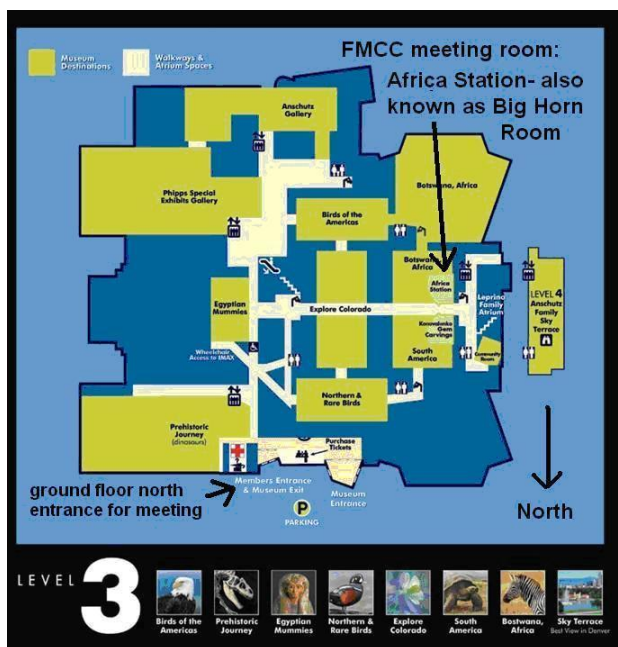


## Friends of Mineralogy, Colorado Chapter Newsletter – May 2016

**May Meeting – Thursday, May 12, 7:30 pm** (Board meeting 6:30-7:30)  
Denver Museum of Nature and Science – Africa Room (3<sup>rd</sup> Floor)\* *Enter the Museum through the Security/Staff entrance to the left of the main entrance.*

### ***“Geology and Mineral Deposits of the Upper Peninsula, Michigan”*** ***by Jim Cappa***



\*P.S., our usual location, the VIP room, is not available due to renovations in progress in the cafeteria area. We are told at this time that our meeting will be in the Africa Room; please check in at the Museum security desk to confirm this.

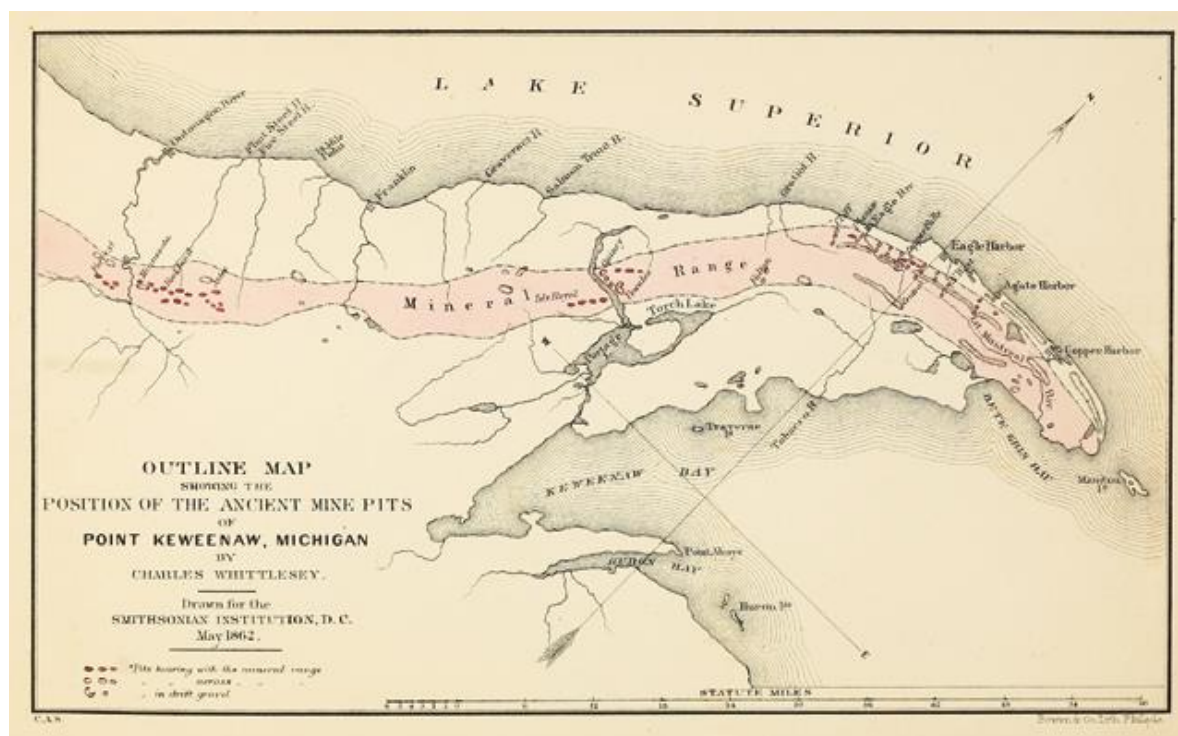


This presentation focusses primarily on the copper deposits of the Keweenaw Peninsula in the western most part of the Upper Peninsula of Michigan. The Keweenaw Peninsula is composed of sedimentary and volcanic rocks of Mesoproterozoic age that were deposited in and adjacent to part of the mid-continent rift system which opened at approximately 1100 Ma (million years ago). The rocks

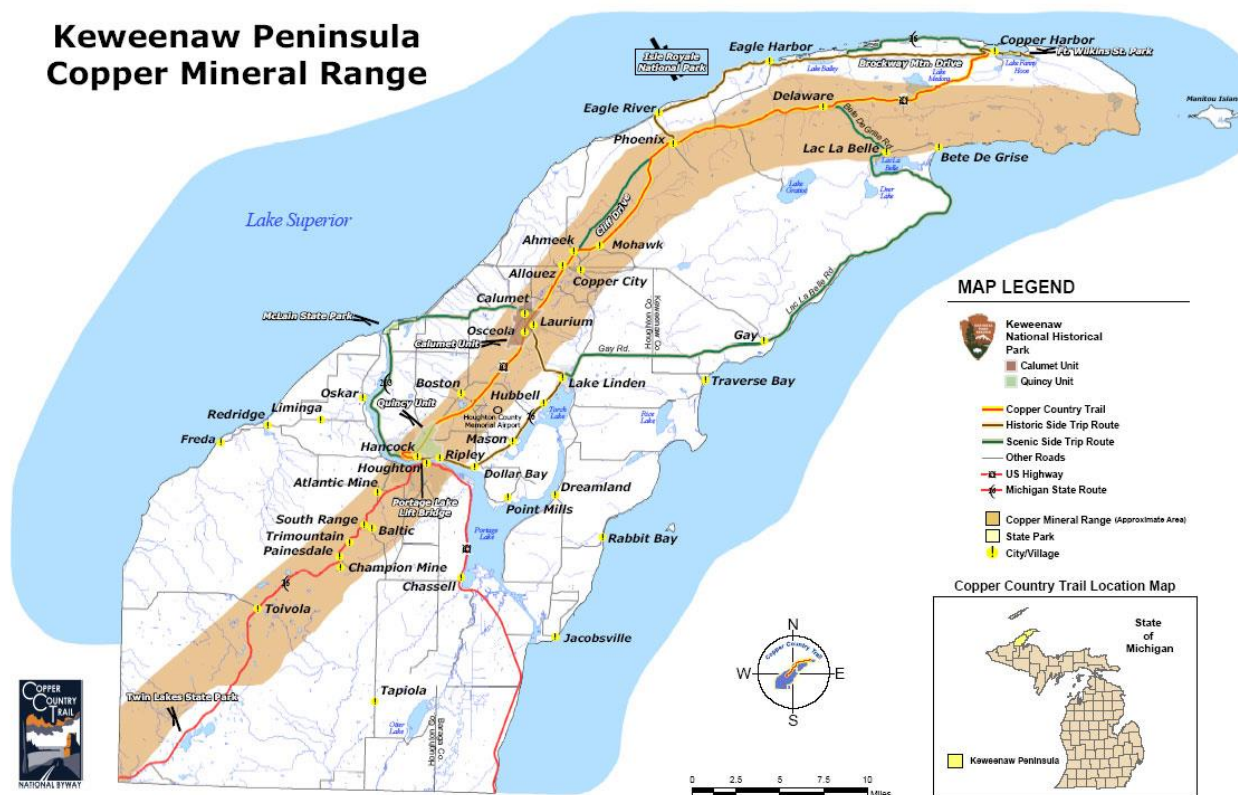
of the Keweenaw Peninsula were deformed during the Grenville collision event and now dip generally northwest to north into and under Lake Superior.

Economically important copper deposits occur in two of the Mesoproterozoic formations, the Portage Lake Volcanics (PLV) and the overlying Nonesuch Shale (NS). Over 11 billion pounds of copper were mined during 1845 to 1968 from the PLV. The PLV ore deposits consist primarily of native copper and are located in brecciated flow tops of the tholeiitic lava flows, interflow conglomerates, and, to much lesser extent, veins. Copper deposits in the NS consist of disseminated, fine-grained chalcocite in dark colored shale and, to minor extent, sandstones. The White Pine Mine was the principal producer of ore from the NS with 4.2 billion pounds of copper and 45 million ounces of silver mined from 1953 to 1992.

Other mineral deposits of interest include the currently producing Eagle Mine in the eastern part of the Upper Peninsula. Copper and nickel ore occurs within mafic dikes in the Paleoproterozoic sediments of the Baraga basin. Other companies are investigating reopening the White Pine Mine and an adjacent property. Minerals of particular interest include: copper crystals, mass and drift copper, rare cuprite crystals and other copper sulfides and carbonates, and datolite.



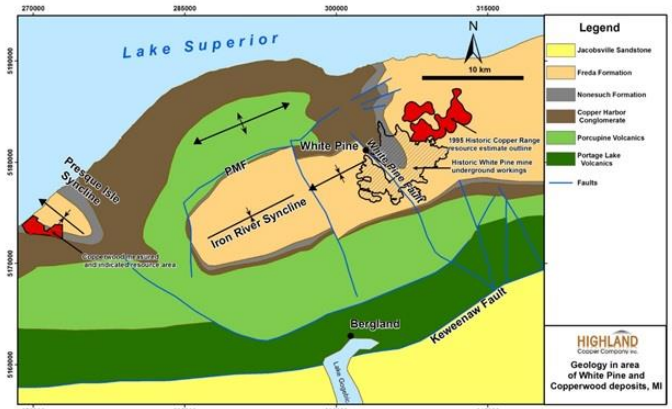
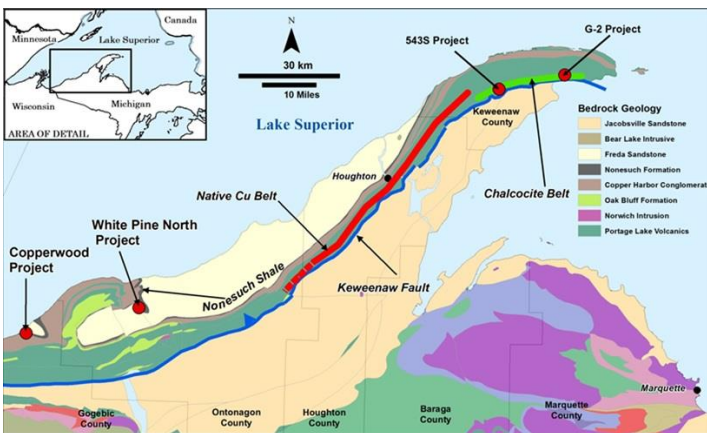
## Keweenaw Peninsula Copper Mineral Range





## Biography of James (Jim) Cappa

Jim Cappa was born in Merced, California but grew up in San Francisco where his father had a grocery store. Jim entered the U.S. Navy after high school and became an airplane mechanic and a crew member on a patrol bomber. After the Navy, he attended the University of California @ Santa Barbara, graduating in 1967 with a B.A. degree in Geology. His first job was with the U.S. Forest Service doing engineering geology and geological mapping. He traveled to Europe and while in London got a job with Anglo American Corporation doing copper exploration in Zambia. Upon leaving Zambia, Jim bought a motorcycle and spent a year touring west and southern Africa, India, Nepal, Asia minor, Europe, USA and eventually back to California. He then attended the New Mexico Institute of Mining and Technology and received a M.S. degree in Geology in 1975. It was the Arab oil crisis and Jim accepted a job as a petroleum geologist for AMOCO in Denver. Jim didn't fit in with the oil and gas business and left in 1976 to take a job doing uranium exploration in Canada and New Mexico for Houston Oil and Minerals. The uranium business faltered in 1980 and he got a new job with FMC Gold Company. Jim worked in Spain, Turkey, Brazil and the U.S.A. exploring for gold and industrial minerals. In 1991, FMC closed their Denver office and Jim took a job as head of the Mineral and Energy section of the Colorado Geological Survey. Jim retired from the CGS in 2007 and worked for Ur Energy doing uranium exploration in the Colorado Plateau until 2009 when he was offered a job as Chief Geologist for First Solar. First Solar made its solar panels using a mixture of cadmium and tellurium and they hired him to develop a staff to conduct worldwide exploration for tellurium. Jim retired from that job in 2012 and became a contract geologist working for a private company in the Leadville district, Colorado until 2014. Since then he has been mostly retired but still getting a few consulting jobs.



Added by the editor: above geologic maps of Keweenaw Peninsula copper deposits from [www.highlandcopper.com](http://www.highlandcopper.com)

*Datolite*



Specimens from the A.E. Seaman Mineral Museum, Michigan Tech University, Houghton MI (photos by the ed.)



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Pictures from our last meeting: certificates of appreciation for their presentations at our meetings being awarded by President Mark Jacobson to Jeff Scovil (March program) and Donna Ware (for the talk by her and Jeff Self at our January meeting).



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## Denver Gem & Mineral Show Mini Report March 2016

The Denver Gem & Mineral Show for 2016 is fast approaching. Remember the dates are September 16 - 18, 2016. The theme is "Minerals of Africa." The location remains the Denver Mart, I-25 and 58th Avenue (Exit 215 on I-25). The show is always a fantastic event for all of us gem, mineral and fossil hobbyists and collectors. Every club member should be a part of it.

Each year the Denver Show offers a "Best of Species" competition based on the show theme, which for 2016 is "Minerals of Africa." This competition is open to any individual (amateur or professional), but not to institutions, groups, clubs or businesses. An individual may enter only one African specimen in each size or type category. The categories are: Thumbnail (specimen fits in a 1" cube as displayed), Toenail (specimen fits in a 1.5" cube as displayed), Miniature (specimen fits in a 2" cube as displayed), Cabinet (specimen fits in a 5" cube as displayed), Oversize Cabinet (specimen must fit into standard 4 foot case), Self-Collected (specimen personally collected by exhibitor), and Lapidary/Jewelry (cabochon, sphere, faceting, intarsia, jewelry, etc. featuring theme minerals). In the case of the Lapidary/Jewelry category, all workmanship must be that of the competitor. Entries for the Best of Species will be placed in special group cases provided by the Show. Specimens may not be part of a regular competitive or non-competitive display.

Other competitive opportunities are also offered by the Show. For clubs who belong to the American Federation of Mineralogical Societies, the club or members thereof may enter an entire competitive exhibit under any of the extensive categories found in the AFMS rules. The cases will be judged using the AFMS Uniform Rules, 8th Edition, updated for 2016. These rules may be found at [www.amfed.org](http://www.amfed.org) or just search for American Federation of Mineralogical Societies. There are several categories for the exhibitor as well. The exhibitor may be an AFMS society, a AFMS Junior society, a Junior, a Novice (first time exhibitor in the

category), Advanced exhibitor, or Master exhibitor. The Advanced and Master exhibitors would have achieved a certain level of proficiency with prior exhibits. It can be quite challenging and exciting to plan and execute an entire exhibit by oneself or with other club members. Please think about it. Anyone with questions about these competitions may contact the Judging Chair, Larry Havens at 303-757- 6577 or lwrnchavens@comcast.net.

Respectfully submitted, Judy Knoshaug, Show Secretary

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## **Denver Gem & Mineral Show Mini Report April 2016**

**DENVER SHOW AWARDS** The Denver Gem & Mineral Show for 2016 is fast approaching. Remember the dates are September 16 - 18, 2016. The theme is "Minerals of Africa." The location remains the Denver Mart, I-25 and 58th Avenue (Exit 215 on I-25). Flyers and postcards for the show will be available soon. The show is always a fantastic event for all of us gem, mineral and fossil hobbyists and collectors. Every club member should be a part of it. Don't forget to volunteer for the show.

In addition to the show competitions covered in last month's mini report, there are other competitive opportunities offered by the show.

The C. E. Withers Award honors the memory of a man who was committed to the improvement of displays in the show. No special entry form is required, and a given exhibit may win this award only once. The winner is determined by a vote of the members of the Show Committee. Entries are judged on showmanship, quality, and educational value. Adherence to the show theme is not a requirement. Individuals, couples, or families are eligible. Dealers, commercial miners, individual competitive cases, cases exhibited by aggregate groups and club cases are not eligible.

The Donna Chirnside Museum Trophy honors Donna Chirnside, a deceased member of the Show Committee who served as Exhibits Chair for several years and as such was instrumental in improving exhibits, particularly the museum exhibits. This trophy is presented to the museum with the best display at the show. The entries are judged on showmanship, quality, educational value and relationship to the show theme. The winner is determined by a special Judging Committee.

The Prospector Trophy is awarded in honor of the countless miners, prospectors, and mineral collectors who preceded us and collectively made a monumental contribution to the Earth Sciences. The trophy is given to the best field collected mineral specimen found during the year preceding the opening date of the show. The specimen(s) entered must have been personally collected in the field by the exhibitor and may be any species, from any locality and any size. An exhibitor may enter up to three specimens. Eligibility is strictly limited to amateurs.

The Junior Prospector Trophy is awarded for the best field collected specimen personally collected by an individual, aged 6 through 14, and found during the year preceding the show. The other rules for this trophy are the same as for the Prospector Trophy.

The Best Fossil Trophy is intended to encourage exhibition of fossils at the show, as well as to increase public awareness of the importance of this aspect of Earth Science. The trophy is given to the best field collected fossil specimen found during the year preceding the show. The specimen(s) entered must have been personally collected in the field by the exhibitor and may be any fossil, from any locality and any size. Specimen(s) must be labeled with the name and location using AFMS fossil labeling standards. In addition, the geological formation must be cited on the label. An exhibitor may enter up to three specimens. Eligibility is limited to amateurs. For complete information on these competitions, see the show website

[www.denvermineralshow.com](http://www.denvermineralshow.com).

Anyone with questions about these competitions may contact the Judging Chair, Larry Havens at 303-757-6577 or lwrnchavens@comcast.net. Next month the last two competitions, the Richard M. Pearl Trophy and the Club Prospector Trophy, will be covered.

Respectfully submitted, Judy Knoshaug, Show Secretary



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## Denver Gem & Mineral Show Mini Report May 2016

The Denver Gem & Mineral Show for 2016 will be here before you know it. Remember the dates are September 16 - 18, 2016 and the theme is "Minerals of Africa". The location is the Denver Mart, I-25 and 58th Avenue (Exit 215 on I-25). Thanks to Publicity Chair, Gloria Staebler, handsome flyers and postcards are available featuring exquisite specimens of tanzanite and diopside. The show is always a fantastic event for all of us gem, mineral and fossil hobbyists and collectors. Every club member should be a part of it.

Here is information concerning the last two competitions at the show - the Richard M. Pearl Trophy and the Club Prospector Trophy.

The Richard M. Pearl Trophy is awarded to the exhibitor of the best crystallized mineral specimen entered in the competition. The trophy is given in honor of Professor Richard M. Pearl, a longtime Colorado resident, who was instrumental in organizing both the American Federation and the Rocky Mountain Federation of Mineralogical Societies and was past President of both. He was the second "Certified Gemologist" recognized by the American Gem Society, as well as the author of many books on Colorado geology and mineralogy. The competition is open to all exhibitors. Entries may be any crystallized mineral, thumbnail or larger, from any locality. The exhibitor must own the specimen. Quality, on a worldwide basis, will be the only criterion by which each mineral specimen will be judged. The exhibitor is limited to three entries for this trophy in a given year. A specimen is eligible to win this trophy only once. An exhibitor shall not be eligible to enter this competition for two years following receipt of the Pearl Trophy. Specimens entered in this category will be placed in special group cases provided by the Denver Show Committee and may not be part of a regular competitive or non-competitive display nor in any other special competition, such as the Species Competition. The deadline for entry is August 31, 2016.

The Club Prospector Trophy is open to any member club of the Greater Denver Area Gem and Mineral Council. A club is eligible to enter up to three specimens collected after September 17, 2015 on club-sponsored field trips in their exhibit. When the club installs its exhibit case on set-up Thursday, the club representative will designate the three specimens to be judged to the Judging Chair or designee. The Judging Committee will then number the designated specimens (1 through 3) in the same direction in all the entered cases. An aggregate entry, such as a vial of gold dust, or a group of loose topaz crystals would not constitute an eligible entry. A gold nugget or a single topaz crystal, or group of crystals on a single matrix, would be eligible. The specimens will be displayed in a standard Denver showcase with supporting information about the field trips. Maps, pictures, drawings, etc. can be used to make an attractive case that would be of interest to viewers. One third of the case score will be on showmanship as defined in the AFMS Rules. The other 2/3 of the case score will be double the highest score from among the three quality scores awarded to the specimens. AFMS Showmanship Rules for minerals refer to the ability of the exhibitor to use the material exhibited, the background material, lighting, arrangement, and labeling features (such as size, neatness, etc.) to create a display which will attract and hold the interest of the viewer upon the specimens exhibited. The deadline for entry is Tuesday, September 6, 2016.

For complete information on these competitions, see the show website [www.denvermineralshow.com](http://www.denvermineralshow.com). Anyone with questions about these competitions may contact the Judging Chair, Larry Havens at 303-757-6577 or [lwrnchavens@comcast.net](mailto:lwrnchavens@comcast.net).

I hope that club members are perusing and signing up on the volunteer sheets for the show. Some 400 plus volunteers are needed to put on the show and we really cannot put on the show without them. Please feel free to contact the Show Chair, Lesley Sebol, at 720-999-1372 or [lsebol@yahoo.com](mailto:lsebol@yahoo.com) if you have ideas or questions about the show. You may also contact the undersigned at 303-423-2923 or [jrknoshaug@comcast.net](mailto:jrknoshaug@comcast.net) if you have ideas for future mini reports. Thanks for your interest.

Respectfully submitted, Judy Knoshaug, Show Secretary

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*For current and updated information about the Denver Gem and Mineral Show, see*  
<https://www.facebook.com/Denver-Gem-And-Mineral-Show-154290574610235/> and  
<http://www.denvermineralshow.com/>

## THE MINERAL LOCALITIES OF THE PIKES PEAK REGION

By

Willard W. Wulff

The purpose of this paper is to describe generally, and perhaps somewhat in detail, the mineral localities of the Pikes Peak Region, and, as far as possible, the variety of minerals found at each location. While I will confine it largely to the immediate Pikes Peak Region, I may digress in a few instances to places just outside of the Pikes Peak Region that are too important to be overlooked.

In my estimation one of the oldest and most prominent collecting fields is that area near Florissant, Colorado, in the vicinity of Crystal Peak which derived its name from the many crystals found on its slopes. This locality has been known as a collector's paradise since the early [18]70s, and has since that time contributed many exquisite specimens to museums and Universities all over the world. In recent years it has been worked only occasionally, and although no great amount of material has been uncovered, some very fine specimens have been found, just within the last few months I found, in an isolated pocket in a pegmatite dike, some superb microcline crystals; also some very fine quality smoky quartz and orthoclase crystals, and a few very small, almost microscopic, topaz on a matrix of green microcline. In addition to these minerals many others are found here. These include fluorite in its various crystal forms. The cube, of course, is the most numerous, and its various modifications such as the octahedron, are far less abundant. The quality of the fluorite is as a rule very fine and ranges from colorless to a light bluish green and on into the darker greens and violet and purple. Some excellent clear quartz crystals are to be found also, but far less abundantly than the smokys. The varieties of feldspar are quite numerous, including microcline, orthoclase, and albite. All can be found in the various twinning habits, Carlsbad, Baveno, and Mannebach. Many of the albites are of extremely fine quality, but quite small in size, making in many cases fine micro-mounts for the microscope fiend. Topaz specimens from Crystal Peak are a valuable asset to any collection, and are found very often in small microscopic crystals up to an inch in length. The color is for the most part clear, but occasionally a faint tinge of yellow or blue is present. Phenacites, while extremely rare, are some times found here, mostly in microscopic crystals, although crystals up to a quarter of an inch have been found. These, when invisible to the naked eye, make superb micro-mounts. Among the other minerals produced here are goethite, columbite, hematite, limonite, strievertite, and limonite pseudomorphs after siderite. All in all, this is without a doubt the first and best known collecting ground in the Pikes Peak Region.

There is a locality in the Garden of the Gods where in the early days some very fine blue celestite was found, and a few years ago I made several attempts to locate it. After a time I was successful and obtained several hundred pounds of this beautiful blue mineral. It occurs in lenses in the red sandy shale, the lenses sometimes being hollow, giving ample chance for good crystal development. However, for the most part the crystals have grown together into quite a compact mass. For the micro-collector this locality also offers an abundance of material.

On the way to the summit of Pikes Peak by way of the Cog Road, is a side canon called Artists Glen where, a few years ago, two other collectors and I discovered a large pocket of cubic crystals of fluorite. There is nothing outstanding in this locality other than the size of the crystals obtained, and the heavily etched faces. Some of the cubes were as much as five inches on a side, and every face highly etched, probably by a peculiar action of hydrofluoric acid after formation. It was also found that this material is slightly fluorescent and quite luminescent, holding this luminescence for as long as five minutes after exposure to the Argon bulbs. In the same pocket were a number of very large smoky quartz crystals, some clear out and others very crude. All were covered with a thick layer of iron oxide and were highly etched. Also we found a black substance resembling lava and cinders, all of which proves that this pocket was probably formed under intense heat and great pressure, from a highly acidic solution, the surplus acid attacking the crystals after formation.

Crystal Park was one of the supposedly favorite localities for collectors in years gone by, and from what I have learned, many fine specimens of quartz, feldspar, and topaz were obtained. However, on my many trips there I have failed to find a good crystal of anything. If it ever was a prolific locality it has apparently been worked out. Unfortunately, in many collections, private and museum, I have seen specimens labeled "Crystal Park, Colorado", practically all being attached to the common rock crystal quartz from Hot Springs, Arkansas. However, there must have been a great number of fine specimens found there in the early days, according to references made in various books and articles written many years ago. One of these in particular is the little book "Crystals and Gold" by the late R. T. Cross, in which he tells of finding a very rich pocket of smoky quartz crystals. He describes it as a "rich find of black beauties." A few years ago a student at Colorado College who had been to Crystal Park brought in what he thought to be quartz, but the specimen proved to be a section of a large topaz. It was about 3 inches in diameter, and about 2-1/2 inches in length and of very good quality. It appeared to be the base of the crystal, being broken squarely off on the characteristic, perfect basal cleavage. Unfortunately, the person who found it was inexperienced and struck it with a hammer to see what was inside, thus ruining an otherwise beautiful rarity. This specimen is now in the Colorado College museum.

In Bear Creek Canon, just south of Colorado City, now West Colorado Springs, in the vicinity of Specimen and Sentinel Rocks, is a peculiar granite formation containing many pegmatites. They in turn contain numerous pockets out of which come groups of curious iron-stained, flattened and distorted, doubly-terminated quartz crystals. These are mostly dull, unattractive crystals on a matrix of iron-stained orthoclase, but occasionally one finds a brilliant group associated with very bright metallic hematite crystals and a few pinkish orthoclase crystals. This makes an extremely showy and interesting cabinet piece. In rare instances a very small phenacite or

two will also be found somewhere on the specimen, which makes a still more interesting group. Here, too, many superb microclines have been found, as well as some of the largest smokys ever found in Colorado.

Just across the canon and higher up on the slope is an interesting deposit of feldspar. From here I have obtained many fine orthoclase crystals. Mannebach, Baveno, and Carlsbad twins are very numerous and nearly all have a partial coating of translucent albite. This could be either a secondary growth on the crystals or a partial alteration. Whichever it is, it is an interesting association.

We must not forget the St. Peter's Dome area. This region is highly mineralized and contains quite a variety of minerals. Astrophyllite, riebeckite, hornblende, the feldspars, many forms of quartz, topaz, fluorite, hematite, limonite, zircon and a few of the rarer ones like fergusonite and bastinsite [sic - bastnaesite]. Of this variety I think the most interesting one is zircon. There are some three or four different locations in this area where they are found. In one place the brilliant little red fellows are found in a pure white quartz vein and when a few of them are scattered over a piece of this matrix it makes an exceptionally showy cabinet specimen. On first sight, the little crystals look to be perfect octahedrons, but on closer inspection it is seen that the crystals are plainly tetragonal, usually showing a simple combination of the prism and pyramid of the first order, the prism faces being so short as to be almost invisible, thus giving the first appearance of octahedrons. The other zircon deposits produce crystals of somewhat larger size, but of much inferior quality. They are black and brown, having a dull metallic luster. However, in one place the crystals are quite large with characteristic crystallization, but having a brilliant metallic luster with the faces of the crystals quite highly etched. The black and brown color is probably due to iron stain, being found associated with hematite in feldspar. In some oases there may be evidences of alteration.

About 16 miles south of Colorado Springs on the road to Canon City is a series of dry washes caused by erosion of the waters of the Little Fountain Creek. These washes are all in the gray shales of the Pierre Shale Formation, which contains waxy concretions of limestone from the size of marbles up to the size of a wash tub. A few of the concretions have a small cavity in the center, which in turn contains beautiful calcites and, in a few cases, barite crystals. The most numerous calcites are small rhombohedrons one-half inch to an inch on a side, and of a beautiful golden yellow color. In the same cavity can also be found a few scalenohedrons of a pure, clear, white calcite. Evidently these are of secondary origin being formed as a general rule on the outside of the afore-mentioned yellow calcites. The yellow crystals probably are of primary origin as they are always directly next to the walls of the cavity and, seemingly, are a part of the limestone matrix itself. Why the barites are present is anybody's guess. The barium content in the solution was probably sufficient enough to crystallize, under other favorable conditions, along with the calcites. While the barites are very rare here, when they are found they are as a rule of exceptionally fine quality, being very brilliant and of a light blue color. They are sometimes intergrown with both the yellow and the white calcites, and at other times appear to have been laid on top of them by some careful hand.

Speaking of barite, those that come from the South Park district are quite good. This summer during my collecting trips I had occasion to visit this locality. This deposit is located near Hartsel, Colorado, and has been mined for use in the refining of sugar by the Great Western Sugar Company. The formation in which the barite is found is a buff-colored, sandy clay with the barite consolidated into huge masses, the crystals closely packed and grown together in various shaped groups. The barite itself is quite plentiful, but getting well terminated crystals is not too easy. The crystals are all of fair size ranging from 1/2 inch up to as much as 5 or 6 inches. In many cases one or more faces of a large crystal will be generously sprinkled with small microscopic crystals, making very beautiful cabinet specimens. The color of the mineral is quite variable, being in the different shades of green, blue, dirty yellow, and in some cases white. Many crystals are of one color throughout, with the exception of the termination which is milky white. The crystals are orthorhombic, bipyramidal class and are well developed. Some crystals show a definite complexity and all show the characteristic perfect basal and prismatic cleavage.

Black tourmaline from the Wilkerson Pass locality should also be mentioned here. This is another deposit that was visited back in 1876 probably for the first time by R. T. Cross. At that time it was virgin ground and some marvelous specimens were obtained. The exact location is on the topmost part of the pass about 100 yards south of the highway. The formation is a white quartz dike in the granite, and the tourmaline crystals are tightly frozen in the quartz. The tourmalines are coal black and well developed and are usually in short stubby and long prismatic crystals, showing well defined vertical striations. Well terminated crystals are now hard to find, but in the past such specimens were plentiful and I think that even now if a shot could be put in the dike a great many more fine specimens could be obtained. In cross section, the crystals show the characteristic spherical triangular outline. I know of no other place in Colorado where the coal black variety of tourmaline is found in as excellent a quality as those of the Wilkerson Pass locality.

There are, of course, many other fine mineral localities in and about the Pikes Peak Region, but it would take a good-sized volume to describe each and every one in detail. The ones I have mentioned are of outstanding value to the collector and student of mineralogy.

The whole state of Colorado is a collector's paradise and offers an unparalleled field for the study of geology and all of its phases, whether it be mineralogy, crystallography, paleontology, petrology, etc. We who live here and have it at our back door can consider ourselves more than fortunate to have such a large store of material from which to obtain a wealth of information in the scientific world.



## Update on the 2<sup>nd</sup> Eugene E. Foord Pegmatite Symposium, July 15-19, 2016



The full registration information for the Symposium is now online at the symposium website, <http://www.colorado.edu/symposium/pegmatite/>.

Our current schedule of presentations at the symposium includes 27 oral talks and 13 poster presentations. There will be a wide variety of talks, ranging from description of pegmatite mineral occurrences to state-of-the-art research on the nature of pegmatites. Shortly, we'll be sending all of our members a full list of the speakers & their presentations.

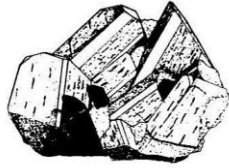
As we've said, conference registration is \$100, and half-price \$50 for full-time students. A Saturday evening banquet at the Table Mountain Inn, in

Golden, will cost \$40. If you choose to attend the banquet, please note that there is now an option to select your choice of dinners: (1) Southwest Pasta Primavera; (2) Southwest Pasta Primavera with Grilled Chicken; (3) Pan-seared Salmon; (4) Buffalo Pot Roast. The banquet will be a social event; there will not be any formal speaker. All attendees and spouses are invited to attend the welcoming reception Friday evening at the CSM Museum. Other options that you can select on our registration page include low-cost dormitory housing (\$37 or \$43) on the CSM campus available for up to 5 nights (through all the field trips if desired); breakfast at the Mines Market cafeteria (\$8.50) for those staying on-campus; lunch at Mines Market (\$10; we recommend this for all participants unless they plan to bring their own lunch, to save time vs. walking to a restaurant in town); and box lunches (\$10) for the field trips. When registering be sure to select your preferred choices for the two days of field trips—mark your preferences from 1<sup>st</sup> to 5<sup>th</sup> choice, and we will do our best to assign everyone their top choices (it has not yet been determined which trips will take place on which days, and a few trips of the 13 offered may have to be dropped if there are not enough sign-ups for them or for other logistic reasons). Please notice that there is a page giving full detailed descriptions of each field trip on the Field Trips website page, via a clickable link to [http://www.colorado.edu/symposium/pegmatite/sites/default/files/attached-files/2016\\_field\\_trips.pdf](http://www.colorado.edu/symposium/pegmatite/sites/default/files/attached-files/2016_field_trips.pdf)

If you have any questions about registration or symposium events please feel free to contact Mark Jacobson, [markivanjacobson@gmail.com](mailto:markivanjacobson@gmail.com), or Pete Modreski, [pmodreski@aol.com](mailto:pmodreski@aol.com).

*Just for a little “who’s who”, here are two photos from the PEG2015 symposium in Książ, Poland, with a few of the pegmatite scientists who will be speaking at our symposium in Colorado, shown relaxing here and, of course, doing what they all do best when not examining pegmatites and their minerals, enjoying some local beer! Those pictured include Al Falster (Maine Mineral and Gem Museum), Mona Sirbescu (Central Michigan University), William B. “Skip” Simmons (Univ. of New Orleans & Maine Mineral and Gem Museum), Dave London (Univ. of Oklahoma), Bob Martin (McGill University, Québec), and Luis Sánchez-Muñoz (Madrid, Spain). Other presenters will be coming from Brazil, Czech Republic, Ireland, Norway, and Sweden.*





# ***Friends of Mineralogy, Colorado Chapter-- Silent Auction***

***Saturday, May 14, 2016***

***Setup begins 10:30 a.m., Auction begins at 12 noon  
Clements Community Center, 1580 Yarrow St., Lakewood CO***

***All are invited to come & bring material to sell, and to bid on items***

**Friends of Mineralogy, Colorado Chapter is having its silent auction** of mineral specimens, rocks, fossils, books, faceted stones, jewelry, lapidary pieces and mining memorabilia. Please bring your auction materials for setup beginning at 10.30 AM. All (members or not) are invited to bring specimens to sell, and to participate as bidders/buyers. Items brought to the auction may be designated as a 20%, 50%, or 100% donation to FMCC.

Time: Our auction will be on Saturday, May 14; setup will begin at 10:30 a.m., auction to begin at 12 noon, a live auction of special items will begin at 1 p.m., all tables will be closed by 3:00 p.m., and checkout should be completed by 4:00 p.m.

Location: Clements Community Center, 1580 Yarrow St., Lakewood, located one block northwest of the intersection of West Colfax Ave. and Wadsworth Blvd. The entrance and parking lot are on the south side, facing Colfax. Go north on Yarrow Street from Colfax.



Auction bid slips are attached on a separate page, and will also be available at the auction during setup. Sellers can also get copies of our bidding slips at our website:

[www.friendsofmineralogycolorado.org](http://www.friendsofmineralogycolorado.org)

***Note to sellers, PLEASE use our current bidding slips, not old ones which may differ, from previous years. Thank you!***

Any questions about the auction should be directed to Mark Jacobson, [markivanjacobson@gmail.com](mailto:markivanjacobson@gmail.com), 1-337-255-0627 or Pete Modreski, [pmodreski@aol.com](mailto:pmodreski@aol.com), 720-205-2553. To be assigned a seller / bidder number in advance, please contact Lou Conti, [dlconti@aol.com](mailto:dlconti@aol.com), 303-797-3205.

Please tell all your friends about the auction, bring some specimens, and come see the good selection of specimens and enjoy our complimentary refreshments. A selection of special items, donated by local dealers, will be included in the "live" auction.

**Silent Auction: Friends of Mineralogy  
Colorado Chapter**

Seller to complete first 3 items below  
And fill in specimen description at top &  
bottom of slip.

1. Minimum Bid \_\_\_\_\_
2. Seller # \_\_\_\_\_  
(assigned at check-in)
3. Amount donated to FM (circle one)  
20%      50%      100%

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Final bid \$ \_\_\_\_\_

To FM \$ \_\_\_\_\_ to Seller  
\$ \_\_\_\_\_

Bidder Number	Bid Amount		Bidder Number	Bid Amount

\*\*\*\*\*

Buyer's receipt  
Description of auction item: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Final Bid Amount \$ \_\_\_\_\_

**Silent Auction: Friends of Mineralogy  
Colorado Chapter**

Seller to complete first 3 items below  
And fill in specimen description at top &  
bottom of slip.

1. Minimum Bid \_\_\_\_\_
2. Seller # \_\_\_\_\_  
(assigned at check-in)
3. Amount donated to FM (circle one)  
20%      50%      100%

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Final bid \$ \_\_\_\_\_

To FM \$ \_\_\_\_\_ to Seller  
\$ \_\_\_\_\_

Bidder Number	Bid Amount		Bidder Number	Bid Amount

\*\*\*\*\*

Buyer's receipt  
Description of auction item: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Final Bid Amount \$ \_\_\_\_\_



## ***Notes about FM this month:***

***Annual Dues to Friends of Mineralogy, Colorado Chapter*** are \$13.00; this includes membership in the national organization, Friends of Mineralogy, Inc.. New members are *always* welcome! Please note the new mailing address we are now using; to join, just mail a check for \$13 to FM-Colorado Chapter, P.O. Box 234, Arvada, CO 80001-0234; please include your name, email address and mailing address (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.

We welcome to FMCC these new members who have joined our Chapter between March to May 2016:

Mark Longman, Denver, CO  
Chuck Borawa, Highlands Ranch, CO  
Bob Larson, Ouray, CO  
Joel Sorensen, Aurora, CO  
Paul Melville, Northern Territory, Australia  
Viola Padilla, Denver CO  
Sandra Gonzales, Denver, CO  
Ethan Steffen, Englewood, CO

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

***FM Silent Auction, Saturday, May 14:*** Come! Bring & tell friends! Bring some specimens to sell! Our members are encouraged to bring some refreshments to share with the attendees. Setup begins 10:30, auction starts 12:00, vocal auction at 1 p.m., all tables closed by 3 p.m., checkout completed by 4 p.m.

***Looking ahead to the Denver Show:*** Consider preparing an exhibit for the show; and please think about helping at our FM-sponsored Mineral Identification Booth (more info will be in our September newsletter).

## ***Dates for upcoming FM Colorado Chapter activities:***

Meetings are normally held at 7:30 p.m. on the 2<sup>nd</sup> 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 2016:

**Jan. 14, FM meeting**, program, Jeff Self & Donna Ware, "The Sherman Dugan Geology Museum".

**Mar. 10, FM meeting**; speaker, Jeff Scovil, "The Best of Colorado Minerals"

**May 12, FM meeting**; speaker, Jim Cappa, Mineral Deposits of the Keweenaw Peninsula, Michigan

**May 14, FM Silent Auction, at Clement Community Center, Lakewood** ***Plan to come! Bring friends!***

**July 15-19, 2<sup>nd</sup> Eugene E. Foord Pegmatite Symposium, Golden, CO**

**Sept. 8, FM meeting** (*this date may be subject to change*); speaker TBA

**Nov. 17, FM meeting** Dr. Markus Raschke, CU, "Thalénite: from redefinition to new discoveries of a rare-earth element silicate mineral from Colorado".

**FMCC 2016 Officers:** President, Mark Jacobson, markivanjacobson@gmail.com , 1-337-255-0627

Vice-President, Jim Hurlbut, jfhu@earthlink.com , 303-757-0283

Treasurer, Gloria Staebler, gastaebler@aol.com, 303-495-5521

Secretary, Alan Keimig, alan.keimig@gmail.com, 303-755-9604

Directors: Bill Chirnside (2015-16), billdozer@mho.com , 303-989-8748

Don Bray (2016-17), don-bray@copper.net , 303-681-3646

Larry Havens (2016-17), lghavens@aol.com , 303-757-6577

Chairpersons: Newsletter, Pete Modreski, pmodreski@aol.com, 303-202-4766

Preservation, Jeff Self and Donna Ware, selfawareminerals@gmail.com

Liaison for DMNS, Alan Keimig

Liaison for RMFMS, Jim Hurlbut

Representative to Denver Council, Dave Bunk; alternate, Mark Jacobson

Membership/Hospitality - ? (open!)

## ***Calendar of coming events:***

**Thurs., May 12, 7:30 p.m., Friends of Mineralogy, Colorado Chapter**, bimonthly meeting, “**Geology and Mineral Deposits of the Upper Peninsula, Michigan**”, by James Cappa, Conifer, CO, retired from the Colorado Geological Survey. At the Denver Museum of Nature & Science, VIP Room.

**Sat., May 14, Friends of Mineralogy, Colorado Chapter, Silent Auction.** Clements Community Center, 1580 Yarrow St., Lakewood CO, 12:00-3:00 (setup begins at 10:30 a.m., auction begins at 12:00, verbal auction 1:00, checkout begins at 3:00 p.m.). To request a seller/buyer number in advance please contact Lou Conti, dlconti@aol.com or 303-303-797-3205.

Coming up during the summer and fall:

**Fri.-Sun., June 3-5, 53<sup>rd</sup> annual Pikes Peak Gem, Mineral, and Jewelry Show**, sponsored by the Colorado Springs Mineralogical Society; at a new (indoor!) location, the Mortgage Solutions Financial Expo Center, “a community partnership between the University of Colorado—Colorado Springs (UCCS) and the Housing & Building Association of Colorado Springs (HBA)”, 3650 N. Nevada Ave., Colorado Springs. 10 a.m. – 5 p.m. Fri. & Sat., 10 – 4 Sun. See [www.csms-web.org](http://www.csms-web.org), email runningboar@hotmail.com .

**June 9-12, Fairplay Contin-Tail rock & mineral show**, Fairplay, CO; see [www.facebook.com/ContinTail](https://www.facebook.com/ContinTail)

**June 17-19, Victor, CO Gem and Mineral Show**, Victor, CO; see <http://victorcolorado.com>

**Sat., June 18, GEOdyssey’s Annual Home Sale**, 9 a.m. – 3 p.m., 15339 West Ellsworth Dr., Golden, CO 80401 (ph: 303-279-5504). Minerals, fossils, “drinks and snacks provided while you relax on our shaded patio; all specimens are a minimum of 20% off, with larger discounts for volume purchases. We’ll have many new specimens priced at 50% off”. See [www.geodyssey-rocks.com](http://www.geodyssey-rocks.com) or call 303-279-5504. “From West 6th Avenue, exit onto Indiana Street and go south on Indiana. Drive into Mesa View Estates. Turn right at the first street (McIntyre Circle) and right at the next street (Ellsworth Drive). We are about midway down the street on the left.”

**July 15-19, the “2<sup>nd</sup> Eugene E. Foord Symposium on Pegmatites, Golden Colorado”** will take place on the CSM campus. There will be a welcoming reception, two days of oral and poster presentations, and two days of field trips to Colorado pegmatite localities. See full registration information at <http://www.colorado.edu/symposium/pegmatite/> Pegmatite researchers from around the country and internationally are expected to attend, as well as local presenters. All interested persons are invited to attend; talks will cover a mixture of scientific research and general descriptive topics.

**Aug. 5-7, Creede Rock & Mineral Show**, at the Creede Underground Mining Museum and Community Center, Creede, Mineral County, CO. 10 a.m. – 5 p.m. daily; see <http://creederocks.com/> .

**Aug. 11-14, Contin-Tail rock & mineral show**, Buena Vista, CO; see [www.facebook.com/ContinTail](https://www.facebook.com/ContinTail)

**Aug. 18-21, Woodland Park Rock, Gem, & Jewelry Show**, Woodland Park, CO; see <https://www.facebook.com/woodlandparkrockandgemshow/>

**Aug. 19-21, Lake George Gem & Mineral Show**, sponsored by the Lake George Gem and Mineral Club, Lake George, CO. See <http://www.lggmclub.org/>

**Thurs., Sept. 8, FM meeting**, 7:30 p.m., Denver Museum of Nature & Science, VIP Room (*this date may be subject to change*); speaker TBA

**Sep. 10-18, Denver Coliseum Mineral, Fossil, and Gem Show**, Denver Coliseum; see <http://www.coliseumshow.com/>

**Sep. 11-18, Colorado Mineral & Fossil Show (Fall)**, Ramada Plaza Hotel (formerly Holiday Inn - Central Denver), 4849 Bannock St, Denver, CO (I-25 frontage road). See [http://www.mzexpos.com/colorado\\_fall.html](http://www.mzexpos.com/colorado_fall.html) .

**Sep. 14-17, Denver Fine Mineral Show**, Denver Marriott West, 1717 Denver West Blvd.; see <http://www.westwardminerals.com/finemineralshow/pages/denver.html>

**Sep. 16-18, 49<sup>th</sup> annual Denver Gem and Mineral Show**, Denver Mart, Denver, CO. **Minerals of Africa** is the 2016 show theme. See <https://www.facebook.com/Denver-Gem-And-Mineral-Show-154290574610235/?fref=ts>

**Nov. 12-13, 37<sup>th</sup> 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. 17, FM meeting**, 7:30 p.m., Dr. Markus Raschke, CU, “Thalénite: from redefinition to new discoveries of a rare-earth element silicate mineral from Colorado”.

**Nov. 18-20, Denver Area Mineral Dealers Show**, Jefferson County Fairgrounds, Golden CO.

You may always refer to our Chapter website, <http://friendsofmineralogycolorado.org/> where information about all our meetings and coming events is posted.

#### ***Special exhibits in 2016:***

The new “**Critical Materials**” **Exhibit** continues in the Colorado School of Mines Geology Museum. The exhibit highlights critical materials and rare-earth elements - including the minerals the elements can be derived from - essential to the development of advanced technology and energy. The exhibit is a joint project of the Critical Materials Institute at the School of Mines and the Colorado School of Mines Geology Museum. Mandi Hutchinson, graduate student at CSM, played a major role in planning and design of the exhibit. The exhibit focuses on the elements Li, Y, Te, Nd, Eu, Tb, Dy, their minerals, and their uses in technology. You’ll find the exhibit downstairs in the museum, near the Gift Shop.

***For more lecture series during the year see: (the university lecture series have all ended for the spring term)***

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

CSU Dept. of Geoscience Seminars (Fridays, 4 p.m.), see <http://warnercnr.colostate.edu/geo-news-and-events/departments-seminars>

Van Tuyl Lecture Series, Colorado School of Mines, (Tuesdays, 4 p.m.): [http://inside.mines.edu/GE\\_Lecture-Series](http://inside.mines.edu/GE_Lecture-Series)

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

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

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

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

<http://westernpaleo.org/> .

\* \* \* \* \*

#### ***A little mineral quiz:***

I have Beth Simmons to thank for sending me this quiz, which she found in an old issue of (Rocks & Minerals I think/she thinks—or was it Earth Science or The Mineralogist?):

“The following sets of four or five minerals are grouped because of a definite relationship among the members of the group. Name the special property which fits all the minerals of each group. If you answer all, congratulate yourself.

Answers printed elsewhere (See page 261 for answers)”

Group 1 – galena, sylvite, cuprite, fluorite, halite

Group 2 – pitchblende, sylvanite, galena, wolframite

Group 3 – calcite, rhodochrosite, smithsonite, magnesite, siderite

Group 4 – halloysite, psilomelane, opal, collophane

Group 5 – stibnite, chlorite, gypsum, sylvanite, muscovite

Group 6 – corundum, cassiterite, zircon, sphalerite, garnet


Group 7 – olivine, biotite, dolomite, spinel, pyrope

Group 8 – epidote, glaucophane, tourmaline, hypersthene

No, there is no p. 261 in this newsletter; I’ll not print the answers here, but will save them for the next newsletter; or, email Pete if you just can’t wait to find out if you have guessed the correct answers. I also promise to include the exact year, issue, & title of the publication in which this appeared. And I’ll admit—I was a bit puzzled by some of these myself.



*The Original*  
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**GEM & MINERAL SHOW**  
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 MR BONES  
 FLUORESCENTS  
 DEALERS  
 GOLD PANNING  
 EXHIBITS  
 MINERAL ID  
 SPEAKERS



ZOISITE VARIETY TANZANITE - 4.4 CM TALL  
 ARDARA, ADO, MBELENI DISTRICT, TANZANIA  
 EVAN ROWLING COLLECTION - JEFF SCOVIL PHOTO

**MINERALS OF AFRICA**

For tickets and information visit [www.denvermineralshow.com](http://www.denvermineralshow.com)  
The Greater Denver Area Gem & Mineral Council is a non-profit 501(c)(3) corporation organized exclusively for charitable, educational, and scientific purposes.

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**2nd Eugene E. Foord Pegmatite Symposium**  
 Golden, Colorado  
 July 15 - 19, 2016

[www.facebook.com/LikeCSMGeoMuseum/](http://www.facebook.com/LikeCSMGeoMuseum/)  
<http://www.colorado.edu/symposium/pegmatite/>