

Friends of Mineralogy, Colorado Chapter Newsletter – November 2017

November Meeting – Thursday, November 16, 7:30 pm **Denver**
Museum of Nature and Science – VIP Room *Meeting at Denver Museum of Nature and Science, 2001 Colorado Blvd, City Park, Denver - VIP Room (1st floor). Enter the museum on the north side, through the security/staff entrance to the left of the main entrance. A board of directors meeting will precede the regular meeting, at 6:30.*

Phosphate Minerals of Arkansas and Where We Found Some

by Ed Pedersen

Arkansas has produced a large number of phosphate mineral specimens. Nearly all of the iron and aluminum phosphate minerals of interest occur in or adjacent to the Ouachita Mountains. The dominant rock in the area is the Arkansas Novaculite of Devonian and Lower Mississippian age. It reaches a maximum thickness of 900 feet and is overlain by the Stanley Shale. Most of the iron phosphates, such as strengite and kidwellite, are found in fractured novaculite. The novaculite is underlain by the Missouri Mountain Slate and the Blalock Sandstone which do not contain any minerals of interest. Below these are the Polk Creek Shale and the Bigfork Chert which are the host rocks for the aluminum phosphates such as wavellite and variscite.

One locality has produced many of the better iron phosphate specimens. The fracture zones in the novaculite seem to be more extensive and more highly mineralized at the Coon Creek Mine than at most Arkansas localities. Many of the better specimens of kidwellite, rockbridgeite, strengite, and phosphosiderite, especially those offered by dealers, have come from this locality.

During the 1970s and 1980s an informal group of mineral collectors calling themselves The Coon Creek Mining and Recreational Society met once a year to collect Arkansas minerals. This group consisted of A. L. Kidwell, Art Smith Jr., Henry deLinde, Meredith York, Mike Howard, Charles Steuart, Don Owens, and Dr. Buford Nichols. Since both Art Smith and Al Kidwell were members of the Mineral Study Group of the Houston Gem and Mineral Society and Arkansas was the closest strongly mineralized area to Houston, collecting efforts were focused there and the phosphate minerals were included.

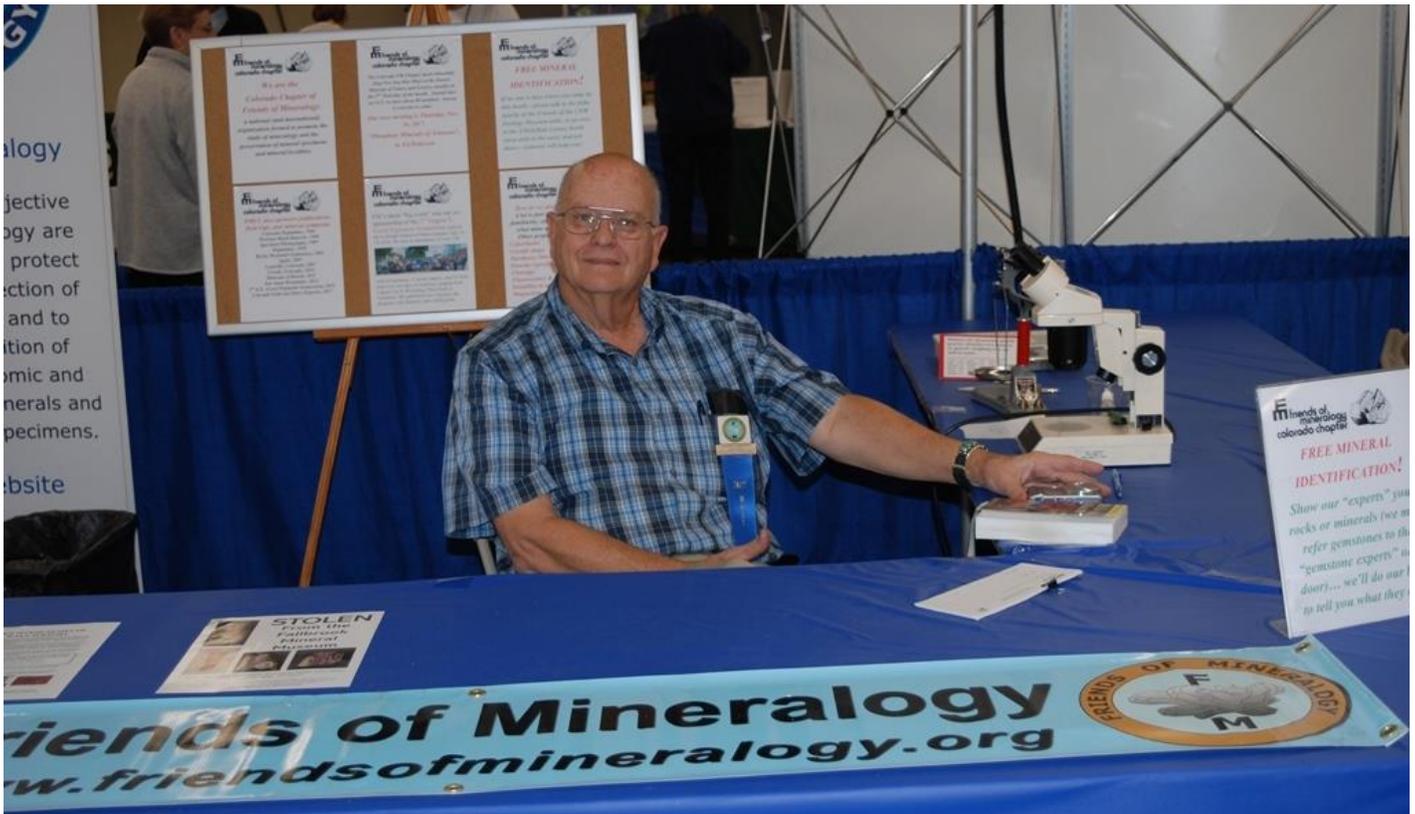


*Can you recognize these Arkansas phosphate minerals?
Answers will be at the end of this newsletter.*

About Ed Pedersen:

Edward Pederson is a geologist with a BS in Geology from the University of Nebraska, Lincoln, Nebraska and a MS in Geology from Arizona State University, Tempe, Arizona. During his professional career he has worked as a Geophysicist for more than 20 years with Amoco Production Company, in Houston and Denver. Later, he advanced his skill sets as a ground water geologist with the Nebraska Department of Environmental Quality, and as a geologist-geophysicist with an Environmental Consulting Firm in Denver.

He has been interested in collecting fossils since grade school, but started collecting minerals in 1965 after taking mineralogy courses in college. He has done extensive field collecting in Arizona, Texas and Arkansas. While living in Houston., he has been Chairman of the Mineral Section of the Houston Gem and Mineral Society and been a member of Friends of Mineralogy since early 1970s. Other clubs he has been or is a member of include the Lincoln Nebraska Gem and Mineral Club (Mineral Study Group leader), North Jeffco Gem and Mineral Society and the Rocky Mountain Micromineral Association, serving at one time as the Program Chairman.



Ed Pedersen at the FM – Mineral Identification booth at the 2017 Denver Gem and Mineral Show

Contents of this issue:

November meeting	1	Sharon Hannu Memorial Volunteer Trophy	8
About the speaker, Ed Pedersen	2	The 2017 Denver Gem and Mineral Show	9
President’s message, by Jeff Self	3	September 2017 FM Museum Tour	15
FM booth at the Denver Show	3	Fluorescent room exhibits at the Denver Show.....	16
Memorial, James Hurlbut	4	Calendar of coming events	18
		Notes about FM this month	20
		FM Membership Form	21

* * * * *

President's Message

Hello fellow FMCC members,

On September 14, 2017, FMCC hosted a tour of the Denver Museum of Nature and Science newly completed mineral and fossil archives. This tour was attended by members of SMMP, Friends of the CSMGM, FMCC and other guests. We were escorted through the museum's new mineral and fossil storage areas by Geology Curator, James Hagadorn. These collection storage areas were bright, shiny and new, located in areas far underground, far from public view. Many minerals were laid out for tour members to examine and discuss. After several hours, the mentally exhausted members of our group dispersed to recuperate.

I would like to thank all of the FMCC members who volunteered their time at the mineral show. The mineral identification booth, sponsored by FMCC, was never without a club member available to assist the public with their expertise. I thoroughly enjoyed the variety of excellent displays brought to Denver by museums and individuals from around the world. The gold and silver specimens in the cases were amongst the finest, providing exceptional eye candy.

On the weekend of November 11, 2017, the 38th annual New Mexico Mineral Symposium takes place in Socorro, NM. FMCC is a financial sponsor of this event. This symposium is an excellent opportunity to enjoy company of other mineral enthusiasts in a educational and relaxed atmosphere. I, myself and many other FM members will be there enjoying ourselves.

I have requested FMCC member, Erin Delventhal (a graphics design artist), to create new chapter badge designs for us. She has come up with quite a few excellent badges for us. These will be presented to the board at our next meeting, Thursday, November 16, 2017. Ed Pederson, a former collecting colleague of phosphate expert, Art Smith, will be giving a talk on *The Phosphate Minerals of Arkansas*. I am looking forward to it.

We hope to see you there!

Jeff Self.

---Jeff Self, September 2017, President, Colorado Chapter, Friends of Mineralogy

* * * * *

Thanks from the Chapter go to all those who helped at the Colorado Chapter's "Free Mineral Identification" booth at the Denver Gem and Mineral Show: Don Bray, Bob Hambree, Mark Jacobson, Pete Modreski, Ed Pederson, and Frank Rosenberg. (And appreciation to anyone else who helped there and whom we may have missed!)

Bob Hambree at the FM booth →



James “Jim” Franklin Hurlbut



Jim Hurlbut at a Colorado Mineral Society banquet in 1986. Photo courtesy of CMS archives, Amber Brenzikofer.

James Franklin Hurlbut “Jim”, 96, passed away in Denver on Monday, September 18, 2017. He was born in Antigo, Wisconsin to Miles and Evelyn Hurlbut and was preceded in death by his three brothers, Arthur, Ira, and George. Jim is survived by his wife Bette Jackson Hurlbut, 94, his children: Susan Bucknam, James B. Hurlbut & Pamela Newton, David Hurlbut & Mary Pellettier, Louise Hurlbut & Richard Caudle, and Bryan Hurlbut & Laura Hodgkinson, 15 grandchildren and 15 great grandchildren.

Jim received his private pilot’s license in 1941 then joined the US Navy as a pilot. He flew seaplanes in the Pacific theater during WWII carrying personnel and cargo between Alameda Naval base, Hawaii, Guam, Australia, and New Zealand. Jim remained in the Navy reserve for 16 years and retired with the rank of Lieutenant Commander.

In 1944 Jim met and married Bette, and when the war ended he returned to finish his degree in Physics at the University of Wisconsin. It was during this period that he began his life-long involvement with minerals.

Jim managed several Los Alamos National Laboratories and USAF projects while working at the Denver Institute of Research in the early ‘50s. In 1956 Jim formed his own company which sold electronic instrumentation and process components. In 1964 he added a geophysical division that designed and manufactured geophysical instruments. Son David still operates this company.

While working on an advanced degree in Physics at the University of Denver in 1948, he joined the Colorado Mineral Society (CMS), later becoming its president. Family weekends were usually spent rock hunting. In 1949 Jim led the party that attached the bronze plaque at the summit of Mount Antero to declare the location a Mineral Park, hoping to ensure collection access for all.

Jim’s influence in the mineral world went well beyond his teaching into leadership at the highest levels. He taught “Rocks and Minerals of Colorado” as a continuing education course at the University of Colorado-Denver for 20 years and introduced hundreds of people to mineralogy. He served as President of the American Federation of Mineralogical Societies (AFMS) and received the AFMS Recognition Award in 2004 for his significant contributions as lecturer, contributor of scientific articles, and judge at numerous mineral competitions. Jim held other leadership roles in the Rocky Mountain Federation and the Friends of Mineralogy.



In 1949, Jim Hurlbut reading the proclamation for Mount Antero, the Mineral Park. Hurlbut family photograph, photo courtesy of CMS archives, Amber Brenzikofer.



Bette and Jim Hurlbut above the California Mine, Mount Antero, July 1988. M. Jacobson photograph.

Jim was introduced to micromounting in 1956, and was hooked for life. Not only did he build an award winning collection of his own, he had the rare opportunity to curate several of the famous collections housed at the Denver

Museum of Nature and Science. In 2011 he was inducted into the Baltimore Mineral Society's Micromounter's Hall of Fame.

Jim volunteered for over 35 years at the Denver Museum of Nature and Science (DMNS). He was involved in procuring and curating of five large micromount collections, and created another collection that numbers nearly 3000 specimens. He represented DMNS and presented papers on the DMNS mineral collections at International Mineral Museum Curator's Association meetings all over the world (Pisa, Budapest, Toronto, London, and Dresden), American Federation of Mineral Societies shows and various Friends of Mineralogy symposia. Jim was a member of the American Physical Society, the American Vacuum Society, the Electronics Representatives Association, the American Association for the Advancement of Science, the Mineralogical Society of England, the Russell Society of London, the Littleton Gem and Mineral Club, the Tucson Gem and Mineral Society, the Friends of Mineralogy, the International Mineralogy Association, the Association of Mineral Professionals the Denver Art Museum, the Denver Jazz Club, and the Boulder Jazz Club.



Your Father's Mustache jazz band, from the 2005 Denver Gem and Mineral Show Saturday evening award banquet. From the left, Jim Hurlbut - clarinet, Joe Petrucelli - banjo, Tony Pierce - trumpet, Mike Johnson - drums, Craig Hugo - Trombone, and Stu Miller - Bass. M. I. Jacobson photograph.

Jim was also a jazz enthusiast interested in traditional and mainstream jazz. He played the clarinet and bass clarinet with the VFW marching band, the North Jefferson County Recreation District concert Band, the Boulder Jazz Club and occasionally sat in with the *Your Father's Mustache Band*. One of the highlights of his playing was to be invited to play at the Sacramento Jazz Festival. He was an enthusiastic supporter of the Denver Jazz Club Youth All Stars Band. Jim and Bette participated in the Gibson Jazz Parties held at the Broadmoor, in Aspen and Vail, at the Trocadero Ballroom in Elitch Gardens, and the Paramount.

Jim loved a good joke, enjoyed sharing his passion for minerals, science, music, and going new places and meeting new people. He loved science and until his death kept up with the publications *Science*, *Physics Today*, *American Mineralogist*, the *Mineralogical Record*. Jim was interred at Fort Logan on September 25, 2017. A celebration of Jim's life was held on Saturday, October 21, 2017 at Rosemark at Mayfair, 833 Jersey St., Denver, CO 80220.

Credit to Larry Havens, the Hurlbut family, Amber Brenzikofer, and Mark Jacobson for preparing this memorial writeup about Jim.



Larry Havens (left) with Jim Hurlbut on Sunday, September 17, 2017 at the Denver Gem and Mineral Show. All the insignia and pins on the vests represent mineral shows attended and show officer positions held. Gail Spann photograph.

Donations in Jim's name can be made to:

Denver Jazz Club Youth All Stars Jazz Band
on-line at <http://youthallstars.denverjazzclub.com/donate/>
or send a check in Jim's name payable to the DJC Youth All-Stars to:
Ed Cannava, Director
6388 S. Dexter St.
Centennial, CO 80121

Greater Denver Area Gem and Mineral Council, Inc.
Denver Museum of Nature & Science, Box 4
2001 Colorado Blvd.
Denver, CO 80205-5798

*The Sharon Hannu Memorial Volunteer Trophy,
the former Exceptional Dedication Award*



A new award was created for the September 2016 Denver Gem and Mineral Show (DGMS). It was named the Exceptional Dedication Award. For 2016 it was awarded to Martin and Sharon Hannu, who have been members of the Show Committee for more than 20 years. The award was created to recognize individuals, partners or groups who had dedicated their time and efforts for many years to improving and promoting the DGMS in particular, and the Denver mineral and fossil community in general. The initial award was determined by a 3-person committee of Lesley Sebol, the 2016 Show Chairperson, Larry Havens, a multi-position 2016 chairman, and Nick North, the 2016 Trophy Chairman.

During the summer of 2017, Sharon Hannu passed away unexpectedly. This had a profound saddening effect on the community, and thus the awarding group decided to rename the trophy title in her honor to “The Sharon Hannu Memorial Volunteer Trophy. The criteria for this award now states that it is given “to an individual or couple who exhibit exceptional dedication to the Denver Gem and Mineral Show, and a willingness to go above and beyond their duties.” Sharon and Martin Hannu had both demonstrated these attributes time after time during their more than 20 years of service on the Denver Show Committee.

For 2017, the trophy was awarded to Judy and Ron Knoshaug at the Saturday night DGMS awards banquet. This couple also exhibited this exceptional behavior by being active on both the Show Committee and the Greater Denver Area Gem and Mineral Council. The Knoshaugs were recommended for the 2017 trophy by Sharon and Martin, the previous year’s winners, and approved by Lesley Sebol, Larry Havens, and Nick North.

The selection committee is intentionally small so that it will be a surprise for the recipient. There are many deserving people who should be considered for this award. The trophy committee’s vision is to keep this award going for as long as appropriate. The hope is that it will help bring the Show Committee closer together in a spirit of cooperation.

The 2017 Denver Gem and Mineral Show



Mr. Bones entertaining visiting waiting in line to enter the show at show opening time.

Mark Ivan Jacobson

Lesley Sebol was again the Show Chairman for the 2017 Denver Gem and Mineral Show with “Gold and Silver” as its theme, commemorating that this show was the 50th show since 1968. The show was held at the Denver Merchandise Mart, September 15-17. The show program document was a major departure from all previous years, being reduced to a folded map portfolio. On one of the map sides was a leaf gold on quartz from the Smuggler Union mine, Telluride, San Miguel County, Colorado with a wire silver with acanthite from Aspen, Pitkin County, Colorado on the other side. The twenty-ninth annual show poster featured the same 4.5 cm tall, leaf gold on matrix from the Smuggler Union mine, Telluride, San Miguel County, Colorado from the Colorado School of Mines Geology Museum as photographed by Jeff Scovil.

The Denver mineral events started September 6th, with the opening of the Colorado Independent Warehouse show (on Quail Street, Denver), followed with the staggered opening of the other shows. By Saturday, September 9, most of the satellite shows were busy with visitors. Wednesday evening, the Colorado School of Mines Geology Museum in Golden, had its annual open-house at 6 PM.

The museum had numerous temporary exhibits. This year’s new exhibits included a recent donations case with many specimens including an amazonite on albite from Crystal Peak and an amethyst overgrowth on a milky quartz crystal from Little Badger Creek, Colorado, both donated by Rudy Kluiber from the former David Rotor collection and other minerals from Eric D. Long, Martin Zinn and Nick Stolowitz. Exhibits of loaned specimens continued from the Chicago Field Museum of Natural history, self-collected specimens of Ian Merkel (scepter smoky quartz, Peterson Mountain, Nevada, azurite, Morenci mine, Arizona, and linarite, Blanchard mines, New Mexico), worldwide fluorite from Lou and Diana Conti and micromounts from the Lazard Cahn, Dorothy Atlee and Arnold Hampson collections.

The new exhibits this year in the main room were minerals from the Nchanga Mine, Zambia on loan from Richard Le Sueur, and an assortment of Colorado quartz specimens on loan from various local collectors.

The Betty H. Llewellyn Special Exhibits Room housed specimens from the recently donated Gerald and Hilja K. Herfurth Estate collection. The exhibit included a three inch long emerald from Hiddenite, NC, an

amazing suite of Brazilian topaz, phenakite from Brazil, pocket petalite from Afghanistan, variscite from Utah, and polished agate slabs from various localities. There were two loaned exhibits. Frederick Wilda's loan, entitled "Nature's Art hidden in stone – Handcut cabochons and uncut specimens," featured polished slabs and cabochons of jasper, opal, turquoise, prehnite, and agate with rough material and a few of Wilda's watercolors, drawn of the polished material or other specimens. The second exhibit was of the incredible intarsia boxes by Nicolai Medvedev, which featured banded material such as malachite and rhodochrosite with opal, sugilite, gold, petrified wood, and turquoise.

The multi-year exhibits were Leadville mining district minerals, and gold and silver from the Allison-Boettcher collection.

The critical materials exhibit continued on the lower level displayed mostly rare-earth minerals with some minor tellurides and lithium minerals. This display was organized and created by Mandi Hutchinson in 2016 (M.S. Geological Engineering '16).

The museum provided free hors d'oeuvres and a cash bar for the event, all to the accompaniment of a Colorado School of Mines String trio. The Open House was well attended with worldwide visiting dealers, collectors and curators, probably more than 300. The gathering has continued as a place to make new friends and become reacquainted with old friends who have arrived for the show. Some visitors even brought their new discoveries to show off at the open house!

On Thursday evening, the Friends of Mineralogy, Colorado Chapter again converted their regular second Thursday of the Month public meeting at the Denver Museum of Nature and Science into a social event for members and museum curators who were attending the Denver Gem and Mineral Show. Geology Curator James Hagadorn led the curators and members for a behind-the-scenes museum tour, showing off the new combined storage area that has finally brought all the scattered storage specimens into one monitored central area with bright lights. For the first time one can compare for examples, topazes from Colorado with all the worldwide topazes within the collection including two exceptional, etched moderate blue topazes from the 1926 Fisher quarry pocket, Topsham, Maine. It was also an opportunity for FM society members to socialize with the curators from around the world.

The displays at the show were exceptional this year as befits a gold and silver theme. There were 92 cases that included 6 club cases, and 29 museum cases representing 18 museums. There were 138 retail mineral, book, and jewelry dealers. There were also 18 public sector booths such as the USGS, Junior Museum of Pennsylvania and 8 club booths. This year continued with utilizing all the possible dealer space in the Mart Expo hall, including the southeast corner of the building. The fluorescent room with 10 display cases and the gold panning area continued as before. The total attendance was approximately 8,000 with approximately 5,000 paid attendees. Mr. Bones, the popular walking dinosaur skeleton, continued as a feature in the halls of the Denver Gem and Mineral Show. The school groups continued to arrive and fill the exhibition hall on Friday morning. Grab bags still were sold, numbering in the thousands.

A unique feature this year was the addition of \$5,000 worth of gold nuggets to be given away free to gold panners who searched for a small special token in the wet gravels and sands. If a panner found a token, the booth caretakers, dressed as 59ers, would holler off Eureka!, loud enough for everyone in the exhibition hall wing to hear it. This token was turned in at a nearby booth for the actual gold nuggets. More than 800 nuggets were given away, most of them varied in weight between 0.0007 to 0.045 troy ounces. Forty nuggets exceeded 0.045 troy ounces with the largest gold nugget that was given away at 0.515 troy ounces.

Organizational meetings this year was only the Society of Mineral Museum Professionals having their board and general society meeting on Friday morning and a combined social meeting of the National and Colorado Chapter Friends of Mineralogy on Saturday.

The magazines represented at the show were *Rocks & Minerals*, *Mineralogical Almanac*, *Australian Journal of Mineralogy*, *The Mineralogical Record*, *Mineralien Welt*, *Lithographie*, and *Rock and Gem*.

The July-August issue of *Rock & Minerals* heralded gold articles in support of the Denver Gem and Mineral Show. The magazine published three articles supporting the Denver show theme of gold and silver. These were *A Rare find: Good luck prevails and a spectacular crystallized gold emerges* by Wayne Leicht; *The occurrence and characteristics of gold nuggets and masses* by Robert B. Cook, Carl Francis and Mark Mauthner, and *Connoisseurs Choice: Wire Silver, Kongberg, Norway and wire gold, Ground Hog Mine*,

Gilman, Colorado by Calvin Anderson and John Rakovan. The September-October issue featured the article *Gold crystals from the Lena Goldfields, Bodaibo area, Eastern Siberia, Russia: Exceptional hopped octahedral and pseudomorphs after pyrite* by John Rakovan, Volker Lüders, Andreas Massanek and Gert Nolze.

The presentations this year were at the same high level as the previous year with excellent, well-known speakers who are considered experts in their areas of interest. The talks started with Jeff Scovil, the well-known mineral photographer, presenting “An Album of worldwide Gold and Silver.” Mark Ivan Jacobson, who had prepared a text documenting the fifty year history of the Denver Gem and Mineral Show, spoke on “The Denver Gem and Mineral Show: A 50 year retrospective.” Terry Wallace, Principal Directory for Global Security at Los Alamos National Laboratory, spoke on “Colorado Silver.” Wayne Leicht, co-owner of Krystalle, a dealership specializing in gold specimens and a gold collector, on “Gold!” Gene Meieran, materials scientist and an Intel Fellow, spoke on “The magic of silver.” Virgil Lueth, Senior mineralogist and Director of the New Mexico Bureau of Geology & Mineral Resources Mineral Museum, spoke on “New Mexico Gold.” Bryan Lees, president and owner of the Collectors’ Edge, described the geology, discovery and preparation at the Colorado Quartz Mine, California of the “Gold Dragon” specimen. Scott Werschky, owner of the Mineral Lunchbox mineral dealership, spoke on “The Fire Creek Mine, Nevada: A new locality for exceptional gold specimens.” Les Presmyk, owner of De Natura and prolific Arizona collector, spoke on “Silver and Gold in Arizona: History and specimens.” Mel King, President of Big Blue Wreck Salvage, spoke on “Shipwreck Treasure – Pieces of 8 and gold doubloons.” Penny Williamson, Geology Curator at the University of Wollongong, Australia, spoke on “Australian Gold.” Bruce Geller, Director of the Colorado School of Mines Geology Museum and specialist in gold tellurides, spoke on “Tellurides.”

Non-theme talks were led by John Warn, a petroleum geologist and paleontologist, who gave a presentation entitled “In the pink, Himalaya Mine tourmaline.” Peter Modreski, a geochemist responsible for educational outreach at the U. S. Geological Survey, followed with “How to start a mineral collection,” a talk geared to beginning mineral collectors. Richard Hauck, operator-owner of the Sterling Hill Mining Museum, spoke on Fluorescent minerals.”

As in the previous three years, Steven Veatch, leader and mentor to the Pikes Peak Pebble Pups and Earth Science Scholars programs, brought four students to give twenty-minute presentations at the show. Evan Walsh spoke on “The Evolution of the Theropod Dinosaurs through the Late Cretaceous. Ben Elick spoke on “High grade gold ore from Cripple Creek.” Quentin Stanley spoke on “Copper.” Jack Shimon spoke on “Seismology: A whole lot of shaking going on.” The innovation this year was that every student speaker was awarded \$50 for presenting by the New Mexico Bureau of Geology & Mineral Resources. This financial grant will be continued in future years to encourage student speakers.



Jim and Gail Spann Silver and silver-bearing mineral exhibit

Upon entering the show, the visitor was greeted with the delights from the Jim and Gail Spann collection. Their large fish tank glass case was packed with silver and silver-bearing minerals from worldwide localities. The specimens ranged from miniatures such as pyrargyrite from the San Genaro Mine, Peru to a museum-sized silver sheet from the Imiter Mine, Morocco. The silver wire tentacles from the Himmelsfurst Mine, Freiberg, Germany was only one treat.

The Institutional displays from eighteen museums continued the visual feast of gold and silver. The Denver Museum of Nature and Science displayed a handful of their famous Campion leaf golds from Farncomb Hill, Summit County, the iconic Ram's Horn wire gold from the Groundhog mine, Eagle, County, and a wire silver from the Smuggler Mine, Pitkin county. The Cranbrook Institute of Science Mineral Museum displayed two native silvers, a mass of euhedral, branching silver mass from Houghton, Michigan and stick-like wire silver from Kongsberg, Norway. The University of Wollongong had an interesting case of **four!** of the world's largest gold nuggets, all Australian with the description of their discoveries. The surprise was that three of them were replicas but the fourth, "Ausrox" was real. Could you tell the difference? The California Academy of Sciences, San Francisco, presented examples of gold crystals, leaves and nuggets to clarify their definitions. Harvard Mineralogical Museum displayed nine leaf and wire golds mostly from Summit County. Colorado School of Mines Geology Museum had two cases exhibiting Colorado gold and silver as well as the famous Creede-sourced silver platter and picher. Big Blue Wreck Salvage, Inc. has three cases to provide examples of Spanish gold coins, silver and gold bars, and gold masses recovered shipwrecks off the Florida Keys as well as some pre-Columbian gold artifacts.

The New Mexico Bureau of Geology and Mineral Resources Mineral Museum showed gold, silver and some new acquisitions (azurite, scrutinyite, hemimorphite) from New Mexico localities. The exhibit contained what is believed to be the largest known New Mexican gold nugget from Lincoln County.

Individual collections provided a personal perspective on gold and silver minerals. For **the first time, anywhere**, Gene Meieran of Arizona displayed his complete collection of native silver from worldwide localities. Wayne and Dona Leicht exhibited some of their native silvers and golds from worldwide localities. Terry Szenics for Scott Rudolph shepherded a case of superb native silver, and acanthite specimens, mostly from Kongsberg, Norway but also from Mexico, Morocco, Michigan, and Germany. The three euhedral acanthite spears from the Imiter Mine, Morocco were a delight.

Pyrite because of its color similarity to gold became a subset of displays. The Rice Museum of Rocks and Minerals exhibited gold and pyrite with the theme of "Don't Be Fooled Gold/Pyrite - physical properties." The Cincinnati Museum Center exhibited pyrite and marcasite from the American Midwest. Bruce Brown exhibited pyrite in all its many forms and localities. Larry Havens also showed pyrites entitled "Pyrite (All that glitters . . .)."

Non-theme mineral cases were also abundant. The Mineral Association of Dallas exhibit included some of the member's favorites which included exceptional specimens of topaz from China, a colorless-gem drill-bit twinned phenakite from Burma; a giant blue Shattuckite from the Tantara Mine, Katanga, Dem. Republic of Congo; leaf gold from the Eagles' Nest Mine, CA; and a large terminated green elbaite from the 1972 Dunton pegmatite pocket, Newry, Maine. Marty Zinn exhibited a case of mineral from India, with all the expected and desired delights of colorful and large well formed zeolites crystals. Lou Conti had an entire case of exceptional well formed salt crystals in white, blue and the various shades in between. The Sherman Dugan Museum of Geology at San Juan College, Farmington, NM displayed golden fluorite from the Minerva Mine, Illinois. The American Museum of Natural History exhibited worldwide minerals from the Arthur J. Boucot collection. The specimens shown included a green elbaite cluster from the Gillette quarry, Haddam, Connecticut, smithsonite from the Kelly mine, New Mexico, and precious opal from Andamooka, South Australia.



Local displays have always been significant at the Denver show. The Saratoga Museum, Saratoga, Wyoming displayed carved jade objects made from Wyoming jade. Scott Luers from Wyoming has exhibited at the Denver Gem and Mineral show several times before as well as in local Wyoming and Colorado shows. He exhibited self-collected minerals from Wyoming including calcite, schorl, lepidolite, barite and other minerals. Randall, Laura & Hunter Kokkinen exhibited the best of what they have found during the last four years. Bill Hutchinson exhibited the best discoveries his family had made during the past year of aquamarine, amethyst and other minerals.

The Junior Museum of Central PA, sponsored by Andrew Sicree, had his hands-on exhibit of “Minerals That Do Things,” located in the far northeast corner of the hall with the clubs and gold panning. This is a popular exhibit that Dr. Sicree has been bringing to the show for a number of years.

Fossil exhibits were continued by Steven Jorgensen with three personally-collected ammonites from Wyoming.

The lapidary arts continued as part of the show. Keith Sheel exhibited faceted gemstones with their rough material and Ron Snelling with fantasy carved-faceted gemstones done by several different gem artists. Francisco Sotomayor, known for his life-size American Woman on a piano of Yule marble, exhibited several carvings of black obsidian. David and Karen DeBruin exhibited layered intarsias as little miniature photos in frames. The Lizzadro Museum of Lapidary Art exhibited cameos carved from Shell Italia (conch) displaying Christ’s Stations of the Cross ordeal.

Meteorite popularity continued but with a gold slant. The Maine Mineral and Gem Museum displayed meteorites with a Maine gold nugget using the approach of the “Cosmic Origin of Gold.” Anne M. Black case of meteorites was entitled “Worth More than Gold. The case provided historical details about each meteorite and its equivalent value in gold.

Several new discoveries appeared at the show. Tom Miller was showing off but not-selling-yet a flat of gemmy clear topazs from the Tarryall Mountains. Troy Hamilton, another Tarryall Mountain topaz digger, was marketing a 3.25 inch tall scepter topaz that weighted 2860 carats. His friend, Stephen Renner was also marketing a topaz on smoky quartz from the Tarryall Mountains. All three of these finds were impressive.

An almost flawless blue topaz about 2 inches tall from the Tarryall Mountains, found in 2017 by Tom Miller.





A sceptered topaz from the Tarryall Mountains found by Troy Hamilton in 2017. The crystal is 3.25 inches tall and weighs 2860 carats.

The Saturday evening activities, in the giant Merchandise Mart atrium, this year morphed with several changes. The evening speaker program was abandoned and replaced by a silent auction of donated specimens, books, jewelry and other earth science materials to benefit Mindat, a 501(c)(3) charity. This was followed by a short awards ceremony. The evening started at 6:30 PM with a cash bar, a western beef and barbeque chicken dinner, vegetables, salad, bread and deserts. After dinner, the awards ceremony included the American Federation of Mineral Societies Awards, as well as the Denver show awards. The Richard Pearl Trophy was awarded to Phil Gregory for his miniature rhodochrosite from the Sweet Home Mine, Alma, Colorado.

The best fossil trophy was awarded to Jim Hooten for his matrix specimen containing two *Paurorhyncha endlichii* brachiopods from the Devonian Dyer Member of the Chaffee Formation, Garfield County, Colorado. This species was named by Fielding Bradford Meek for Frederic Miller Endlich, geologist-mineralogist with the Hayden Survey.

The Prospector Trophy was awarded to Randy Kokkinen for his amazonite and smoky quartz from Crystal Peak, Colorado. The Junior Prospector Trophy was awarded to Hunter Kokkinen, Randy Kokkinen's son, for his Smoky quartz and amazonite, Crystal Peak, Colorado. The Club Prospector trophy was awarded to the Colorado Mineral Society.

The Carroll Everett "Shorty" Withers Trophy, for the overall best exhibit was awarded to John Warn for his "In the pink: elbaite tourmaline crystals from the Himalaya Mine, Gem Hill, Mesa Grande district, San Diego County, CA." The Donna Chirnside Memorial Museum Trophy was awarded to the Western Museum of Mining and Industry, Colorado Springs, for their eleven cases documenting the origin of gold in the ground, its historical extraction and processing to its final refined product using modern processes. Each case, demonstrated with memorabilia, models, minerals and photographs the mining processes. These exhibits also received the National Friends of Mineralogy Educational award for a display by an institution. Similarly, Anne M. Black's case of meteorites, entitled "Worth More than Gold" received the National Friends of Mineralogy Educational award for a display by an individual. The National Friends of Mineralogy Educational awards are given annually at the Denver Gem and Mineral Show and the Tucson Gem and Mineral Show for the best institutional and individual educational exhibits.

Nine satellite shows continued, with the addition of a new 10th show. The 12-day wholesale-only Independent Warehouse Show at 810 Quail Street, started the Denver show events off on September 6. The warehouse units A, B, C, H and N represented the efforts of four dealers. The next two shows to open was the Denver Expo Gem Show at the National Western Complex, Level 2, 4655 Humboldt St. and the Colorado

Mineral and Fossil Show on September 8. The Colorado Mineral and Fossil Show at the Ramada Plaza Hotel in 2016 was owned by Martin Zinn but after September 2016, the show was sold to Rocky Mountain Gem & Minerals, owned by Sandra Gonzales, and moved to the Crown Plaza Hotel at East 40th Ave.

The 9-day Denver Coliseum Gem Show and the Miner's Cooperative Mineral Show opened September 9, along with the JG&M Expo Denver at the Quality Inn – Denver Central Hotel and the new Denver Mineral Show at the National Western Complex, Level 3, 4655 Humboldt St., just north of the Coliseum. The Denver Mineral Show is owned by the same promoter, Eons Expos, as the Coliseum Show. The 4-day Denver Fine Minerals Show at the Marriott Denver West opened September 13. The 4-day Intergem Denver Gem & Jewelry wholesale Show, Inc. in the Pavilion building, Denver Merchandise Mart and the Bead Renaissance show in the Merchandise Mart Plaza both opened on Thursday, September 14.

All these activities ended Sunday evening with more than 400 exhausted show volunteers having completed another successful show, often exhibiting minerals rarely seen elsewhere. This show completed 50 years of joint shows by local area clubs, purely volunteer with no paid workers.

* * * * *

Some photos from our September FMCC meeting, a tour of the new mineral collections archive at the Denver Museum of Nature and Science

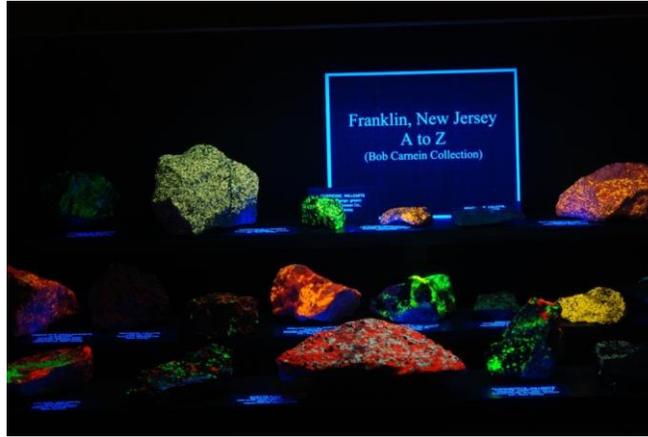


← *Dr. James Hagadorn and the curator staff had set out several tables of “mystery specimens” for possible identification help; specimens for which the museum has no record of either the identity, or the locality, or both.*



*The Fluorescent Room Exhibits
at the Denver Gem and Mineral Show 1975-2017*

Conrad North
President, Fluorescent Mineral Society
president@uvminerals.org



Bob Carnein's 2017 DGMS exhibit of Franklin, NJ fluorescent minerals.

The first known mention of a fluorescent room was at the precursor to the Denver Gem and Mineral Show at the 1967 Gem-O-Rama show at the Jefferson fairgrounds. The next mention of fluorescent displays was at the 1975 Denver Gem and Minerals show which was also a joint American Federation show held on June 19-22, 1975 at the National Western's Hall of Education at the Coliseum complex. The small fluorescent room was in the SW corner, just south of the cafeteria.

There were two UV mineral display cases at that show. One was presented by Mrs. Betty Renz, of Denver, and the other by Frank and Laura Cole of Peoria, AZ. Renz's case contained 26 specimen and the display was illuminated by a 24 inch BLB long wave light (commonly referred to as a black-light) and a 15 watt shortwave light. Today it would be unheard of to use a BLB in a formal fluorescent display. Her two lights sequenced on at the same time for "about" 27 seconds, with a precursor of 25 seconds of white-light, followed at the end with 3 seconds of dark after the SW/LW illumination. Interestingly, the Cole display also ran both SW and LW with both appearing to be 15 watt UV display lamps. Their case contained 12 specimens. Running two wave lengths is an anomaly in today's displays.

After the 1975 show, there is no record of fluorescent exhibits until 1980. At the 1980 show, a fluorescent room appears in the show program for the first time, located in Aisle C, just on the south side of the aisle after leaving the central hall to the east. This fluorescent room was continued until 1987. In 1988, the room was expanded and moved to the west side from the central hall, into aisle H. In 1990, three cases were exhibited in the fluorescent room on aisle H of fluorescent minerals by Pete Modreski, at that time Vice-President of Friends of Mineralogy-Colorado Chapter and Earl Verbeek (who specialized in Sterling Hill minerals), assisted by Marilyn Grout. The story of their cases described a darkened room with a glass front, as is typical of the side aisle rooms.

After that 1990 display, the displays in the room grew a bit as local collectors discovered the opportunity to exhibit and up until 2013, the displays was loosely knit and basically open to anyone that wanted to put a case in. From 1996 when the fluorescent room was formalized to a committee chair level until 2010, the fluorescent room was chaired by Bruce Geller with Aaron Rever helping out after 2007. During 2011-2012 Richard Kerr coordinated the room activities.

In the earlier years, there are reports of "glow-offs" the day before the show, where participants showed their wares and the other potential exhibitors voted on which cases were to be included in the room. During that time three gentlemen from Fort Collins carried the heavy load of filling the room. Those three were Fred Hart,

Jim Kasal, and Kevin Boulter. They worked with then UV chair Gerry Naugle and the room had their three cases and one or two additional cases that showed up.

During 2013, the Rocky Mountain Chapter of the Fluorescent Mineral Society (FMS) formed and Conrad North became involved in the UV Room as co-chair with Gerry. They added new cases and updated the lights which garnished ten to 12 cases each year dependent on availability of exhibitors.

2017 Denver gem and Mineral Show fluorescent exhibits

During the last few years, there have been 10 fluorescent display cases exhibited in an essentially 11 room space in Aisle G (G 39-49)-at the Denver Show. This year the potential loss of two display cases required adapting to this problem to enhance the exhibits both for children and adults. The response was to add an additional 480 square feet of dark space that was configured as an "educational room". This addition was aimed at the school groups to provide a little UV education to go with all the oohs, and awwws of the glowing rocks which followed in the later room.

The four UV displays in the Education room, covered subjects of why rocks fluoresce, to everyday fluorescence, as well as a triple wave display that cycled through Short wave (SW), medium wave (MW), and long wave (LW) fluorescence and phosphorescence on three large Challenger cave, terlingua type calcite rhombs. This triple-wave demonstrated the different fluorescent colors from the different UV wavelengths from the same mineral.

Also as part of the Education room, we added an informational web site that could be access from a smart phone explaining the new displays. The site could be accessed via a back-lit QR code display that was on the case.

The second room which was the central display room was entered from the Education room. Near the entrance was a "blacklight" (BLB) to illuminate everyone who entered into the display area. This allowed the kids, and adults, to have a little fun with Ultraviolet light and see each others' teeth/nails/clothes fluoresce a blue-white. We also handed out 900 fluorite samples on educational cards and 900 chemiluminescent/fluorescent glo-stixs. Six hundred of each of those items were disbursed during the Friday School Day and the balance handed out during Saturday and Sunday. Needless to say, the room caretakers spent a lot of time cleaning the nose prints off the display cases.

In this room were the main mineral displays of fluorescent minerals from assorted worldwide localities as well as specialized cases of just minerals from the Franklin and Sterling Hill, New Jersey localities. Bob Carmein brought a case of "Franklin Minerals from A to Z." Fred Hart from Loveland exhibited an assortment of minerals from Franklin and other places.

* * * * *

Answers to the Arkansas phosphate mineral photographs on page one (from left to right):

1. Strengite, $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$, Coon Creek mine, Shady, Polk Co., Arkansas; Mindat, photo © Jean-Marc Johannet; field of view 3 mm.
2. Wavellite, $\text{Al}_3(\text{PO}_4)_2(\text{OH})_3 \cdot 5\text{H}_2\text{O}$, Mauldin Mt., Montgomery Co., Arkansas; Mindat, photo © Rob Lavinsky & irocks.com; dimensions 5.4 cm x 3.1 cm x 1.8 cm.
3. Phosphosiderite, $\text{Fe}^{3+}\text{PO}_4 \cdot 2\text{H}_2\text{O}$, Shady, Polk Co., Arkansas; Mindat, Alex Knoll Collection, Georgian Court University Rock and Mineral Collection; crystals around 3-5 mm across. However: "Labelled as Metastrengite (now known as phosphosiderite) [but possibly strengite, see <http://www.mindat.org/mesg-7-145079.html>]".
4. Kidwellite, $\text{NaFe}^{3+}_{9+x}(\text{PO}_4)_6(\text{OH})_{11} \cdot 3\text{H}_2\text{O}$ ($x \sim 1/3$), Polk Co., Arkansas; Mindat, © Karl Volkman; 0.5mm spheres on rockbridgeite.

* * * * *

Calendar of coming events:

Fri., Nov. 10, 3:00 p.m., Raymond Rogers (Macalester College), **Twenty Years of Paleontological Adventure & Discovery on the Great Red Island, Madagascar.** Denver Museum of Nature & Science Earth Science Colloquium Series; VIP Room, DMNS; all are welcome, and museum admission is not required to attend.

Sat., Nov. 11, Silent Auction, held by the Littleton Gem and Mineral Club; Columbine Hills Church, 9700 Old Coal Mine Ave, Littleton CO. Seller setup at 11, auction begins at 12 noon, verbal auction at 1 p.m., auction is completed and checkout of purchases begins at 3:30 p.m. All are welcome; complimentary refreshments.

Sat.-Sun., Nov. 11-12, 38th annual New Mexico Mineral Symposium, at New Mexico Institute of Mining & Technology, Socorro, NM; see <https://geoinfo.nmt.edu/museum/minsymp/home.cfm> .

Thurs., Nov. 16, 7:00 p.m., Colorado Scientific Society November meeting, Simone Marchi, Southwest Research Institute, **The Early Evolution of Earth—Fire from Above, Fire from Below,** at Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood. All are welcome.

Thurs., Nov. 16, 7:30 p.m., FM-Colorado Chapter bimonthly meeting, in VIP Room, DMNS. Program, “**Phosphate Minerals of Arkansas and Where We Found Some**”, by Ed Pederesen.

Fri.-Sun., Nov. 17-19, Denver Area Mineral Dealers Show, Jefferson County Fairgrounds, Golden CO. 10 a.m. – 5 p.m. Friday, 10-6 Sat., 11-4 Sun. All welcome; free admission and parking.

Sun., Nov. 19, 12 noon, monthly meeting of the Florissant Scientific Society, at Dinosaur Ridge, in the Chevron Classroom (upstairs in the “barn” at the Visitor's Center). Potluck lunch at noon (bring something to share), talk follows at about 1 p.m. Speaker: Cal Ruleman, USGS. Cal will be giving a version of the talk he presented back in February for the Colorado Scientific Society, **Cenozoic drainage integration of the southern Rocky Mountains**“. If you'd like to read the abstract from Cal's February talk, find it on the CSS website at http://coloscisoc.org/wp-content/uploads/2017/02/2017-02_CSS_February_newsletter.pdf .

Beth Simmons (FSS Program Coordinator) adds: “Cal and his cronies (including me) have been investigating the extent of early glaciations in Colorado. My [Beth's] belief is that the "wind gap" directly west of the barn, high on the hogback is truly a U-shaped valley. It has glacial boulders in it. I believe that the extensive scree slopes on the north-facing canyon walls are ancient peri-glacial features that formed when the glacial front sat nearby. I believe that the canyons were cut by rivers flowing under the glacier that sat overtop. Cal has traced glacially modified surfaces high above the present landscape along the Front Range from New Mexico into Wyoming and is working to identify the time that boulders on those landscapes were exposed. Come hear him discuss these features and how these observations change our interpretation of the glacial epoch here along the Front Range.”

Next summer, the FSS plans to have a field trip to observe some of these features, including the Central City "Gravels" along the Casino (Central City) Parkway.

Sun., Nov. 19, 2-4 p.m., Rocky Mountain Micromineral Association, monthly meeting. All are welcome; bring minerals and a binocular microscope or just yourself. Normally held on the 2nd Sunday of the month, RMMA meets on the 3rd Sunday this month to not conflict with the NM Mineral Symposium. The meeting is regularly held in the conference room opposite the CSM Geology Museum; to confirm this or for more info see their website, <http://rocky-mountain-micromineral-association.com/> or contact Joe Taggart, President, j-taggart@comcast.net .

Sun., Nov. 19, Colorado Scientific Society Family Night at the Museum, open house at the CSM Geology Museum, 4 to 7 p.m., hosted by Museum Director Dr. Bruce Geller (all are welcome; come and get acquainted with—and join, if you like—the Colorado Scientific Society, *Colorado’s oldest scientific society!*)

Wed., Nov. 29, 4:00 p.m., “**In dry climates with weak rocks, micro-climates reshape drainage networks**”, by Sam Johnstone, USGS. . CU Geological Sciences Colloquium, Benson Earth Sciences 180; refreshments follow lecture. See <http://www.colorado.edu/geologicalsciences/colloquium> for the full fall schedule.

Sat.-Sun., Dec. 2-3, 9 a.m. – 4 p.m., “**Book and garage sale**” at the **Colorado School of Mines Geology Museum**, 1310 Maple St., Golden. “Lapidary equipment and material, books, journals, minerals, fossils, maps, and miscellanea. Prices vary by item or box. Most prices will drop throughout the event.”

Tues., Dec. 5, 3:00 p.m., Ellen Currano (University of Wyoming), **Seeing the forest through the leaves - from Ethiopia to the Rocky Mountains**. Denver Museum of Nature & Science Earth Science Colloquium Series; VIP Room, DMNS; all are welcome, and museum admission is not required to attend.

Fri.-Sun., Dec. 8-10, Flatirons Mineral Club annual Gem and Mineral Show, “Rocks and Rails”. Boulder County Fairgrounds, Main Exhibit Building, 9595 Nelson Rd., Longmont, CO. Combined Gem and Mineral Show + Boulder Model Railroad Club Exposition; 10 a.m. – 5 p.m. each day. See <https://flatironsmineralclub.org/about/annual-fmc-gem-and-mineral-show/> .

Wed., Dec. 13, 5:30 p.m., **Colorado Scientific Society Annual Meeting**, Potluck Dinner, and President's Address, by Marith Reheis, USGS Scientist Emeritus: **DUST! Why Should You Care? (The answer is blowing in the wind)**. At the Arbor House, in Maple Grove Park, 14600 W. 32nd Ave., Golden. Social time begins at 5:30, potluck dinner at 6:00, program begins at 7:00 p.m.

* * * * *

For more lecture series during the year see:

Colorado Café Scientifique in Denver, monthly lectures on science topics held either at Blake Street Station or Brooklyn’s, Denver; open to the public, no charge other than refreshments you may choose to purchase; see <http://cafescicolorado.org/> .

CU Geological Science Colloquium (Wednesdays, 4 p.m.) see <http://www.colorado.edu/geologicalsciences/colloquium>

CSU Dept. of Geoscience Seminars (Fridays, 4 p.m.), see <https://warnercnr.colostate.edu/geosciences/geosciences-seminar-series/>

Van Tuyl Lecture Series, Colorado School of Mines, (Thursdays, 4 p.m.): <https://geology.mines.edu/events-calendar/lectures/>

Denver Mining Club (Mondays, 11:30), see <http://www.denverminingclub.org/>

Denver Region Exploration Geologists Society (DREGS; 1st Monday, 7 p.m.), <http://www.dregs.org/index.html>

Florissant Scientific Society (FSS); meets monthly in various Front Range locations for a lecture or field trip; meeting locations vary, normally on Sundays at noon; all interested persons are welcome to attend the meetings and trips; see <http://www.fss-co.org/> for details and schedules.

Rocky Mountain Map Society (RMMS; Denver Public Library, Gates Room, 3rd Tuesday, 5:30 p.m.), <http://rmmaps.org/>

Rocky Mountain Micromineral Association, <http://rocky-mountain-micromineral-association.com/> (RMMA; 2nd Sunday of most months, 2 p.m., in conference room across hall from CSM Geology Museum)

Western Interior Paleontology Society (WIPS; Denver Museum of Nature & Science, 1st Monday, 7 p.m.), <http://westernpaleo.org/> .

* * * * *

Notes about FM

Annual Dues to Friends of Mineralogy, Colorado Chapter are \$15.00, or \$25.00 for a family; this includes membership in the national organization, Friends of Mineralogy, Inc.. (After many years of dues at \$13, we have *finally* raised them just to \$15, and created a new category of Family Membership for \$25.) New members are *always* welcome! To pay dues, mail a check for \$15 or \$25 to FM-Colorado Chapter, P.O. Box 234, Arvada, CO 80001-0234; please include your name, email address and mailing address; or pay in person at one of our meetings. Attach a copy of our membership form (in this newsletter, or available on our FMCC website under “Membership”), especially if you want to update your information. All our newsletters and mailings are normally sent by email, unless the member is unable to receive them that way. If you are uncertain about your membership status, please contact our Treasurer, Gloria Staebler, gastaebler@aol.com, 303-495-5521. *Now* is the time to pay your dues for 2017!

See our Colorado Chapter website: <http://friendsofmineralogycolorado.org/>

* * * * *

FM Colorado Chapter activities:

Meetings are normally held at 7:30 p.m. on the 2nd Thursday of alternate (odd-numbered) months, at the VIP Room in the Denver Museum of Nature and Science. The dates are sometimes shifted in September and November so as not to conflict with the Denver Gem & Mineral Show and the New Mexico Mineral Symposium. Visitors are *always* welcome at our meetings!

Meeting dates for 2017 have been:

Jan. 12, FM meeting

Mar. 9, FM meeting

May 11, FM meeting

May 13, FM Silent Auction, Clements Community Center, Lakewood

Sept. 14, , FM meeting – DMNS Museum Tour

Sept. 15-17, Denver Gem and Mineral Show; 2017 show theme, “Gold and Silver” (50th anniversary)

Nov. 16, FM meeting

Friends of Mineralogy, Colorado Chapter, 2017 officers

President: Jeff Self, selfawareminerals@gmail.com
Vice President: Bob Hembree, rhembree@comcast.net
Secretary: Alan Keimig, alan.keimig@gmail.com, 303-755-9604
Treasurer: Gloria Staebler, gastaebler@aol.com, 303-495-5521
Denver Museum N&S Liaison: Alan Keimig, alan.keimig@gmail.com, 303-755-9604
DG&MS Council Trustee: David Bunk, dave@davebunkminerals.com
FMCC Newsletter: Peter Modreski, pmodreski@aol.com, 303-202-4766
Field trip planner (not field trip leader): unfilled
FMCC Website: unfilled
Postings for the FM national facebook page: unfilled
At-large voting board members:

Larry Havens, lwrnchavens@comcast.net, 303-757-6577

Don Bray, don_bray@copper.net , 303-681-3646

Ed Pederson, mineraljeep@aol.com

Mark Jacobson, markivanjacobson@gmail.com, 1-337-255-0627

Plus one unfilled position



Prospective members for the Colorado Chapter, please send this form with your check to the address below. This form may also be used to renew your membership. Membership in the local chapter includes membership in the National Society. A local chapter member does not need to live within the area. Membership lists are not shared outside of the organization. Membership in the local chapter provides membership in the Rocky Mountain Federal of Mineralogical Societies (RMFMS) with its associated group 3rd party liability insurance for field trips.

Note: Dues have increased for 2017: Please mail annual dues of **\$15 for an individual**, or **\$25 for a family** made out to **Friends of mineralogy, Colorado Chapter** to:

Ms. Gloria Staebler

Friends of Mineralogy - Colorado Chapter
P.O. Box 234
Arvada, CO 80001-0234

Please complete the following for new members.

Last Name: _____ First name: _____

Middle name (optional): _____

Street Address (used for mail): _____

City: _____ State or Province: _____

County: _____ Zip or Postal Code: _____

Telephone (land line): _____ Telephone (Cell phone): _____

Email address: _____

Signature: _____ Date: _____

My primary area of interest is: _____

Chapter and National newsletters will be sent to you by email unless you request a paper copy to be mailed. _____ Please note that mail newsletter as sent as a black and white paper copy.

Friends of Mineralogy Colorado Chapter is affiliated with the Mineralogical Record Magazine, The Mineralogical Society of America (MSA), the American Geological Institute (AGI), Rock and Minerals magazine, the American Federation of Mineralogical Societies and the Rocky Mountain Federation of Mineralogical Societies.

Friends of mineralogy, INC. is composed of member of local chapters, of which in 2014, seven chapters existed. Members may affiliate with any chapter or none. Local chapters issue newsletters as does the national organization.