

Bulletin of the Mineralogical Society of Southern California

Volume 76 Number 1

January 2006

The 815th Meeting of The Mineralogical Society of Southern California

"Insights into the Insides of Pegmatites"

by Dr. Peter Modreski, USGS

Saturday evening, Jan. 21, 2006

To be presented at the Oak Tree Room,
1150 East Colorado Blvd., Arcadia.
Happy hour at 5:30 and Dinner at 6:30
to be followed by show awards and program.
Reservations required. See details inside.

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January Banquet: Pegmatite Feast with Pete Modreski

The Annual MSSC Banquet and installation of officers will take place on Saturday evening, January 21, 2006, at the Oak Tree Room (next to Coco's), 1150 East Colorado Blvd., Arcadia at the SE corner of Colorado Blvd. and Michalinda.

Festivities begin at the 5:30 Happy Hour with a no host bar serving wine and beer. Dinner at 6:30 will be followed immediately with presentation of show awards and a fine program on Colorado and New Mexico pegmatites.

The Food: The meal will be a buffet featuring prime rib, salmon, chicken dejon, mash potatoes and gravy, rice pilaf, salad bar, bread, dessert table, and dinner beverages. The cost for the complete meal including tax and tip is \$30. Reservations are imperative! Make reservations with Walt Margerum no later than January 15th by phone (310-324-1976) or e-mail. Payment may be made at the door by cash or check, or checks may be mailed in advance to MSSC Treasurer, PO Box 41027, Pasadena, CA 91114-8027.



Pete Modreski

The Program: Dr. Peter J. Modreski of the U.S. Geological Survey will present "Insights into the Insides of Pegmatites." Pegmatites are the source of many of our gem-stones as well as common to rare crystallized minerals sought by collectors and miners world-wide. The details of their origin and crystallization have been a perennial source of fascination (and puzzlement) to petrologists and mineralogists. Pete will review some of the characteristics of pegmatites and their minerals, with personal illustrations especially from Colorado and New Mexico and comparisons to pegmatites in the rest of the world, and he'll try to approach some understanding of how the minerals in them actually form.

The Speaker: Dr. Peter J. Modreski is a geochemist with the U.S. Geological Survey, Lakewood, Colorado. He is presently with the USGS Office of Communications, responsible for public communications and educational outreach. Pete is the USGS geologic resource specialist for gemstones, abrasives, quartz, beryllium, cesium, and rubidium. His research interests have included mineralogy, gemstones, Colorado geology, ore deposits, alkaline igneous rocks, volcanoes, caves, and luminescence. Pete is a co-author of "Minerals of Colorado", published in 1997, an Executive Editor of Rocks and Minerals magazine, and a Research Associate with the Geology Department, Denver Museum of Nature and Science.



The White Cloud pegmatite, South Platte pegmatite district, Pikes Peak batholith, Jefferson County, Colorado. Pete Modreski photo.

It's Dues Time Again!

by Walt Margerum, Treasurer

You should have received your dues statements in the mail by now and sent in your dues. If you have not received your statement, please let me know. If you have not paid please do. The address and dues rates can be found inside the front cover.

Minutes of the December Meeting

The 814th meeting of the Mineralogical Society of Southern California was held on Friday, December 9, 2005, in the Geology Department at Pasadena City College. President Bill Besse brought the meeting to order at 7:37 pm.

Vice President James Kusely then introduced the evening's speaker, Dr. Kenneth G. Libbrecht. Dr. Libbrecht gave a terrific talk on the complexities and inner world of the common snowflake including a background on crystal growth as well as the different crystal shapes they can form.

Announcements were made regarding the next January banquet on January 21st as well as the current slate for next year's officers and directors. There was a motion to accept and elect the slate of nominated officers and directors for 2006, it was seconded and passed unanimously. The 2006 officers will be as follows: President Ilia Lyles, Vice President James Kusely, Secretary Pat Caplette and Treasurer Walter Margerum. The 2006 directors are as follows: Robert Housley, Ken Raabe and Jo Anna Ritchey.

Following the election of the officers there was a brief show and tell of recent

mineral finds from some of the members. Congratulations to Ann Meister for being this month's door prize winner! The meeting came to a close at 9:50 pm.

Respectfully submitted by Ilia Lyles, Secretary

This is Your Chance to Tell Me Where To Go.

Collecting That Is!

by Walt Margerum

Several possible field collecting locations for 2006 have been discussed, but no firm commitments have been made as of this date. They include the following:

1. The Boron Pit in Kern County. As you all know the MSSC was given the rare opportunity to visit the Boron Pit in March of 2004. It appears that this opportunity will again be available this year. As before the trip will be limited to about 20 people.

2. The Champion mine in Mono County. We have all heard of this location. What I need is someone that has been there to act as trip leader.

3. The Bessemer mine in San Bernardino County. This was an iron mine that has magnetite as well as other skarn minerals. Again I need a trip leader.

4. Topaz Mountain in Utah. In the past we have had an annual Labor Day trip to Topaz Mountain. I am willing to lead one this year.

In addition to the above formal field trips we may have the opportunity to visit the Rowley mine in Arizona. This mine has great wulfenite, and mimetite. It is a fee site, and the number of people is restricted to about 6 due to the limited space in the mine. Several of us visited the mine in October, and had a great time collecting. Steve Knox has talked to the owners, and we have been invited back. As soon as I get detailed information I will make it available. With the limited space available, and the fact that it is an underground it cannot be a formal MSSC field trip.

As soon as a field trip is firmed up I will let the membership know. If the number of people in any trip is limited, the selection will be on a first reply, first invited basis.

I am open to suggestions on other locations. As you all know the number of local collecting areas is very limited, and therefore we have to travel longer distances to collect. If you know of a local collecting area please let me know.

Due to the monthly Bulletin schedule formal trips take about two months to organize. I know many of our members go collecting on a regular basis. I also know that these trips are usually informal and quickly organized. If anyone has a

suggestion on how to open trips to a larger audience without converting them into a major event, please let me know. I am interested in your suggestions.

Rock Currier Reports: Mali Mineral Trip

On December 13, 2005, I arrived in Bamako, Mali and hooked up with Demetrious Pohl, my old gold mining buddy. He was in town on business and had agreed to take a few days off and try and visit the mines with me which he had also never seen. He, among other things, lived in Mali for 4 years running a gold mine, and I could have not had a better traveling companion.



We had to settle for mosquito-ridden dive of a hotel on the far side of the Niger because all the hotels were chock a block full of diplomats attending some big west African summit in town. Actually it was a pretty nice little tourist motel that even supplied mosquito nets for all the beds.

We headed for the little depot where the miners bring all the garnets and other specimens and spent two days frantically selecting specimens. Most of the prehnite that is produced is sold to the lapidary factories of Asia. That and the gem rough broken from garnet crystals is what keeps the mining operations going. They have not learned to wrap specimens yet, and sometimes it breaks your heart to see some of the broken specimens that might have otherwise been fine if they had not been broken. The specimens are for the most part terribly dirty and when you buy them you are gambling that they will clean up. Some of them don't.

Soon we were off in a rented 4x4 with driver for the north of the country where the prehnite/epidote/garnet mines were located. Because of a good new road, we were actually able to reach them in only one day of travel. We made the little village of Bendugo our headquarters, and after paying our respects to the Chief and his wife and leaving presents, we hunkered down in a little courtyard where many of the miners camped out for the night. It was right with the goats and mules. I slept in the 4x4 and Dem on the ground with a mosquito net covering. During the night we were serenaded with the animal sounds of the village. Dogs barking, roosters crowing, geese honking, and every once in awhile the mules would sound off. The

mules sounded like someone was butchering them without killing them first.

When we woke up, miners were binging us bags of prehnite specimens to buy, and we spent a couple of hours in the morning selecting specimens. Adjacent to the little dirt courtyard, a guy had a little wooden table set up, and every morning he would butcher a goat and offer the meat for sale. He would barbecue it for you on the spot if you asked him to. We quickly learned to buy two or three kgs of meat every morning and have it cooked so that when we got back in the evening our dinner would be ready.

We took off for the mines (diggings) and found them only a few km to the north of the village. They consisted of small shafts that went down as much as 70 feet to the layer that produced the specimens. They were little rat hole,s and I don't think I would have fit in them even if I had tried.

The geology is pretty simple. Below is all sandstone with limestone above. Diabase, an igneous intrusive rock similar in composition to basalt, has intruded next to the limestone, and depending on the kind and amount of "dirt" in the limestone, a skarn is formed, and various minerals like prehnite, garnet and epidote are formed.

About 70 miners were working there. The mining is a very seasonal affair because they are often farmers during the wet season. After the crops are harvested, the mining picks up again. Many of the miners are from other places in Mali and are not locals. The gem garnets that are produced in various locations in the region are what got the whole thing going. Now there is not so much emphasis on the garnets but on prehnite that is mostly mined for sale to the lapidary factories of Asia.

We visited perhaps a dozen different localities during our four days at the mines and found much the same situation as the diggings near Bendugo. Returning to Bamako we spent a couple more days selecting specimens before heading home. We hope to have a lot of the specimens prepared for the Tucson show.

Rock Carrier

<p>TUCSON 2006 . . JAN. 28 - FEB. 11 (Sat. - Sat.) Show Hours: 10 to 6 Daily (except Sat. Feb. 11th), Sat. Feb. 11th only - 10 to 5</p> <p>ARIZONA MINERAL & FOSSIL SHOW</p> <p>5 Great LOCATIONS - Easy to Find</p> <ul style="list-style-type: none"> • Clarion Hotel-Randolph Park - 102 N. Alvernon, at Broadway • Smuggler's Inn - 6350 E. Speedway, at Wilmot • InnSuites Hotel - 475 N. Granada Ave., at St. Marys • Ramada Ltd. - 665 N. Freeway, at St. Marys • Mineral & Fossil Marketplace - 1333 N. Oracle, at Drachman <p>Martin Zinn Expositions, L.L.C., P.O. Box 665, Bernalillo, NM 87004 Fax: (505) 867-0073, email: mz0955@aol.com, www.mzexpos.com</p>

Notes from the Editor

A new year has begun and with it the 76th volume of the MSSC Bulletin. I look forward to continuing as editor through the end of this volume, but it's already time to be thinking about a new editor for 2007. This is a rewarding job, especially when members contribute fine articles and other materials such as those that have appeared in recent issues. It is not a hard task, and the job could be made easier by utilizing some of the hi-tech services that are now available. One editor that I know simply e-mails a monthly file to the printer who duplicates it and puts it in the mail. An arrangement like this would free the editor to do the fun parts of the job: communicating with members about their latest adventures, getting acquainted with interesting speakers, interfacing with other bulletin editors occasionally, writing an article now and then, and generally sniffing out interesting things going on in the mineral world. So think about it - you may be just the one to be the next editor.

But back to the present. All MSSC members and their friends are invited to contribute to the bulletin now. Complete articles are always most welcome, and so are many other kinds of shorter items including field trip reports, mineral-related photos, book reviews, mineral show news, items for the events calendar, and anything else that you think your follow members might be interested in.

Another way to support the bulletin is by advertising in it. Mineral-related ads are welcome and help defray the publication costs. Advertising rates are as follows:

Business card size	\$5 per month
1/3 page	\$10 per month
1/2 page	\$20 per month
Full page	\$35 per month

In addition, any advertiser who purchases 12 of space in advance will receive a discount of 12 months for the price of 10 months. The MSSC Board and the Bulletin editor reserves the right to decline ad requests if the material submitted is judged to be inappropriate. Copy in digital format is most welcome. Additional charges apply for colored ads, which are accepted only by special arrangement. The deadline for submitting ads and any other materials for the Bulletin is the 20th of the month preceding the month of issue (e.g. January 20 for the February issue). Print and electronic versions of the Bulletin typically reach members on the first of the month.

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2006 Pekov Mineralogical Study Tour

via the Fallbrook Gem and Mineral Society

The purpose of the Pekov Mineralogical Study Tour is to maintain a robust technical dialogue between leading mineralogists of the USA and the Russian Federation. Such a dialogue will lead to further cooperation and exchange of research materials.

Igor V. Pekov, D. Sc., is one of the foremost professional mineralogists in the world today. He is the author of the 2000 monograph on the Lovosero Massif in the Kola Peninsula, one of the world's largest alkaline plutons, and a published authority on the minerals of the former Soviet Union. His work on the Palitra pegmatite in Lovosero is the lead article in the Sept-Oct Mineralogical Record. He has described new mineral species from Lovosero. Lovosero is the home to 340 mineral species (second only to the Langban district), 73 of which were first discovered in Lovosero. Both Igor and his wife Anna are on the faculty of Moscow State University. They continue field work in the Kola and other localities and conduct student instruction in the Urals.

The study tour is supported by a research grants from The Fallbrook Gem and Mineral Society (FGMS) and Excalibur Minerals/Hudson Institute and a number of individuals. Other donors are needed. The study tour is scheduled to begin with the Tucson mineral expositions in early February 2006 and end with the mineral museums of New York City in late February. Between those dates, the Pekovs will visit the Los Angeles County Museum, Caltech, mines in San Diego County and the rare earth element deposit at Mountain Pass, California. A highlight of the trip will be a visit to Magnet Cove, Arkansas arranged by Mike Howard of the Arkansas Geological Commission. The itinerary will afford the Pekovs time for presentations and technical discussions with researchers, curators, field collectors, dealers and collectors.

In addition to in kind contributions, tax deductible donations earmarked for the Pekov grant may be made to the FGMS at 123 W. Alvarado #B, Fallbrook, CA 92028. Questions regarding the project may be directed to John Watson (geospace@pacbell.net). MSSC members are encouraged to support this activity, including a possible event in Pasadena on Feb. 14, 2006. Watch for the February Bulletin with details.

2006 Calendar of Events

Jan. 6-Feb. 3, Quartzsite, AZ, various gem and mineral shows. See www.quartzsiechamber.com/show_schedule.html.

Jan. 13-Feb. 22, Laughlin, Nevada, 5th Annual Cloud's Jamboree Rock, Gem and Mineral Show.

Jan. 21, 2006, MSSC Banquet! Save the date, details on p. 3.

Jan. 21-22, Exeter, Tule Gem & Mineral Society, Exeter Veteran's Memorial Building, Hwy 65, hours: Sat. 10-5, Sun. 10-4.

Jan. 27-29 Redlands, Southern California Micromineralogists, 41st Pacific Micromount Conference, San Bernardino County Museum, 2024 Orange Tree Lane. Hours: Fri. 3-10, Sat. & Sun. 8 am-10 pm., Paul M. Adams (310) 336-6927, paul.m.adams@aero.org.

Jan. 28- Feb. 11, Arizona Mineral and Fossil Show, Tucson, AZ, www.mzexpos.com, see ad on page 5.

Feb, 3-7, Tucson, Westward Look Show, Westward Look Resort, 245 E. Ina Rd., Sunday evening Steve Smale and Bryan Lees present "My Favorite Minerals" at 7:30,

Feb. 9-12, 52nd Annual Tucson Gem and Mineral Show, Tucson Convention Center, Hours 10-6 Thurs.-Sat., 10-5 Sun. Special seminars every day, silent auction Saturday evening, www.tgms.org.

Feb. 17-26, Indio, San Geronio Mineral & Gem Club, "Date Festival" Riverside Count Fair and Date Festival, Gem & Mineral Building #1, 46-350 Arabia St., Hours 10-10 daily, Gert Grisham (951-849-1674, grish1@msn.com.

Feb. 25-26, Antioch, Antioch Lapidary Club, Contra Costa Co. Fairgrounds, 1201 West 10th Street, Ella Bauer (925) 458-2539, jbauer@wwdb.org.

Mar. 3-5, Hayward, Mineral and Gem Society of Castro Valley, Centennial Hall, 22292 Foothill Blvd., Hayward, Hours: Fri. & Sat., 10-6, Sun. 10-5, www.mgscv.com.

Mar. 4-5, Arcadia, Monrovia Rockhounds, Inc., Los Angeles County Arboretum and Botanical Garden, 301 North Baldwin Ave., Hours: Sat. & Sun. 9-4:30, Janie Duncan 626-358-8157 or Jo Anna Ritchey j.ritchey@verizon.net, www.moroks.com.

Mar. 4-5, Ventura, Ventura Gem & Mineral Society, Seaside Park, Ventura County Fairgrounds, Hours: Sat. 10-5, Sun. 10-4, Jim and Nancy Brace-Thompson (805) 659-3577, www.vgms.org.

Mar. 11-12, Salinas, Salinas Valley Rock & Gem Club Annual Show, Spreckels Veterans Memorial Bldg., 5th and Llano Street, Hours: 10-5 both days. Jim Bassett (831) 758-5830.

Mar. 11-12, San Marino, Pasadena Lapidary Society, San Marino Masonic Center, 3130 Huntington Dr., Hours: Sat. 10-6, Sun. 10-5, (626) 355-6964 or (626) 914-5030, Todd Neikirk (323) 256-4992.

Mar. 11-12, Turlock, Mother Lode Mineral Society, Stanislaus County Fairgrounds, 900 N. Broadway, Hours: 10-5 both days, Bud and Terry McMillin (209) 524-3494,

www.motherlodemineralsociety.com.

April 21-22, Desert Symposium, Theme: Dinosaur Track Ways with field trip to Utah and California on April 23-25. Desert Studies Center, Zzyzx, California. Contact William Presch Ph.D., Director, Desert Studies, Department Biological Sciences, California State University, Fullerton, 714-278 2215 or wpresch@fullerton.edu.

Thinking about Quartz

The basic building block of the quartz structure is the silica tetrahedron which consists of 4 oxygen ions surrounding one silicon ion. In the tetrahedrons depicted here, the silicon is hidden in the center and an oxygen would occupy each tetrahedron apex.

Two partial structural diagrams for high temperature quartz give insights into the physical characteristics of quartz. The upper diagram is a view looking approximately down the c-axis (generally the long axis) of the crystal, which shows a distinctly hexagonal pattern. The lower diagram is a side-view of the c-axis direction showing that the tetrahedrons are arranged in spirals.

This structural information supports the observations that quartz crystals typically form in elongated hexagonal prisms and that they break with a curved fracture.

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Contact: Bill Besse (wbesse@altrionet.com, 626.359.4488) or Walt Margerum (wmargerum@earthlink.net, 310.324.1976).



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