the Fault. Many of those rocks consist of lenses and pods of **Actinolite Schist**. Remember that the mineral forms in bundles of radiating needles, has perfect cleavage, and splintery fracture? All this contributes to instability, magnified by the presence of the San Andreas Fault and the steepness of the San Gabriel Mountains. When I collected my personal specimen of the mineral in 1962, I picked it up next to a chimney that was the only remnant of a former dwelling. That chimney and every other chimney around in the forest only protruded two feet above the ground. All those houses had been buried by a massive landslide that, I was told, had occurred in 1948. There have been subsequent slides in 1965, 1969, and 1977. While none have been as destructive as in 1948, the potential remains due to the geology of the area.

As a collecting experience, there are few as easy or pleasant. While the respective Counties have tried to turn the area in one vast, restricted flood control channel, a stroll through the forest off of Lone Pine Canyon Road usually yields the characteristic bladed green mineral. Just remember how those pebbles, rocks, and boulders got to where you're standing!

CALENDAR

June 5: Display Case Repair and Potluck Day, 9 a.m. till we finish eating, home of Rock Currier.

June 6: Open house with Jane and Casey Jones at Geoprime Minerals in Monrovia.

June 5-6: Rockatomics Gem & Mineral Club, Boeing Recreation Center, 8500 Fallbrook Ave, West Hills.
Hours: 10 - 5 p.m.

June 11: MSSC monthly meeting, 7:30 p.m., Geology Building, Pasadena City College.

June 18-20: CFMS 60th Annual Show & Convention, County Fairgrounds, Turlock

July 9: MSSC monthly meeting, 7:30 p.m., Geology Building, Pasadena City College.

July 10-11: Culver City Rock & Mineral Club Show at Veterans Memorial Auditorium, Culver Blvd. & Overland Ave., 10 - 6 p.m. Saturday, 10 - 5 p.m. Sunday, info: Bradford Smith (310) 472-6490 or Brad@bigdiff.com.

July 11: MSSC Board of Directors' meeting, 2 p.m. at Bill Besse's home.

NOTES FROM THE EDITOR'S DESK

The June meeting will not only be educational but fun too, especially for the younger generation. Ed Smith expects to bring twenty-five kids and fifteen or so adults, including many from his Boy Scout Council.

From Darryl Futrell: At my tektite talk at the April MSSC meeting, I left my "handouts" in Bill Rader's auto and didn't have time to retrieve them. I'd be happy to mail them to anyone who will just let me know. This includes an illustrated 1997 paper by J.A. O'Keefe & me on "Libyan Desert Glass," a copy of my recent tektite article in Rock & Gem, along with five or so double sided pages of additional photos, references, and other information.

ADVERTISING SPACE ONCE AGAIN AVAILABLE. . .

The Board of Directors of the MSSC has voted to once again make advertising space available in the Bulletin to help offset the cost of publication and distribution. The following rates have been set:

Business Card size \$ 5 per month

1/4 Page \$ 10 per month

½ Page \$ 20 per month

Full Page \$ 35 per month

In addition, any advertiser who purchases 12 months of space in advance will receive a discount of 12

months for the price of 10 months. The Board and Bulletin Editor reserve the right to decline requests for space if material submitted is adjudged to be inappropriate. You may submit camera ready copy and payment to the MSSC in care of PO Box 41027, Pasadena, CA 1114-8027, or directly to the Editor.

See you at Case Repair Day and the Open House at Geoprime...

These are two "Don't Miss" events. -Ron