



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.

BULLETIN OF FRIENDS OF MINERALOGY

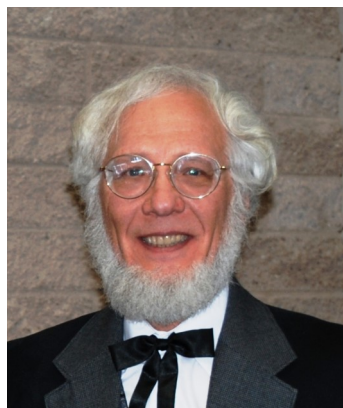
Volume 47 No. 3

ISSN 2471-7932

July 2017

Inside This Issue

| | |
|--|-------|
| President's Message | 1 |
| Officers | 2 |
| The Southern California Chapter Symposium | 3-9 |
| Website Changes | 9 |
| The West Chester University Geology Museum | 10-11 |
| Chapter Updates | 12-14 |
| Our Affiliates | 15 |



President's Message By Mark Jacobson

The Tucson Gem and Mineral Show is just a short memory now with the sphalerite and wurtzite mineral symposium at Miami University, Oxford, Ohio and the hydrothermal mineralization symposium at the Tellus Museum, Cartersville, Georgia. Both were in March. The Rochester Mineral Symposium, Rochester, New York in April, and the New England Mineral Conference, Newry, Maine in May were also recently finished.

The activities ahead are summer field collecting with splendid weather in the Rockies. The Colorado Springs Mineralogical Society a few weeks ago in June completed their annual mineral show with a handful of great displays based on a few themes. Pyrite was one theme with Larry Havens showing a diversity of worldwide pyrite localities. Ray Berry planned a Minerals from the Pikes Peak Batholith display which sadly became a memorial case of great self-collected specimens. Another just past event during the middle of June was the 8th International Pegmatite Symposium in Kristiansand, Norway (see pictures on page 14).

New events are following. The Colorado School of Mines Precious Metal Symposium is coming in July, followed by the 50th year anniversary of the Denver Gem and Mineral Show in September, the FM Pacific Northwest Mineral Symposium in October and the New Mexico Mineral Symposium in Socorro in November. Plenty of activities to enjoy. I encourage any past or future attendees to these or other mineral symposia to submit summaries with pictures of the meetings for the national newsletter for others to enjoy.

Amidst all these activities, a majority of the FM board of directors and chapter presidents have agreed to move our national website to a new provider and convert the pages to different software so that they can be more easily updated and thus more current on the activities of the chapters and National. Once the change is completed, which should be soon, I'll be able to write more about other improvements and activities. See page 9 for more information.

NATIONAL OFFICERS

PRESIDENT: Mark Jacobson; markivanjacobson@gmail.com

VICE PRESIDENT: Virgil Lueth; New Mexico Tech, 801 Leroy Place, Socorro NM 87801-4796; vwlueth@nmt.edu

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

Terms expire in February, 2018 just before the general meeting :

Clyde Spencer; c_spencer123@att.net

Jim Etzwiler; kd7bat@arrl.net

James Houran; jim_houran@yahoo.com

Sue Liebetrau; liebetrauam@msn.com

Terms expire in February, 2019 just before the general meeting :

Bob Meyer, pyrite111@hotmail.com

Virgil Lueth; vwlueth@nmt.edu

Mark Jacobson; markivanjacobson@gmail.com

Linda Smith, vanegas3@charter.net

Terms expire in February, 2020 just before the general meeting :

Allan Young, allanyoung@msn.com

Gloria Staebler, gastaebler@aol.com

Randy Marsh, marsh.rg@pg.com

William Besse, wwbesse@gmail.com

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: David Shapiro; Dshapiro33@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
September 20, 2017**

Article from the Southern California Newsletter, June 2017

Spring Symposium March 25-26, 2017 Lane Mountains San Bernardino County



Photo by Alicia Borchmann

Howard Brown, a retired local geologist served as our guest speaker and field guide for the weekend program. Howard graduated from California State University Northridge during the 1970s and worked as a geologist in the mining and minerals industry for 37 years before retiring in 2013. Howard was involved in uranium, and gold exploration before working for Omya, an international industrial minerals mining company in 1979, where he worked until retirement. He was involved in more than 135 mineral evaluation projects in North America from British Columbia to Southern Mexico, and played an important role in the discovery, and mining of 10 mines in the United States and Mexico.

He has authored more than 45 published abstracts, peer reviewed papers, and geologic maps for various professional societies, technical journals, State and Federal Geological surveys, and is considered a leading expert on Paleozoic rocks and limestone deposits.

Since retiring, Howard has focused his geological interests on detailed geologic mapping of the Lane Mountain and Northern Calico Mountains area, in San Bernardino

County, resulting in significant revisions to the understanding of the geology in the central Mojave Desert. Howard has recently presented maps at 2015 and 2016 Geological Society of America Cordilleran Section meetings, and is working on getting digital maps of his research published by the California Geological Survey. Howard gave a 2-hour power point presentation on the following subject as summarized below:

GEOLOGY, MINERALS AND MINING IN THE LANE MOUNTAIN AND NORTHERN CALICO MOUNTAINS AREA, SAN BERNARDINO COUNTY CALIFORNIA

Rocks in the Lane Mountain area north of Barstow California, in the north central Mojave Desert area have long intrigued geologists and mineral hobbyists. No new mapping of the area has been done for more than 60 years. New detailed geologic mapping at 1:6000 scale (1 inch = 500ft) allows more accurate correlation of strata, resolution of complex structures and a clearer and complete geologic picture. The new detailed mapping also recognizes and categorizes the numerous metallic and nonmetallic mineral deposits that occur in the area, which served as mineral collecting sites during our weekend field trips.

Bedrock in the Lane Mountain area includes Paleozoic and Mesozoic metasedimentary rocks, Mesozoic intrusive rocks and Miocene sedimentary, volcanic and shallow intrusive rocks. Tectonostratigraphic metasedimentary sequences of Paleozoic age include more than 30,000 feet (tectonic thickness) of east dipping, tectonically juxtaposed, metamorphosed, clastic dominated rocks including quartzite, conglomerate, argillite, metavolcanic and subordinate impure carbonate rocks of off-shore and or basinal affinity, correlated with the Antler orogenic belt in central Nevada. Allochthonous rocks correlated with shallow water cratonal-miogeoclinal Paleozoic carbonates of the Cambrian Bonanza King Formation, Mississippian Monte Cristo Limestone, and Pennsylvanian Bird Spring Formation, may have been emplaced as westward backslides onto the previously tectonically juxtaposed deeper water strata.

An overlap sequence of Early Jurassic calc-silicate rocks and conglomerate correlated with the Fairview Valley Formation was deposited on top of the eroded older Paleozoic rocks. McCulloh (1960) recovered a Mesozoic age fossil from these rocks, and recent age dating of detrital zircons verified an Early Jurassic age. Several varieties of intrusive rocks are present and include Permo-Triassic diorite and tonalite, Middle Jurassic diorite, Cretaceous quartz monzonite, and Late Cretaceous aplite, pegmatite, and felsic dikes. Recent radiometric dating verified the ages of the intrusive rocks. Early Miocene rocks in the map area include sedimentary and volcanic rocks of the Jackhammer Formation, the Lane Mountain rhyolite and Pickhandle Formation sedimentary, volcanic and shallow hypabyssal plugs. The recent work resulted in revisions to the stratigraphy of the Miocene rocks.

Geologic structure is very complex, the result of numerous deformational events. In latest Paleozoic and early Mesozoic time the offshore Paleozoic sequences were tectonically assembled, allochthonous shallow water carbonate sequences were emplaced on the deeper water rocks and the combined assembled packages were deformed by poly phase ductile bedding plane faulting, and folding, and juxtaposed against the Permo-Triassic diorite complex. After uplift and erosion, Early Jurassic overlap sequence (Fairview Valley Formation) rocks were deposited, and all of the rocks were again deformed by folding and faulting, before intrusion of Middle Jurassic diorite. Low angle faulting placed Middle Jurassic diorite and Jurassic roof pendants over the older rocks. After intrusion of Cretaceous quartz monzonite and associated dikes, the rocks were uplifted and went through a long period of erosion. During earliest Miocene time (24 my) extension and associated detachment faulting began in the region, forming basins within the hanging wall. Deposition of sedimentary and volcanic rocks of the Jackhammer, Lane Mountain and Pickhandle Formations occurred during that time (23-17 my). During and after deposition, the Miocene rocks underwent continued deformation including localized intense overturned recumbent folding, and abundant faulting. Young NW trending faults also cut the mapped area.

The sedimentary and volcanic rocks have undergone a complex history of intrusion, metamorphism and deformation, resulting in the formation of a large variety of metallic and nonmetallic mineral deposits in the Lane Mountain area.

Metallic minerals prospected or mined include many placer and lode gold prospects and mines. The Shining Dawn lode gold mine was active during the 1980s. Copper sulfides and colorful secondary copper minerals were mined from several copper prospects associated with diorite. Magnetite iron prospects are present, and tungsten was mined at the Starbright deposit. The Starbright Mine produced more than \$1 million worth of tungsten during the Korean War, from garnet epidote scheelite skarn deposit. An unusual nickel prospect is located in the eastern part of the area, and nickel sulfides, nickel silicate and chromium garnet uvarovite occur there.

Several significant nonmetallic mineral deposits are also present. Large deposits of wollastonite (calcium silicate) are present in metamorphosed impure wollastonite/diopside marble. Potential reserves are large (>50,000,000 tons), and some of the wollastonite is very coarse grained. A significant undeveloped deposit of coarse-grained white calcite marble (calcium carbonate) is present in allochthonous carbonate rocks correlated with the Mississippian Monte Cristo Limestone. Calcium carbonate is used in thousands of consumer products as a filler and extender. Other nonmetallic mineral deposits in the Lane Mountain area include barite, and Miocene volcanic rocks are the source of colored deco rock (red, green, lavender colors). Lapidary materials including jasper are plentiful in some rocks (silicified and jasperized impure limestone), and banded orange travertine is common as fracture and fault filling veins and deposits as much as 20 feet thick.

Howard concluded that the complex geology has allowed the formation of numerous and diverse mineral deposits including both metallic and nonmetallic industrial minerals. Most metallic mineral deposits are hydrothermal, in structurally controlled fault and shear zones, and generally small. Tungsten was formed in receptive skarn deposits in calc-silicate rocks. Detailed exploration may recognize and better define more metallic mineral deposits. Some nonmetallic mineral deposits are large and may include potential future resources (white calcite marble and wollastonite). This presentation and demonstration of samples specimens created an enthusiasm for over 40 attendees to prepare for an hour drive from Apple Valley's Lewis Center for Educational Research north and east of Barstow, California to the Lane Mountains for weekend field investigations, mineral collecting and camping.



Photo by Gregor Losson

Howard Brown leads the field trip to Starbright Mine area for first afternoon collecting site and overnight camping for collecting grossular garnet with epidote in skarn and crystals of both during the day and scheelite at night with UV lights.



Photo by Gregor Losson



Photo by Gregor Losson

Members scatter into a long pit mined initially for tungsten in the 1950-60s above. Quartz veins in diorite were searched for metamorphosed garnet epidote scheelite skarn specimens.

Lucky individuals were able to find some beautiful garnet crystals within the quartz grossular garnet skarn.

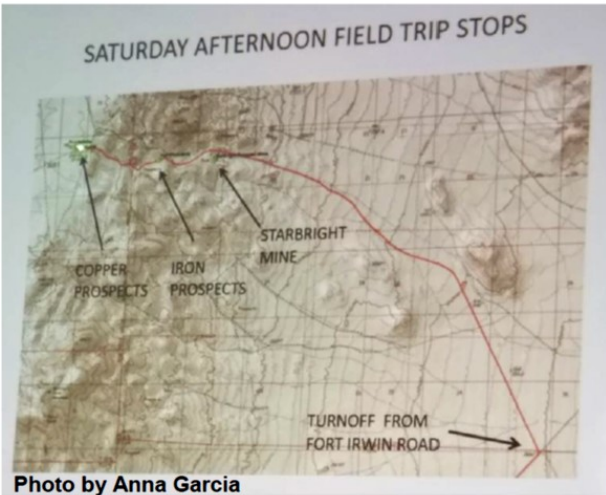


Photo by Anna Garcia

The field trip group of 47 members downsized the caravan from 20 plus vehicles to ten to navigate the single lane desert roads from Starbright base camp to iron deposit prospects and Azurite Mine pits for the rest of the afternoon. The iron deposits consisted of a variety of iron minerals including magnetite, hematite, limonite and goethite in both hydrothermal mounds alongside the desert road and within associated boundary metamorphosed schist. Magnets were quite useful to distinguish different iron minerals in addition to color. The last field site was the Azurite Mine copper pits and tailing piles scattered over a quarter mile on both sides of the desert road. We collected a variety of copper and sulfide ore specimens including chrysocolla, malachite, and pyrite at this site to make all participants pleased with their daytime excursions, before setting up camp to explore the Starbright Mine pit walls for fluorescent minerals using UV lights.



Photo by Pam Birge

Hematite and magnetite shown below left from the mound deposit where collectors are congregated in the photo above to find their special specimens to take home. The weathering of iron deposits gives the deep red oxidation color to the magnetite specimen. On the right is a schist specimen collected off the slope in the foreground above the mound in metamorphic contact boundary of the photo above. Both specimens are definitely magnetized and easily identified with hand magnets.



Photo by Alicia Borchmann



Photo by Alicia Borchmann



Photo by Gregor Losson



Photo by Gregor Losson

At the Azurite Mine pits, we didn't find any obvious azurite copper minerals, but collectors had a field day with chrysocolla. The shear wall shown above illustrates the hydrothermal deposited copper minerals. As collectors scoured the pits and surrounding terrain, they also found some malachite and pyrite. A close-up photo of the thin chrysocolla with botryoidal texture above right.

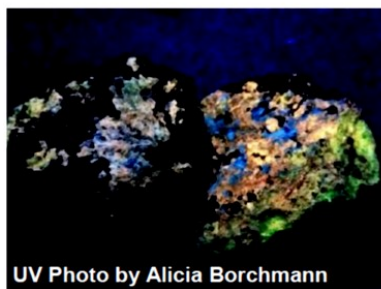


UV Light Photo of Scheelite by Alicia Borchmann

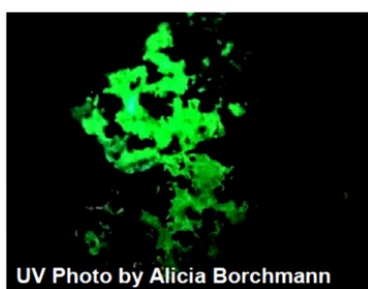


Daylight Photo of Scheelite by Alicia Borchmann

At the end of the day as the sun was setting some trekkers drove back to town to motels or RV, while the braver souls set up tents and camper trailers, and prepared some hot meals. Before settling into our tents, vehicles, and campers the entire party broke out flashlights for safety and UV lights to scramble over the pit floor and walls where we found garnet and epidote specimens during the day. At night, the glow of fluorescent minerals was a delight for all to see as we collected green opal; orange to red calcite; blue and white calcite and golden (from Molybdenum) scheelite specimens. We shared specimens with those without UV lights. We then crawled into our tents and listened to the winds blow all night and experienced the temperatures plummeting to nearly freezing by morning.

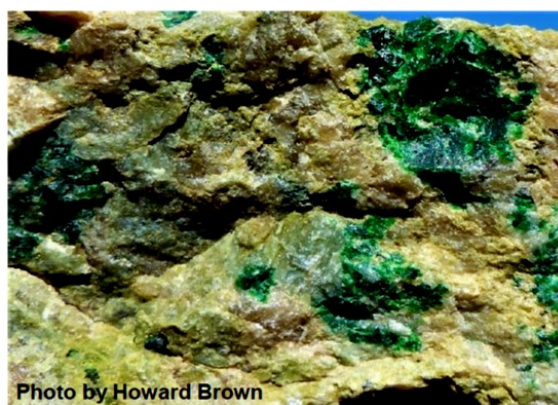


UV Photo by Alicia Borchmann



UV Photo by Alicia Borchmann

Sunday morning was a gathering of 40 some trekkers from motels, RVs, tents, campers and vehicles where we slept for the night to line up 20 vehicles on Fort Irwin Road north of Pickhandle Pass. Howard Brown led this caravan across the desert roads to a Wollastonite quarry shown below west of Coyote Dry Lake. The view was majestic as all participants parked and hiked up the slope into the abandoned quarry to find wollastonite, garnet, travertine and other minerals for collecting at our first site for the day. The coarse-grained wollastonite specimen below right has garnets embedded within the wollastonite crystals.



The second site for Sunday was a turning point as some trekkers headed back to San Francisco, San Diego and other distant locations, while dedicated mineral collectors drove a very narrow desert road up the side of a mountain and walked the last half mile to climb up on this hilltop shown above left. Exposed on this hilltop was an unusual nickel prospect in a dike cutting the wollastonite calc-silicate marble, where enthusiastic collectors searched through the apple green diopside and quartz matrix to find a darker rich color of green chromium garnet uvarovite. Following the field trip, numerous samples were analyzed and verified the presence of nickel arsenides, and secondary nickel minerals. At this point after hiking down the slopes to our vehicles to take a tailgate lunch break, the group broke up into two groups. SCFM President Don Buchanan led one group to drive to barite and jasper site near Pickhandle Pass, and released them to head on home. The second group stayed the afternoon with Howard Brown to drive up to a more challenging mountainous site to experience a steep hilltop hike for geological observations of structural folding and faulting as shown in the photos below.



2017 Future Changes to the FM National Webpages

A majority of the FM National board of directors, officers and FM chapter representatives have approved the plan to move the FM website to a non-AGI service provider that allows the use of WordPress software. This change is being implemented to allow for easier and more frequent updating of the website. The FM National webpages are also being redesigned by Bill Besse who has agreed to implement these changes. This change will not affect the site url or domain name, only who is hosting the site. Users will only notice changes to the pages, not its location.

These changes are to create and maintain separate pages on the site with 1) a list of all future symposiums, links to those future symposia for information on attending and recent past symposiums; 2) status of state locality indexes and state mineralogy books; 3) continue adding past FM newsletters that can be downloaded as pdfs until a complete historic record is achieved; 4) An abstracted history of the National organization with chapter formation, 5) updated results of FM awards with some history of the awards and 6) direct website visitors to the FM national facebook pages for current activities.

Mark Ivan Jacobson

Article from the Pennsylvania Chapter Newsletter, Summer 2017

The West Chester University Geology Museum

By Casey M. Slattery
West Chester University

While West Chester University's geology museum is often overlooked by the masses of busy students who pass by it each day, it is without a doubt one of the university's most noteworthy hidden gems. The museum, located in the Schmucker Science Link between the Schmucker and Merion Science Centers, is open to both students and the public.

Opened on April 11, 1992, the West Chester University geology museum has served as a shining example of the collaboration between visionaries and enthusiastic supporters. To make the museum a reality, donations from individuals, mineral clubs (including the Friends of Mineralogy), civic organizations, and the West Chester University Foundation provided more than \$5,300 in funding. Two West Chester Geology Department professors, Dr. John Stolar, Jr., and Dr. Gil Wiswall, donated their time and carpentry skills to construct the display cases in the museum. Donors' names on the display cases include current Friends of Mineralogy Pennsylvania Chapter members -- Arnold Mogel, Juliet Reed, and David Saja, and FM PA members who are no longer with us -- Martin Anné, Robert Eisenhauer, Paul Lazar, Paul Morgan, George Rambo, and Bill Yocom.

The geology museum displays minerals from the West Chester University mineral collection, which is composed of the collections of the Chester County Cabinet of Natural Sciences (dating back to 1826), West Chester Normal School, Dr. John Rose, Dr. Willard Brinton, Capt. Thomas Gay, Dr. Hugh McKinstry, Ruth Bass, and Franklin Sharpless as well as significant donations from the collections of John Stolar, Sr., Deanne Smith, and Rick and Belinda Hopewell.

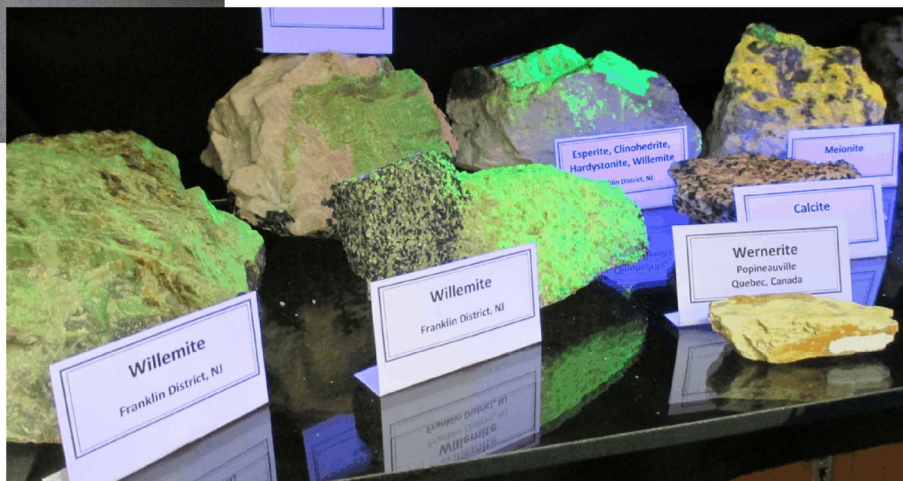
Displays in the museum are intended to be educational. All displays were designed and installed by students. The museum boasts a particularly impressive collection from Chester County, including a display dedicated to Brinton's quarry. Another case features Laguna agates, beautiful minerals from Chihuahua, Mexico, making fascinating finds from distant areas accessible to our local community. One of the favorite displays is an interactive exhibit, which uses hands-on experience to demonstrate the electrical properties of minerals. A special cabinet houses selected fluorescent mineral specimens from the collection of John Stolar, Sr. Other exhibits include Green River fossils, industrial minerals, and minerals from the Wissahickon Valley.

The West Chester University geology museum can be found in room 145 of the Schmucker Science Center Link, 750 South Church Street (corner of South Church Street and Rosedale Avenue), West Chester, Pa. The museum is free and open to the public Monday through Thursday from 10 a.m. to 2 p.m. during the fall and spring semesters, and is open by appointment during summer and winter sessions.





Some photos of the West Chester University Geology Museum and its contents





COLORADO CHAPTER UPDDATE

The Colorado Chapter of Friends of Mineralogy has been very busy this year. For our March meeting our speaker was Markus Raschke from the University of Colorado. His presentation was titled Mineralogy and Petrology of a REE pegmatite near Wellington Lake Colorado. It was a case study providing a new insight into pegmatite petrogenesis. This was a very informative talk.

Our May speaker was Linda Burns, president of the Denver Gem and Mineral Guild. Her presentation was about the Stratica salt mine in Hutchinson Kansas. It was very well received.

This upcoming July 20th through 24th FMCC is co-hosting the Gold and Silver deposits in Colorado Symposium. This will be a 4 day event to be held at the Colorado School of Mines campus. Two days of presentations and 2 days of optional field trips. A full list of speakers and posters, field trips and registration is available through the FMCC website. friendsofmineralogycolorado.org

This September 15th through 17th is the 50th Denver Gem and Mineral Show. The show theme this year will be Gold and Silver. Expect to see wonderful displays of the precious metals. Mineral dealers from around the globe will be bringing to Denver many of the world's treasures for sale. Displays from individuals as well as Museums from around the world, will offer us a opportunity to enjoy some of the best specimens the world has to offer. FMCC is proud to be a part of the Denver Gem and Mineral Show Council.

We will also be hosting a reception and backstage tour of the Denver Museum of Nature and Science Mineral collection for the Society of Mineral Museum Professionals (SMMP) at the Denver Museum of Nature and Science at 7:00 P.M. Thursday September 14th .

Jeff Self , President
Friends of Mineralogy
Colorado Chapter



Pennsylvania Chapter Update

FM-PA Chapter Symposium

Saturday, November 4

Field Trip November 5

Our Chapter's 2017 Symposium is set for Saturday, November 4, at Franklin & Marshall College in Lancaster, PA, with a field trip on Sunday. Please mark that weekend on your calendar and plan to attend.

PACIFIC NORTHWEST CHAPTER UPDATE



The Pacific Northwest Chapter of the Friends of Mineralogy
will host its

43rd Annual Symposium and Mineral Show

October 13-15, 2017

Red Lion Inn, Kelso, Washington

Theme: Minerals of the Pacific Northwest

-- Featured Symposium Speakers --

Ray Lasmanis: "Introduction to Geology of the Northwest"
 Rick Dillhoff: "The Purple Hope Claims, Green Ridge, King County, Washington"
 Tony Potucek: "Two Intertwined Owyhee County Idaho Mining Districts: Silver City and De Lamar"
 Doug Toland: "Green Monster Mountain: A Long-lived and Storied Locale That Still Has Promise"
 Julian Gray: "Pacific Northwest Treasures at the Rice Museum of Rocks and Minerals"
 John Cornish: "Rat's Nest, Summer Storm and New Beginnings, Custer County, Idaho:
 High Desert Treasure Chests!"
 Bob Jackson: "Big Amethyst at Little Gem"
 Allan Young: "Belshazzar's Gold"

-- Featured Show Room Dealers --

Pacific Rim Gems & Minerals: John Meek
 Lehigh Minerals: Jim and Yolanda McEwen

Earth's Treasures: Rick Kennedy
 XTAL: Dennis Beals

o-o-o-o-o-o-o-o

Additional dealers will be selling minerals from Pacific Northwest and
 worldwide locations in rooms adjacent to the Main Show Room.
 Exhibits in the Main Show Room will include a number that are world-class,
 including one from the Rice Museum of Rocks and Minerals.

Admission to all Dealers and Show Room Exhibits is Free
A Registration Fee is required to Attend the Symposium

For general inquiries or information about the Symposium, including registration
 deadlines and costs, please visit www.pnwfm.org or contact one of the Symposium
 Chairpersons:

John Lindell (lindell4@aol.com) or Bruce Kelley (bruce.kelley@gmail.com)

Room reservations should be made directly with the Red Lion Inn at (360) 578-4017.
 Mention that you are with the PNWFM to obtain a special symposium rate. The special rate
 applies from July 13 through September 5: Regular rates apply thereafter.

Rooms on the ground floor of the North wing are traditionally reserved for our satellite
 dealers. Therefore, if at all possible, we ask that you please refrain from requesting one
 of these rooms unless you plan to sell.

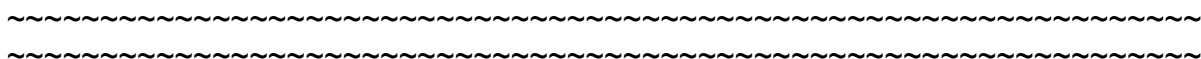
Please note that the Micro-Mineral Study Group will also have a room with microscopes for visitors to use, a presentation on micro-mineral photography on Friday evening, ongoing slide shows of micro-minerals, demonstrations and a give-away table during the Symposium on Friday evening and Saturday. This room and its activities are free to all visitors.



SOUTHERN CALIFORNIA CHAPTER UPDATE

Fall Symposium Announcement

Plan for SCFM Fall Symposium, October 21, 2017 at the Fallbrook California Mineral Museum, with field trip to the Pala Chief Mountain mines in a world-class lithium pegmatite region. We will tour pegmatite mines collecting pegmatite minerals including pink tourmaline, kunzite, morganite, aquamarine, smoky quartz, etc.



8th International Pegmatite symposium in Kristiansand, Norway



The pegmatite wall at Iveland, Norway where anatexic simple mineralogy (plagioclase-mica-quartz-magnetite) pegmatites have formed directly. The people are the participants on the post-symposium field trip of the 8th International symposium on pegmatites (PEG2017). Photo by Ruth Yeager.

Aeschynite-Y in feldspar matrix from Molland, Norway. Specimen on display in the Iveland Commune Mineral Museum next to the Iveland Kirke (Church).



FM AFFILIATES

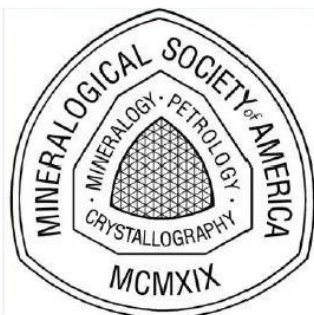


The Friends of Mineralogy is a long-time affiliate of The Mineralogical Record magazine. The magazine was founded in 1970 by John White, who was at that time a curator in the Mineral Sciences Department of the Smithsonian Institution. With the initial help of a financial backer, Arthur Montgomery, White 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.MineralogicalRecord.com.


ROCKS & MINERALS

For Everyone Interested in Minerals, Rocks & Fossils
www.rocksandminerals.org



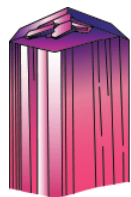
MINERALOGICAL SOCIETY OF AMERICA

If you are interested in earth, planetary, industrial, or biologic minerals or mineral-like materials, you may want to learn about the Mineralogical Society of America

 3635 Concorde Pkwy Ste 500
 Chantilly VA 20151-1110 USA
 phone: +1 (703) 652-9950
 fax: +1 (703) 652-9951
 website: www.minsocam.org



Mineralogical Association of Canada



mindat.org

AGI american geosciences institute
 connecting earth, science, and people



Mineral News
The Mineral Collector's Newsletter