



Newsletter - March, 1992

President:	Pete Modreski	Director:	Gene Foord
Vice-president:	Roger Bennett	Director:	Glen Johnson
Treasurer:	Eunice York	Director:	Ed Raines
Secretary:	Carol Smith		

March Meeting: 7:30 p.m., Thursday, Mar. 12, 1992

Third Floor Lecture Room

Denver Museum of Natural History

(Enter the museum through the staff door, to the left of the main entrance, on the north side of the museum, facing the parking lot; security personnel will direct you to the meeting room.)

PROGRAM:

**'Mineral Occurrences of the Black Range
and Rio Grande Trench Region, New Mexico'**

by Allen V. Heyl

Consulting Geologist

(U.S. Geological Survey, retired)

plus

A Slide Review of the 1992 Tucson Show

Allen Heyl is a longtime FM member (he belongs to both the Colorado and the Pennsylvania chapters) and a geologist who has had a long career in the study of ore deposits. Allen has worked extensively in New Mexico and, among other places, the Upper Mississippi Valley mining district of the north-central U.S (Allen is an internationally recognized expert on Mississippi Valley-type lead-zinc ore deposits). An abstract of Allen's talk, adapted from one he presented at the 10th annual New Mexico Mineral Symposium, in 1989, follows:

Abstract

Mineral occurrences of the Black Range and Rio Grande Trench Region, New Mexico
Allen V. Heyl

Many mines and mineral localities are located along the Rio Grande trench in south-central and southwestern New Mexico. Many of the best localities are along the Black Range, particularly south of Alamosa Creek. The well-known tin deposits on the west side of the range are not discussed here because many recent papers have described them. The best-known mineral locality is the Iron Mountain deposit in the Sierra Cuchillo, east of the main Black Range, about 2 mi. east of the junction of the road to Dusty and NM-52. Many minerals have been reported in the iron-manganese skarn at Iron Mountain, including helvite, danalite, fluorescent fluorite, and fluorescent molybdenum-bearing scheelite (Richard Jahns and J.J. Glass, USGS Bull. 945). Manganoan calcite that fluoresces red and hypogene pale-yellow granular willemite that fluoresces bright yellow-green (similar to that at Franklin, N.J.) are also common in the main tunnel workings and at the adjacent large ore bin. Both minerals are intergrown with banded andradite garnet, magnetite, and inconspicuous danalite. Nonfluorescent supergene grayish-pink transparent willemite crystals occur in vugs. The helvite occurs in yellow-brown tetrahedrons; the danalite, where present as euhedral crystals, has a similar habit but is pale brown to pink.

South of NM-52, 1.2 miles into the Black Range, a mine road leads southward to the Great Republic mine in a branch of Poverty Creek, where large open pits expose beautiful coarse amethyst crystals that are suitable for slabbing, bands of silver-copper minerals, sparse grains of gold, and pale green chlorargyrite. A rocky point of andesite, adjacent to the north side of the Winston-Chise road, 7 mi. south of Winston, contains crystals of heulandite, stilbite, and uncommon natrolite. Along the same road 6.1 miles south of Winston, Cuchillo Negro Creek is joined by a valley from the south that becomes Coyote Canyon. South 1.1 miles, on a 4-wheel-drive road up the canyon, along the northwest side of the road, are outcrops of semiprecious white opal. West of Chloride, about 14 miles up Chloride Creek on a 4WD road, are the dumps of the Silver Monument mine. The dumps contain beautifully colored massive bornite and much nearly microscopic native silver. South of NM-152, 2.5 mi. east of Hillsboro, a passable road extends down Ready Pay Gulch to the east end of Percha Creek Box. Here old vanadium mines have well-formed pale yellow crystals of endlicheite (arsenian vanadinite), orange vanadinite, wulfenite, and yellow-brown desclozite. Far to the south of the Black Range, 2.3 mi. due south of Deming and 10 mi. south on NM-517, are the old silver-lead mines of the Mahoney mining area that are at the foot of the northwest corner of the Tres Hermanas Mountains. These mines and their dumps have well-formed supergene crystals of willemite and smithsonite, masses of cerussite, pale-green fornacite $(Pb,Cu)_3[(Cr,As)O_4]_2(OH)$, wollastonite, hydrozincite, malachite, and hemimorphite.

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For the Tucson Slide Show at our March meeting, slides have already been collected from Pete Modreski, Bill Smith, and Sandy Walden. If you have good slide photographs of minerals, people, or events at the Tucson Show, please bring them to the meeting. Also, for those who attended the Tucson show, we invite you to bring to the meeting any mineral specimens obtained in Tucson that you think are especially noteworthy, or that you are just plain proud of. A glass case will be on hand at the meeting to display the specimens.

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The theme mineral at this year's Tucson show was, of course, **pyromorphite**. Articles about pyromorphite appeared in recent issues of Rocks and Minerals, Lapidary Journal, Rock and Gem, and in the Tucson Show Guide. A number of good museum displays at the show featured pyromorphite, and an FM-sponsored symposium (the 13th in the series) held Saturday, Feb. 15 at the show included eight talks, on pyromorphite and other topics:

- Pyromorphite - a review (Robert I. Gait and Malcolm E. Back)
- An overview of lead minerals from Bisbee, Arizona (Richard W. Graeme)
- Pyromorphite and associated secondary lead minerals in the southeastern United States (Robert Cook)
- Beryll phosphates: structural and paragenetic perspectives (Anthony R. Kampf)
- Minerals of Texas salt domes (Arthur E. Smith)
- An account of pyromorphite in France (Eric Asselborn)
- Arsenate mineralogy of the Ojuela mine, Mapimi mining district, Durango, Mexico (Marcus Origlieri)
- A brief look at the Bunker Hill discovery (Wendell E. Wilson)

PLEASE NOTE - DUES ARE DUE (second reminder)

According to our FMCC's By-laws, dues are delinquent after March 1. If we do not receive your dues (\$13), the March newsletter will be the last you will receive.

Please contact membership chairman Glen Johnson if you are uncertain whether you have paid your dues for 1992.

Correction: We note one small correction to information about FM dues printed in the last newsletter. The amount given to National FM out of each chapter member's dues is \$5.00, not \$6.00 as was stated here.

NOTES ABOUT CURRENT ACTIVITIES

The Colorado Chapter, Friends of Mineralogy, meets monthly or bimonthly except during the summer. Meetings are at 7:30 p.m. at the Denver Museum of Natural History, normally on the 2nd Thursday of the month. Meetings were formerly held only bimonthly, in odd-numbered months; however this year, as a trial to gauge member interest, additional meetings will be held in April and October. The 1992 meeting dates are Mar. 12, April 9, May 7, Sep. 10, Oct. 8, and Nov. 12. Meetings are open to the public and all interested persons are always welcome to attend. Dues to belong to FM are \$13.00 per year; this automatically includes membership in the parent national organization, Friends of Mineralogy, Inc.

Questionnaire for Speakers Bureau: Ed Raines has prepared a questionnaire, included with this newsletter, to compile an inventory of FM members (and others) who can present lectures and programs to other organizations. Ed will collect the completed questionnaires and will prepare a summary to share with area mineral societies, clubs, and other organizations. If you are able to give one or more presentations, please complete the questionnaire (or a photocopy thereof) and bring

it to an FM meeting or mail it to our P.O. box. Please help us by distributing copies of this form to other persons who are possible speakers.

New meeting dates: At our January board meeting and regular meeting, we decided to add two new monthly meetings to our schedule this year. FM normally has met only 5 times per year, and many of us felt that the members would enjoy having more meetings, to give the organization more continuity. For 1992, we are adding meetings in April (April 9) and October (Oct. 8). If the meetings are well attended, we will continue to meet on an expanded schedule of 7 meetings per year.

Change in date of May meeting (Annual Auction): Because of a conflict with other Museum of Natural History events, the atrium area in the Museum is unavailable to us on the date originally scheduled for our May meeting, May 14. We are accordingly holding the May meeting one week earlier, on Thursday, May 14. The next (April-May) newsletter will contain information about both the April meeting (topic to be announced) and the May auction.

Photography Symposium Booklets: Expanding on our reduction in price of this booklet (announced in the last newsletter) from \$15 to \$10, at our January meeting we further authorized the books to be sold in person at shows or meetings (when no mailing is required) at a special price of \$8.00.

Refreshments at FM meetings? At our January meeting, we sought in vain for a "refreshments chairperson" to coordinate the bringing of cookies/chips/soft drinks to each FM meeting (not necessarily to bring them; just to see that someone signs up each month to do so; FM reimburses the cost). No one was willing to volunteer for the job. Do we really not want to have any refreshments at our meetings? Accordingly, it was moved and seconded that refreshments be omitted from future meetings. We believe this course of action has been temporarily delayed, as one person did, as a stopgap, subsequently volunteer to bring refreshments to the March meeting. After that--if no one cares enough about this particular part of the social hour at our meetings, there will henceforth be no more refreshments. Enough said!

Bill Smith (who sits on the Mined Lands Reclamation Board's Advisory Council) reports that he has located volunteers to review proposed closures for the Abandoned Mines Lands Program for Boulder, Clear Creek, and Gilpin Counties, and for the San Juan Region. Mineral collectors knowledgeable about other Colorado regions are still needed, especially for the Cripple Creek and Saguache County areas.

SCIENCE NOTES

Local Meteor News

On Jan. 30, a bright meteor that lit up the evening skies over northern Colorado was widely reported in the local news media. It was originally reported that the meteor "appeared" to be landing in the vicinity of the Buffalo Peaks, Park County; as Jack Murphy's note below states, this impression was almost certainly false. Jack has passed on to us an "official" news release from the Denver Museum of Natural History about the meteor, based on his interviewing of persons who observed the fireball. Jack's report follows.

"About 80 persons contacted the Denver Museum Earth Science Department in response to our request for information about the large and brilliant "fireball" meteor that burst through the

atmosphere over the mountains west of Denver at approximately 5:30 p.m., Thursday, January 30, 1992. Some excellent eye witnesses have been interviewed over the phone; some stationary observers provided compass bearings or reliable line of sight information.

"Several distinguishing characteristics about the fireball are:

1. Its brightness and size--this is the brightest and apparently largest fireball seen over Colorado in many years.
2. Its very steep angle of descent--several observers reported that it appeared to plunge nearly straight down.
3. It was multi-colored--reports range from bright white and yellow to greenish and blue.

"From available information we have learned that the meteor traveled from the south-southeast to north-northwest; it mainly became visible to people at about a 45 degree angle above the horizon; some looked higher and watched it quickly descend. There is very limited evidence that the meteor broke into two pieces.

"Its brightness, size, and position in the sky caused most people to believe it landed close by in their vicinity; however, reports from all around Colorado provide evidence that it was widely observed. It was apparently last seen over the Colorado-Wyoming border north of Walden, Colorado.

"It cannot be ascertained if the meteor burned up in the atmosphere or if meteorites were deposited on the ground. So far it is impossible to designate a meteorite impact area; thus far eye witnesses have not reported characteristic phenomena related to meteorites falling from overhead and striking the earth."

New form of silica? "Moganite", described as another new crystalline polymorph of SiO_2 , is said to be a widespread constituent of most cryptocrystalline forms of silica, including chalcedony, agate, chert, and flint, according to an article recently published (Jan. 24, 1992) in *Science*. "Moganite" (also called $\text{SiO}_2\text{-G}$) was originally described in 1976 as a constituent of ignimbrite (welded tuff) volcanic flows on the island of Gran Canaria. However, this most recent article reports that the mineral is common worldwide, comprising from less than 5 to more than 20 percent of the silica in the various varieties of cryptocrystalline quartz (the highest abundance reported outside Gran Canaria was up to 45% moganite, in chert from Lake Magadi, Kenya. Moganite can be recognized by the appearance of several small peaks in the X-ray diffraction pattern, in addition to the normal quartz peaks. Moganite is described as being fibrous, and optically indistinguishable from chalcedony except that its fibers are length-slow instead of length-fast; it appears to be identical to a fibrous, length-slow form of silica formerly described (1892) as "lutecite". The authors studied "moganite" by examining X-ray diffraction patterns of more than 150 specimens of fine-grained silica in the U.S. National Museum collection; only Arkansas novaculite failed to show any trace of moganite. However, "moganite" is not an approved mineral species; a description in the "New Mineral Names" section of the *American Mineralogist* (v. 70, 1985, p. 874) notes that moganite was disapproved by the I.M.A. when it was submitted as a new mineral after being detected at Gran Canaria. It appears that more debate about moganite, and further study of the extent of its occurrence in microcrystalline quartz throughout the world, is sure to take place.

references:

Florke, O.W., Florke, U., and Giese, U., 1984, Moganite, a new microcrystalline Silica-mineral: *Neues Jahrbuch fur Mineralogie, Abhandlungen*, v. 149, no. 3, p. 325-336.

Florke, O.W., Jones, J.B., and Schmincke, H.-U., 1976, A new microcrystalline silica from Gran Canaria: *Zeitschrift fur Kristallographie*, v. 143, p. 156-165.

Heaney, P.J., and Post, J.E., 1992, The widespread distribution of a novel silica polymorph in microcrystalline quartz varieties: *Science*, v. 255, p. 441-443.

OTHER NEWS NOTES

Two items by chapter member Bill Smith appeared in the Nov.-Dec. 1991 issue of *Mineralogical Record*. His article on "The mineral collection of Moritz and Adolf Lechner, Vienna" (p. 433-438) describes a famous collection (over 8000 specimens) that was assembled mainly in the early part of the 1900's. Some of the collection is now in the U.S National Museum, but most of it was sold, through *Shortmann's Minerals*, to private collectors.

Bill is also the author of a guest editorial in this issue of MR, on "Diversity", in which he discusses the aesthetics vs. the true intrinsic (scientific?) value of mineral specimens. Bill talks about concerns of minerals being seen "more and more primarily as pretty objects", as opposed to "The real meaning of minerals is: what they are in themselves, even the lowliest specimen just as much as the more glamorous one; what they can teach us through what they truly are." [Bill notes one correction to the column as it was printed in MR; a comment about the success or lack thereof of Friends of Mineralogy in opposing the tendencies to commercialize minerals and judge them only in terms of their monetary value, was inadvertently attributed to Bill himself; it was in reality a quotation from Arthur Montgomery.]

Jade: The Denver Museum of Natural History is offering for sale, five lots of high grade Wyoming jade, totalling approximately 8000 pounds. It may be inspected at the museum from 1:00 to 4:00 p.m. on Friday Mar. 6, Monday Mar. 9, or Tuesday Mar. 10; or from 5:00 to 8:00 p.m. Monday Mar. 9; or at other times by arrangement (call the Department of Earth Sciences, 370-6445 or 370-6434). Bidding closes at 4:00 p.m. Tuesday, Mar. 10; bids must be accompanied by a deposit (to be refunded promptly to unsuccessful bidders) of \$300. Minimum bid per lot is \$500.

The Greater Denver Area Council of Gem and Mineral Societies, at its First Quarter meeting in February, voted to propose several changes to the by-laws of the Council. This is being done to bring the by-laws into better conformity with the way the organization is actually run, and to more clearly state the role and responsibilities of (1) the Show Committee, which puts on the annual Denver Gem and Mineral Show, and (2) the Long Range Planning Committee, which recommends future goals for the Council and makes recommendations on proposals for grants to be given to other institutions. Nine separate paragraphs in the Council by-laws are being amended; after obtaining the views of their organization, Trustees representing each member organization will vote on the proposed changes at the Second Quarter council meeting, in May. You may examine a copy of the proposed changes at our March meeting. The Denver Council is composed of nine member organizations in the Denver-Boulder area, one of which is FM.

Note from the Denver Show Committee (from Judy Knoshaug, club liaison): In the last few years, the Saturday night activity during the Denver Show has been an awards presentation and benefit auction. The event has never drawn the desired level of participation. Recognizing this fact, the Saturday night event will be changed to a new format to include the presentation of awards, food, and an entertainment program related to our hobby. The committee feels the awards presentation is very important because it is our opportunity to recognize those whose hard work and dedication result in the outstanding cases admired by the general public and by all of us. More information will be shared with you as plans for the event are finalized.

Since this is our 25th anniversary show, a 25th anniversary pin is being designed. The show pins always sell well.

Miguel Romero receives 1991 Carnegie Mineralogical Award

Dr. Miguel A. Romero Sanchez, founder and director of the Museo Mineralogico de Romero (Romero Mineralogical Museum) in Tehuacan, Puebla, Mexico and "the man who singlehandedly saved his country's mineralogical patrimony," was awarded the Carnegie Mineralogical Award for 1991 at the Saturday night awards ceremony at the Tucson Gem and Mineral Show on February 15th.

In addition to the discovery of several new minerals including mapimite and ojuelaite, Dr. Romero has assembled one of the world's finest private mineral collections (approximately 8,500 specimens), mostly Mexican minerals and meteorites. Had he not acquired these specimens, they would have been dispersed to the United States and Europe for study and exhibition.

Dr. Romero initially became interested in mineralogy while a student at the National University of Mexico. Today he provides financial support and study specimens to Mexican college students pursuing degrees in mineralogy and geology and operates an exchange program that enables students in Russia, France, Denmark, and the United States to study Mexican mineralogy in his museum's fully-equipped research laboratory.

Dr. Romero was a founding member and the first president of the Sociedad Mexicana de Mineralogia, a group devoted to the scientific study and preservation of Mexican minerals; he founded the Boletin de Mineralogia which is devoted to the mineralogy, petrology and geology of Mexico; he organized and raised funds for the First Mexican Mineralogical Congress held in June 1991. He has exhibited specimens from his museum at the Tucson Gem and Mineral Show for many years, and served on the International Board of Directors of the Arizona-Sonora Desert Museum.

Other recipients of the Carnegie Mineralogical Award include the Tucson Gem and Mineral Society (1987), Dr. John Sinkankas (1988), Dr. Frederick H. Pough (1989) and the late Paul E. Desautels (1990).

California Desert Legislation

by John T. Alf, RMFMS Chairman,
Public Lands Advisory Committee

The House of Representatives on November 26, 1991, passed by overwhelming majority, its version of the Cranston "Desert Protection" bill, which has been in the U.S. Senate for the past several years. The bill has now gone to the Senate for consideration by that body. Politics had, and will have in the future, a significant impact on the progress of this legislation in that the members of Congress think they can see more potential votes for themselves among the environmental groups pushing this thing than in the groups of people who will be adversely affected by it. The bill, HR 2929, was not taken up by the Senate in Congress's rush to recess for the holidays but will be on the agenda, probably in January 1992. It may bear the House number or it could be advanced under the number of its Senate counterpart, S-21, but the important thing to remember is that both bills are essentially similar and equally devastating to the activities of rockhounds. Approval of this legislation is the keystone of the environmentalists' program for the future, and they feel that this will set the pattern and precedent for coming efforts in the other Western states.

Each and everyone should contact his/her own two Senators and register his/her opposition (or approval, if that is the way you feel) to the legislation. Don't bother writing or contacting Senators in states other than your own since many of them acknowledge that they do not even open mail postmarked out of their state. Because of the well-know apathetic attitude of most rockhounds, I'm not appealing for letters, although it is a fact that letters do more good than anything else; but I am appealing for everyone to make a telephone call to his/her Senator's office, either the local office or in Washington, DC. All you need to do is give your name and address to the person who answers and say that you are opposed to the California Desert Bill, HR-2929 or S-21. Even if you make a long distance call to Washington at the day rate, this can be accomplished within one minute and shouldn't cost more than 75 cents. Surely there isn't anyone seriously interested in the continued right to collect on public lands who cannot afford 2 minutes of time and \$1.50 for calls to two Senators.

It appears that Senators in states lying east of Colorado are the ones who are most likely to be swayed by the environmentalists' arguments. This is not to say that we do not have a problem in the West; it's just that it is probably worse in the East. Therefore, if you have friends in the East, please contact them and ask them to make calls to their Senators. Let these Senators know that there are people other than environmentalists who care about how public lands are managed. (Reprinted, with permission, from the Rocky Mountain News, newsletter of the Rocky Mountain Federation of Mineralogical Societies, Inc.)

[Ed. note - we don't know if, as noted in the above article, this bill has already been acted upon in Congress; but it appeared to be of enough possible interest to reprint here.]

Events for Your Calendar: 1992

- MARCH 7-8** Albuquerque Gem & Mineral Show, "Copper Mining & Minerals", UNM Continuing Educ. Center, Albuquerque, Judy DeMark & Barbara Matz, Co-Chmn., (505) 884-9457.
- MARCH 12** March FMCC meeting, speaker Allen Heyl on "Mineral Occurrences of the Black Range and Rio Grande Trench Region, New Mexico". DMNH, 7:30pm.
- APRIL 3,4,5** Ft. Collins Rockhounds Show, Lincoln Center. Chairman: James Kasal 1506 Patton Dr., Ft. Collins, CO 80524.
- APR. 9** FMCC meeting, DMNH, 7:30pm. Speaker to be announced.
- APRIL 24-26** RMFMS Show and Convention, hosts Wichita (KS) Gem and Mineral Society, Cessna Activity Center, 2744 George Washington Blvd., Wichita, KS. Chmn., Bob Crouch, (316) 686-9007.
- APRIL 25-26** Flatirons Mineral Society Show, "Mountain Magic", at Fisher Honda, Boulder. Chmn: Jim Spotts, telephone 303-258-7979.
- APRIL 25-26** Helena Mineral Society Gem and Mineral Show. At Valley Community Center, York Rd., North of Helena. Saturday, 10am - 6pm, Sunday, 10am - 5pm.
- MAY 7** FMCC Meeting/Auction
- MAY 16-17** Grand Junction Gem and Mineral Show: Two Rivers Convention Center, 159 Main Street. Chmn.: Howard Schubarth, (303) 243-0779.
- JUNE 25-28** RAMS (Mile-Hi Rock and Mineral Society) Show: Westminster Mall, 88th and Sheridan. Chairperson: Sue Kurtz, 466-4950
- JULY 18-19** Colorado Springs Mineral Society Show, 10am to 7pm Saturday, 10am to 5pm Sunday. Theme mineral: amazonite. For information contact Ray Berry, Publicity Chmn, 7513 Tudor Rd, Colo. Spgs, 80919 or telephone (719)598-7877.
- SEPT. 10** FMCC meeting, DMNH, 7:30pm.
- SEPT. 18-20** Denver Gem and Mineral Show. Theme mineral is silver. Chairman: Carl Charette, 674-5545.
- OCT. 8** FMCC meeting, DMNH, 7:30pm.
- NOV. 12** FMCC meeting, DMNH, 7:30pm.

FRIENDS OF MINERALOGY, COLORADO CHAPTER

SCHEDULE OF MEETINGS FOR 1992

7:30 p.m., Thursday evenings

DENVER MUSEUM OF NATURAL HISTORY

March 12

April 9 (new-an April meeting!)

Auction! - May 7 (note date change)

September 10

October 8 (new-an October meeting!)

November 12

Friends of Mineralogy, Colorado Chapter
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