

Friends of Mineralogy, Colorado Chapter Newsletter – May, 2001

May Meeting – Thursday, May 10, 7:30 p.m.

(Board meeting 6:30-7:30)

Denver Museum of Nature and Science – V.I.P. Room (next to cafeteria)

Imaging Spectroscopy: Mapping Minerals from Air and Space

by Dr. Gregg Swayze, U.S. Geological Survey

Imaging spectroscopy is a relatively new science that can be used to map minerals at the Earth's surface using the reflected light from the sun. Most minerals, plants, water, and synthetic materials have diagnostic spectral absorptions in the ultraviolet to near infrared wavelengths that can be measured with airborne and orbital spectrometers. These absorptions are like fingerprints that can be used to uniquely identify materials and in some cases to measure their chemical composition. Work at the U.S. Geological Survey involves creating "spectral mineral maps" of the surface and applying these to detect acidic mine drainage in the southwestern U.S., map naturally occurring asbestos in the foothills of California, explore for gold in Nevada, and search for hydrothermal systems in terrestrial analogues of the Martian surface on the Big Island of Hawaii.

Gregg Swayze has worked for the USGS for 16 years, applying imaging spectroscopy to a host of geohazard and mineral exploration problems. He got his M.S. in Geology from CSM in 1985 and Ph.D. in Geology from CU in 1997. He is currently involved in a project to map asbestos hazards in California and Montana. His long term research goals are to use imaging spectroscopy to help identify those Martian hydrothermal systems with the highest potential to yield traces of past or present Martian life.

➔ If you go to the USGS Mineral Resource Team's web page at
<http://minerals.cr.usgs.gov/remotesens.html>

You can look at articles and images about remote sensing mineral surveys of:

California Gulch, Leadville, Colorado

Summitville, Colorado

Animas River watershed from Hermosa to Animas Forks, Colorado

Ray, Arizona

Yellowstone National Park

A description of this work and one of Gregg's color mineral maps of the Cuprite mining district, Nevada, appeared in *Rocks & Minerals*, July-Aug. 1998, in the Geo-Currents column by Jane M. Matty (pp. 237-238).

FM dues for 2001 are \$13.00 and are payable **NOW!** if you wish to remain a member. If your address label does not say "2001" you haven't paid your dues (and we'll circle it in red). Send dues to Friends of Mineralogy-Colorado Chapter, at our **new mailing address** (*Please note!*), **P.O. Box 5276, Golden CO, 80401-5276**. Please call treasurer Jim Hurlbut if you have questions about dues (303-757-0283).

FMCC Officers: Bill Chirnside, President, 303-989-8748

Jim Hurlbut, Treasurer, 303-757-0283

Eunice York, VP, 303-761-8296

Pete Modreski, Sec., 303-425-9549

Directors: Bruce Geller (2000-01), Judy Peterson (2001-02), Jack Thompson (2001-02)

At our March 8 meeting we heard short presentations on the history & past activities of FM by Jack Murphy, Jim Hurlbut, Pete Modreski, Ray Berry, and Marty Zinn. Refreshments were kindly brought by Jack and Kaye Thompson. Our follow-up discussion covered "what do members want to get out of FM", and what new activities should we plan? Pete Modreski passed out copies of a questionnaire asking for members' ideas for our activities. If you did not fill one out at the March meeting, a copy is included with this newsletter; we ask you to fill it out with all your best suggestions, and bring it to our meeting or auction, or mail it to FM.

Wyoming Field Trip Bill Chirside is still planning to lead this trip over May 17-20, 2001 to collect minerals from pegmatites in the Black Mountain and Copper Mountain districts in the boondocks of west-central Wyoming. The Black Mountain pegmatite (Rattlesnake Range, western Natrona Co. north of Muddy Gap; spodumene, black to green tourmaline, garnet, apatite) was described by Mark Jacobsen in *Mineral News*, vol. 13, no. 5, May 1997. Mark also has an article in press in *Rocks & Minerals* about the minerals of the Copper Mountain district (Owl Creek Mountains, northeast of Shoshoni in northern Fremont Co., WY; lepidolite, petalite, beryl, tantalite, gahnite). These pegmatites are "interesting" mineral occurrences though they are not noted for fine crystal specimens. If you are interested in going along but have not yet talked to Bill, please call him ASAP.

FM Annual Auction, June 7 Our annual chapter auction will be held Thursday evening, June 7, 7-9 p.m. (open for setup at 6), at the Glendale Community Center, 999 Clermont St., Denver (east of Colorado Blvd. south of Kentucky St.). There will be both a silent and verbal auction, with refreshments provided by FM members. You may bring material either for a full (100%) or a 20% donation to FM. A flier and blank bid forms are attached to this newsletter. Please call Bruce Geller (303-237-2947) if you have any questions about the auction. ***All visitors & guests are very welcome!***

Please help us by reminding all your mineral-interested friends about our auction.

Want to get on our email list? To receive any up-to-date announcements about plans or changes to meetings, field trips, + outside lectures, shows, auctions, etc., Send your email address to pjmodreski@att.net and I'll add you to our (embryonic) FMCC email list.

---Pete Modreski, newsletter editor for the time being; 303-425-9549

Coming Events:

May 10, May FM meeting, 7:30 p.m., Denver Museum of Nature and Science

May 12-13 Grand Junction Gem & Mineral Show

June 7, FM auction, 7 p.m., Glendale Community Center

June 21-24, "Westminster Mall Rocks" show, Mile Hi Rock & Mineral Society

July 14-15 Pikes Peak Gem and Mineral Show (Colorado Springs Gem & Mineral Society); "Out of the Heavens" -- moon rock + meteorites; Masonic Temple, 1150 Panorama Dr. (Fillmore St. west exit).

Aug. 10-12 Contin-Tail rock swap, Buena Vista

Aug. 17-19 Lake George Gem & Mineral Show

Sep. (6 or 20?), September FM meeting, Denver Museum of Nature and Science

Sep. 14-16, Denver Gem and Mineral Show; *Minerals of the Pikes Peak Batholith*

See web page <http://www.denvermineralshow.com/>

Nov. 1, November FM meeting, Denver Museum of Nature and Science

Nov. 10-11 New Mexico Mineral Symposium, Socorro NM

2002

Feb. 14-17, 2002 Tucson Gem and Mineral Show: *Minerals of Africa*

Sep. 7-10, 2002 Symposium on Gemstone Deposits of the Rocky Mountain Region

Sep. 13-16, 2002 Denver Gem and Mineral Show: *Gemstones of Colorado*

2002 Mineral Symposium: At our last meeting, FMCC decided that it will sponsor a 4-day symposium on Gemstone Deposits on September 7-10, 2002, the weekend before the Denver Show. Our co-sponsors will include Colorado School of Mines, the Denver Museum of Nature and Science, and the USGS. There will be two days (probably 1½ full days, Saturday plus Sunday morning) of lectures, to be held at Colorado School of Mines, followed by two day-long field trips, Monday and Tuesday, probably one trip to the Teller-Park County area and one to Larimer County (diamond-bearing kimberlites). The talks will be planned to interest both professional geologists and mineral collectors. We are planning a welcoming party Friday evening, a banquet with speaker Saturday evening, and a reception at the Denver Museum of Nature and Science Sunday afternoon. More details will be printed as they become available. Our preliminary announcement about the symposium is below.

Gemstone Deposits of Colorado and the Rocky Mountain Region September 7-10, 2002

First Announcement and Call for Papers

A symposium on the mineralogy, geology, and field occurrence of gemstones in the Rocky Mountains states.

Co-sponsored by the Colorado Chapter of Friends of Mineralogy, Denver Museum of Nature and Science, Colorado School of Mines Geology Museum, and U.S. Geological Survey.

The symposium will be held on the Colorado School of Mines campus, Golden, Colorado, the week before the Denver Gem and Mineral Show. "Gemstones of Colorado" will also be the theme of the 2002 Denver Gem and Mineral Show, Sep. 13-15. The symposium will include 1 1/2 days of lectures (Saturday and Sunday, Sep. 7-8) and two days of field trips to selected Colorado gem localities (Sep. 9-10). The symposium will endeavor to bring together professionals and amateurs involved in mining, collecting, mineralogical research, lapidary and jewelry use, and curation and display of gem materials from the Rocky Mountains area. We hope to include papers on all the best-known gemstone deposits of the region. Persons wishing to give a paper at the symposium (or to receive further information about attending) should submit a title and a 50-word summary by Jan. 1, 2002 to Pete Modreski, U.S. Geological Survey, email pmodresk@usgs.gov, or to FM-Colorado Chapter, P.O. Box 5276, Golden CO 80401-5276. Further details will be available.

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A new USGS publication that may be of interest to mineral collectors is USGS Geologic Investigations Series Map I-2681, "Geologic map of the Silverton and Howardsville Quadrangles, Southwestern Colorado", by Robert G. Luedke and Wilbur S. Burbank, published in 2000. It includes a color geologic map, 1:24,000 scale, plus an 11-page explanatory pamphlet. Cost is \$7.00; the map can be purchased over-the-counter at USGS Map Sales, Building 810, Federal Center, Lakewood CO (open 8 a.m. – 4 p.m. weekdays) or ordered by phone or mail (call 303-202-4200 or toll-free 1-888-ASK-USGS). There is a \$5.00 per order postage & handling charge for mail orders.

Did you know that a number of USGS geologic maps can be viewed or downloaded online? The maps are in PDF format, and can be viewed using Adobe Acrobat Reader 4.0 (free download). A list of online maps is at: <http://geology.usgs.gov/i-maps.html>

(continued next page)

USGS maps available digitally online include:

I-2605 Geologic Map of the Proterozoic Rocks of the Central Front Range, Colorado

I-2635 Geologic Map of Precambrian Rocks, Rawhide Buttes West Quadrangle and Part of Rawhide Buttes East Quadrangle, Hartville Uplift, Goshen and Niobrara Counties, Wyoming

I-2656 Geologic Map of the Wolcott Quadrangle, Eagle County, Colorado

I-2661 Geologic Map of Precambrian Rocks of the Hartville Uplift, Southeastern Wyoming

The first two above (I-2605, I-2635) can also be purchased as folded paper maps (\$7.00); the second two (I-2656, I-2661) can be ordered as paper "map-on-demand" color plotter printouts from the USGS, at a cost of \$20.00 per map with about a two-week delivery time.

The Colorado Geological Survey has recently published quite a few new geologic maps and publications about parts of Colorado that may be of interest to collectors. These include:

MS-31 Geologic map of the Glenwood Springs quadrangle, Garfield County, Colorado (1997, \$12.00).

OF-97-02 Geologic map of the Dotsero quadrangle, Eagle and Garfield Counties, Colorado (1997, \$6.00).

OF-97-03 Geologic map of the Carbondale quadrangle, Garfield County, Colorado (1997, \$6.00).

OF-97-06 Geologic map of the Salida East quadrangle, Chaffee and Fremont Counties, Colorado (1997, \$6.00).

OF-98-01 Geologic map of the Basalt quadrangle, Eagle and Pitkin Counties, Colorado (1998, \$6.00).

OF-98-04 Geologic map of the Cameron Mountain quadrangle, Chaffee, Park, and Fremont Counties, Colorado (1998, \$6.00).

OF-99-18 History, geology, and environmental setting of selected mines near Creede, Rio Grande National Forest, Mineral County, Colorado (1999, \$5.00).

OF-00-1 Geologic map of the Jack Hall Mountain quadrangle, Fremont County, Colorado (2000, \$10.00).

OF-00-2 Geologic map of the Idaho Springs quadrangle, Clear Creek County, Colorado (2000, \$10.00).

OF-00-3 Geologic map of the Colorado Springs quadrangle, El Paso County, Colorado (2000, \$10.00)

OF-00-4 Geologic map of the Hesperus quadrangle, La Plata and Montezuma Counties, Colorado (2000, \$10).

SP-49 The handbook of Colorado meteorites (2000, \$7.00).

All of these publications are available over-the-counter at the CGS office in Denver at 1313 Sherman St., Room 715, or by mail or phone (303-866-2611, or see www.dnr.state.co.us/geosurvey).

Do you know about all the publications available from FMCC? These past publications are still available from our chapter:

Pegmatite Symposium abstracts & field guide (1986, reprinted 1999)	\$ 8.00
Precious Metals Symposium abstracts & field guide (1988)	<i>not currently available</i>
Mineral Photography Symposium (1989)	\$ 6.00
Pegmatite Symposium abstracts (1999; reprinted from Canadian Mineralogist)	\$ 10.00
Pegmatite Symposium Field Guide (1999)	\$ 10.00
Antero Aquamarines, by Mark Jacobson (1993) (softcover; reduced price!)	\$ 12.00
Antero Aquamarines (1993) (hardcover, very limited number available)	\$ 34.95
Minerals of Colorado (1997)	\$150.00

To request any copies, please contact either Jim Hurlbut or Pete Modreski for all except Minerals of Colorado, for which please contact Ed Raines (303-682-2828).

Friends of Mineralogy--Colorado Chapter

MINERAL AUCTION

Thursday, June 7, 2001

Glendale Community Center, 999 S. Clermont St.
(on 2nd floor; please park in east lot !!)

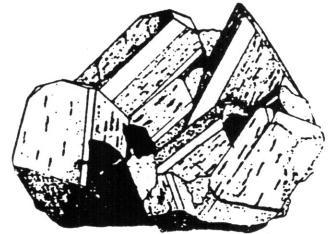
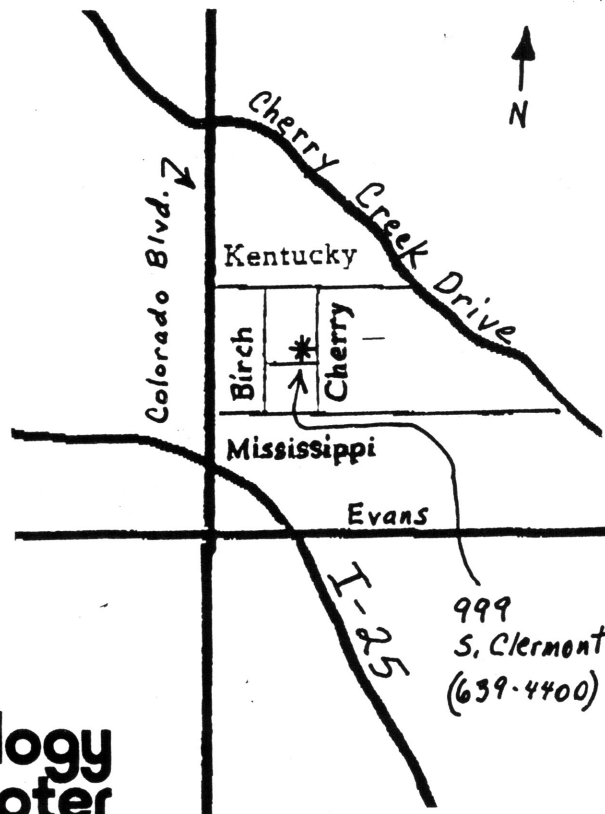


Setup at 6:00 pm
Silent auction from 7:00 to 9:00 pm
Verbal auction at 8:00 pm
Checkout from 9:00 to 10:00 pm



20% donation of selling price to FM – remainder to seller
(100% donations also accepted)
for additional information please contact
Bruce Geller, 303-237-2947

Everyone is welcome!



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