



## Friends of Mineralogy, Colorado Chapter Newsletter – September 2015

and

**Sept. Meeting – Thursday, Sept. 24, 7:30 pm** (Board meeting 6:30-7:30)

Denver Museum of Nature and Science – VIP Room *Enter the Museum through the Security/Staff entrance to the left of the main entrance.*

### ***The Grossular Locality at Sierra de Cruces ("Lake Jaco"), Coahuila, Mexico by Dennis Beals***



The Sierra de Cruces in Northwest Coahuila, Mexico has been known as a source for large pink and green grossular garnet and vesuvianite for many years. Unfortunately they were labeled by the original buyer as coming from Lake Jaco, Chihuahua, Mexico, a salt playa.

In 1995, Benny Fenn began mining for a bright red grossular commonly referred to as "Raspberry" garnets. Production of these continued until 2000. In 2010 the quarry was reopened and new mining was started by Dennis Beals.

The unusual color and fluorescence has prompted a great deal of research. New research into boron rich vesuvianite from the locality is ongoing but hampered by the confusion over locality labeling.

GROSSULAR, VESUVI  
Sierra de Cruces (Lak  
Hercules  
Coahuila  
Mexico  
1301  
Xtal-Dennis Beals  
Greenwood Village CO (3F  
www.xtal-dbeals.



*About the speaker:*

Dennis Beals is a mineral dealer specializing in Mexican Minerals. He began collecting minerals at a young age in Scottsbluff, Nebraska. Vacation travels to Mexico led to form Xtal-Dennis Beals Minerals in 1988. Dennis lives in Centennial, Colorado with wife Diane and son Jacob.

*Dennis taking a break from mining in Mexico*



“Raspberry” colored grossular garnet in rhyolite from the Sierra de Cruces, Coahuila, Mexico. Photo and specimen from the Uncarved Block. 4.3 x 3.2 x 3 cm.



“Raspberry” colored grossular garnet in rhyolite from the Sierra de Cruces, Coahuila, Mexico. Photo from MineralAuctions.com, also known as the Arkenstone, Dr. Robert Lavinsky. 5.0 x 4.4 x 1.8 cm

*More about the Sierra de Cruces red grossular. This abstract by Virgil Lueth, from the November, 2002 New Mexico Mineral Symposium, was written before the best name for the actual location of the garnet locality was clarified.*

**RED GARNETS FROM LAKE JACO, MEXICO, AND THE CHEMICAL CONTROLS OF COLOR IN GARNET**, by Virgil W. Lueth, New Mexico Bureau of Geology & Mineral Resources, New Mexico Institute of Mining & Technology, 801 Leroy Place, Socorro, NM 87801

A recent find of garnets from the famous grossular garnet locality near Lake Jaco, on the Chihuahua–Coahuila border is unique for the bright red color exhibited by the specimens. The geology of the area and petrology of the rock types involved are not exceptionally unique for skarn-type garnets of the grossular-andradite (grandite) series. These garnets typically exhibit colors ranging from pure white (grossular) to dark brown (andradite). Most grandite garnets are typically greenish in color and intermediate in composition. Some of the andradite garnets are black (a variety known as melanite) when they contain significant amounts of titanium. Red colors are typically observed in pyropealmandine-spessartine (pyralspite) series garnets and until now, never observed in the grandite series. Pyralspite series garnets are never observed in skarn environments. A detailed geochemical study of the garnets was undertaken to determine the cause of the red coloration using petrography and electron microprobe microanalysis. The cores of the garnets are typically black and contain elevated concentrations of titanium (as much as 4.5 wt %) consistent with the andradite (Ad15–29) variety of melanite. The immediate layer adjacent to the black core is white grossular. Minor variations in calcium and iron indicate increasing amounts of andradite component outward from the core. The red coloration in the Lake Jaco garnets is due to elevated concentrations of manganese from 1.0 to 1.7 wt % (Sp 1.6–3.7) in the latest stage of garnet growth with a distinct change toward more grossular-rich compositions. Geiger et al., 1999, determined the red coloration in these garnets is due to the presence of Mn<sup>3+</sup> in the octahedrally coordinated silicate site using spectroscopic analysis. They postulate that the color is derived from a similar mechanism that causes the red color in the mineral piemontite of the epidote group.

Reference

Geiger, C. A., Stahl, A., and Rossman, G. R., 1999, Raspberry red grossular from Sierra de Cruces Range, Coahuila, Mexico: *European Journal of Mineralogy*, v. 11, pp. 1109–1113.

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**Mineral specimen of the month**

**Columbite, Lake George area, Colorado**

This crystal was shown to me at the Lake George Mineral Show, in August, by John Rakowski, of the Lake George club. It was found recently by a collector friend of his in the Lake George/Crystal Peak area. From its weight and appearance, we are pretty sure it is columbite. John gives the size of this crystal as 6.5 x 4.5 x 2.8 cm. He asked me if I'd known of columbite crystals this large and well-formed from the Crystal Peak area; I do not; wondering if others have any comments on this specimen.—Pete Modreski

Here is the letter we received from James Hagadorn, Geology Curator at DMNS, about fund raising for the Museum's purchase of the "Smoky Hawk King" specimen:

## Giant Amazonite Coming to the DMNS

In 2012, the Dorris family of Colorado Springs (and Prospectors fame) opened a pocket that contained some of the biggest amazonites ever discovered. See photos below or go to <https://www.youtube.com/watch?v=rqQcvoZSVX4#t=6m48s> for an example. Over the next two years, Tim Dorris cleaned and restored a massive plate from the ceiling of this pocket, called the Smoky Hawk King. The plate weighs over 85 pounds and is nearly three feet long and almost two feet wide. It is dominated by extraordinarily large amazonite, smoky quartz and cleavelandite crystals. Perhaps you've seen this piece on TV or on display at the 2015 Tucson or 2014 Denver mineral and gem shows. At the Denver show it handily won "Best in Show" for its size, color, completeness, and overall wow factor. Many of you, both individually and through your clubs, have already had a role in making this specimen possible through your advocacy for the gem and mineral hobby and through supporting local mining operations like the Dorris family's. Without your support for the earth sciences, it is quite likely this specimen would never have come to light. Thank you.

Over the past year, the Denver Museum of Nature & Science, in partnership with Joe Dorris and other supporters, has been working to secure this specimen for permanent public display. Like the Alma King rhodochrosite or Diane's Pocket aquamarine, this amazonite specimen is a key piece of US and Rocky Mountain history and of our mining heritage. Once on display it can inspire the next generation of mineral, rock, and fossil collectors and catalyze public interest in the stunning natural features of our landscape.

To learn more or arrange a behind-the-scenes showing for your group, please get in touch with the museum's geology curator, James Hagadorn, at [jwhagadorn@dmns.org](mailto:jwhagadorn@dmns.org). Or stop by the museum when you're in the neighborhood!

If you or your club would like to help support the acquisition and display of the Smoky Hawk King, please go to <http://dmns.org/amazonite> to make a donation. Or, contact the museum's advancement director, Megan Fisher, at [megan.fisher@dmns.org](mailto:megan.fisher@dmns.org) or 303-370-8259. The Museum greatly appreciates your support.



*Above left:* Joe and Tim Dorris pulling specimens from the partially-opened Icon Pocket at their Smoky Hawk claim, near Lake George, Colorado. *Right:* A spectacular amazonite, immediately after being pulled from the pocket. Images courtesy of Joe Dorris.



Above: The nearly-restored Smoky Hawk plate, as it was displayed at the 2014 Denver Mineral & Gem Show.

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**Sept. 16, 6-9 p.m., Annual reception and open house at the Colorado School of Mines Geology Museum.** Once again this year, all are invited to come to the CSM Geology Museum's Open House, Wednesday evening Sept. 16, the week of the gem and mineral show. There will be refreshments, cash bar, music, a preview of new displays, and the opportunity to



meet and socialize with museum staff, visiting dealers and curators, and local collectors. Here's a glimpse of one of the new displays; drusy and other crystalline quartz from the San Juans, on loan from the collection of Jasper and Anita Bertisen.

## ***Events the week of the Denver Show: (Denver Mart Expo Hall, 58<sup>th</sup> Ave. at I-25)***

The principal way our chapter supports the Denver Gem and Mineral Show is to conduct the ***Mineral Identification Booth***. We can use as many Chapter members as can find the time, to volunteer to be at the booth—any time throughout the show. We will have on hand some testing supplies (hardness set; streak plate; bottle of HCl; binocular microscope; long & short wave UV lamp; balance for measuring specific gravity; pencil and paper to write down for people to take home your identifications or at least your “informed guesses”) and mineralogical reference books; you supply the knowledge about rocks and minerals and the willingness to talk to people. We don’t have a formal sign-up schedule at this time, but please contact Mark Jacobson, markivanjacobson@gmail.com, 1-337-255-0627, or Pete Modreski, pmodreski@aol.com, 720-205-2553, to let us know in advance when you might like to help out; or, just check at the booth during the show. Remember, anyone helping at the booth will receive free admission to the show (if you aren’t already a show exhibitor or volunteer).

### ***Lectures at the Denver Gem and Mineral Show:***

Friday, September 18; show hours 9 a.m. – 6 p.m.

12:00 PM - 1:00 PM: A Photo Album of Southwestern Minerals, by Jeff Scovil

1:00 PM - 2:00 PM: Four Decades of Collecting in the Southwestern U.S., by Tony Potucek and Mike Saunders

2:00 PM - 3:00 PM: Contemporary Utah Mineral Collecting, by Phil Richardson

3:00 PM - 4:00 PM: Uranium Minerals of the Colorado Plateau, by Terry Wallace

4:00 PM - 5:00 PM: The End of the Age of Dinosaurs by Peter Larson

Saturday, September 19; show hours 10 a.m. – 6 p.m.

12:00 PM - 1:00 PM: Pikes Peak Pebble Pups presentations by various students

1:00 PM - 2:00 PM: Starting a Mineral Collection, by Peter J Modreski

2:00 PM - 3:00 PM: The Comstock Lode, Nevada, by George Witters

3:00 PM - 4:00 PM: 30 Years of Collecting in the Southwest, by Graham Sutton

4:00 PM - 5:00 PM: Gold Specimen Occurrence & Habits at the Round Mountain mine, Nevada, by Scott Werschky

Saturday Night Special in the Palm Court of the Denver Mart Main Building:

8:00 PM - 9:00 PM: A Mineral Collecting History of New Mexico, by Virgil Lueth

Sunday, September 20; show hours 10 a.m. – 5 p.m.

12:00 PM - 1:00 PM: Native American Jewelry of the American Southwest, by Eric Fritz

1:00 PM - 2:00 PM: Recent New Minerals of the Southwest, by Joe Marty

2:00 PM - 3:00 PM: Mining the Purple Passion Mine, by Bill Gardner

3:00 PM - 4:00 PM: Lava Cap Thunder Egg Deposit, by Lori Coleman

### ***More shows & events taking place during the week of the Denver Show:***

**Sept. 12-15, Denver Fine Mineral Show**, 10 a.m. – 6 p.m. (ends 5 p.m. on 9/15), Denver Marriott West, 1717 Denver West. Blvd., Golden CO. As the name says, a “fine mineral show”—its emphasis is on high quality, valuable specimens. The second year of this show; produced by the same group of dealers who conduct the Westward Look mineral show in Tucson. No admission charge. See

<http://www.westwardminerals.com/finemineralshow/pages/denver.html>

**Sept. 12-20, Denver Coliseum Mineral, Fossil, and Gem Show**, see <http://www.coliseumshow.com/> . There will be both outdoor (in tents) and indoor (in the Coliseum building) rock, mineral, fossil, gem & jewelry dealers. Free admission.

**Sept. 13-20, Colorado (Fall) Mineral and Fossil Show**, Ramada Plaza Hotel (once the Holiday Inn - Central Denver), 4849 Bannock St, Denver, CO; see [http://www.mzexpos.com/colorado\\_fall.html](http://www.mzexpos.com/colorado_fall.html) . This show emphasizes more “mineral specimens for serious collectors” as opposed to rocks & jewelry. No admission charge.

**Sept. 13-19, “Dave Bunk Minerals and Lithographie** are no longer homeless. We will be hosting an Open House and half-price sale during the Denver show at our new facility, 5695 Yukon Street, Arvada, CO 80002” 12 noon to 6 p.m., Sunday, Sept. 13; 10 to 6 daily, Monday, Sept. 14 through Saturday, Sept. 19. All are welcome.

**Wed., Sept. 16**, 6-9 p.m., Annual Open House and Reception (all are invited) at the **Colorado School of Mines Geology Museum**, 1310 Maple St., Golden. Refreshments, music, preview new displays, and meet museum staff and visiting curators. For more information see <https://www.facebook.com/LikeCSMGeoMuseum> .

**Sept. 18-20, Denver Gem and Mineral show**, at The Denver Mart Expo Hall, 58<sup>th</sup> Ave. and I-25 (exit 215), sponsored by the Greater Denver Area Gem and Mineral Council; dealers, special exhibits by clubs, individuals and museums nationwide, lectures, demonstrations, and kids’ activities; 2015 theme, “Minerals of the American Southwest”. 9-6 Fri., 10-6 Sat., 10-5 Sun. See <http://www.denvermineralshow.com/> .

### **Remember our bright-yellow-green mineral quiz from May?**

I posted these 5 specimen photos in the May newsletter and invited readers to make their “best guesses” as to mineral identity, locality, and (if anyone dared), asking price where I saw them at the Westword Look show in Tucson. I basically received three responses, from Beth Simmons (2 correct), Beth’s geology class (1 correct), and Bill Hutchinson (2 correct, but became 3 when he rethought and changed one of his guesses); so I guess Bill wins the mineral sight identification award! If you want to take one more look at these and guess before you read the answers—I’m printing the answers (including locality and price) on the last page of this newsletter.



*(specimens numbered clockwise, starting from lower left across top to lower right; A, B, C, D, E)*

## ***Important notes about FM this month:***

***July 18 Field Trip with RAMS:*** Mark Jacobson and a few other FM members took part in the field trip & picnic to which we were invited to join the Mile-Hi Rock and Mineral Society at their pegmatite claim near Lake George. We may have a few notes & pictures from this trip in our next newsletter.

***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! To join, just mail a check for \$13 to FM-Colorado Chapter, P.O. Box 254, Littleton CO, 80160-0254; please include your name, email and mailing address (all our newsletters and mailings are normally sent by email).

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

### ***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 often 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! Our planned 2015 meeting dates are:

**Sept. 18-20 2015 Denver Gem and Mineral Show**

**Sept. 24 FM meeting – Dennis Beals, The Grossular Locality at Sierra de Cruces (“Lake Jaco”), Coahuila, Mexico**

**Nov. 5 FM meeting – Dan Wray, “Cave Minerals in 3-D”**

Tentative dates for 2016:

**Jan. 15, FM meeting**

**Mar. 10, FM meeting**

**May 12, FM meeting**

**May 14, FM Silent Auction** (tentative date only, not confirmed)

**Sept. 22, FM meeting** “ “ “ “ ”

**Nov. 3, FM meeting** “ “ “ “ “

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### ***A 2016 Colorado Mineral Symposium on Colorado Pegmatites***

There is interest in holding a mineral symposium, with lectures and field trips, on Colorado Pegmatites sometimes during the summer of 2016. A planning meeting to discuss the possible symposium will be held on **Tuesday, Sept. 22**, 10 a.m. – 12 noon in the Colorado School of Mines Geology Museum Conference Room, 1310 Maple St., Golden. The dates, exact theme, sponsoring organizations, symposium location, and locations for field trips are all still to be determined and will be discussed at this meeting. All interested persons are invited to attend the meeting. For more information contact Mark Jacobson, [markivanjacobson@gmail.com](mailto:markivanjacobson@gmail.com) .

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**FMCC 2015 Officers:** President, Mark Jacobson, markivanjacobson@gmail.com , 1-337-255-0627  
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Secretary, Alan & Norma Keimig, alan.keimig@gmail.com, 303-755-9604  
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Preservation, Jeff Self and Donna Ware, selfawareminerals@gmail.com  
Liaison for DMNS, Alan Keimig  
Liaison for RMFMS, Jim Hurlbut  
Membership/Hospitality - ? (open!)

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Back on May 9, our FM Silent + Vocal auction at Clement Community Center, Lakewood, was well attended and a good success. Bruce Geller, auctioneer; Larry Havens, assisting; Jeff Self, spotting. We want to thank again, all the dealers who donated specimens to the auction—with special thanks to David Bunk and Marty Zinn, among many (we'll have a list of all the specimen donors in our next newsletter).

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*Complete calendar of coming events:*

**Sat., Sept. 12**, 10 a.m. – 2 p.m., monthly “**Dinosaur Discovery Day**” at **Dinosaur Ridge, Morrison**. Guides are stationed all along the ridge to show and explain the fossils and geology, plus educational booths and activities by the Visitors Center. Walk up & down the ridge, or ride a tour bus for \$4. See [www.dinoridge.org](http://www.dinoridge.org) . This date will feature “Geohazards Day”.

**Sat., Sept. 12**, 5:00 p.m., monthly meeting of **the Park County Historical Society**, Bailey, CO; a dinner meeting with a history presentation by Jackie Powell and Gary Higgins on “**The Snowstorm Dredge**”. “The Snowstorm Dredge was constructed in the 1930s after most of the gold mining activity in the state had long diminished. Tucked away out and out of sight, between Fairplay and Alma, is the only remaining gold dredge in Colorado. There are only bits and pieces of other gold dredges in the state, but this one is nearly complete.” At Shepherd of the Rockies Lutheran Church, 106 Rosalie Rd., just east of Crow Hill. There is an \$8.00 at the door charge. Dinner will start at 5:00, presentation around 5:30. All are welcome; please call (303) 838-8241 with any questions.

**Sat., Sept. 12**, and **Sat., Oct. 3**, two one-day field trips/classes to see & study glacial geology in the Leadville area, led by Vince Matthews, former Colorado State Geologist. **Glaciers of Lake County** will be Sept. 12, 8:30 a.m. – 5:00 p.m., and **Glaciers of Eagle and Summit Counties** will be Oct. 3, 8:30-5:00 p.m. Both are offered through Colorado Mountain College, Continuing Education; cost, \$50 for 9/12 class, \$60 for 10/3 class. Both meet first in a classroom at CMC-Leadville, then depart for a day’s field trip. For more information see <http://coloradomtn.edu/campuses/leadville/continuing-education-calendar/> or call Mary Laing, 719-486-4292

**Tues., Sept. 15**, 3:00 p.m., Denver Museum of Nature & Science, Earth Science Seminar, “**The WHAT of conodont science: Insights into Permian oceans and beyond**”, by Charles Henderson, Univ. of Calgary. VIP Room at DMNS. Free lecture, museum admission not required.

**Tues., Sept. 15**, 5:30 p.m., at the monthly meeting of the Rocky Mountain Map Society, **William Henry Jackson, Artist and Mapmaker in His Later Years**, by Camille Bradford. “The RMMS is a non-profit organization dedicated to the study and appreciation of maps and other items of cartographic interest. The Society was formed in 1991 and is based in Denver, Colorado.” In the Denver Public Library, Gates Room, Fifth Floor – Open to the Public. See <http://rmmaps.org/> for more info.

**Wed., Sept. 16**, 4:00 p.m., CU Geological Sciences Seminar, Boulder, **To Plug or not to Plug? Unintended consequences of Mine Plugging for Remediation at Inactive Mine Sites**, by Kirk Nordstrom, USGS, Boulder. . Benson Earth Sciences Building Auditorium (room 180). Refreshments served at 3:30 p.m. outside Benson Room 380. Everyone is welcome. . See <http://www.colorado.edu/geolsci/colloquium.htm> for the complete CU weekly seminar schedule.

**Wed., Sept. 16**, 6-9 p.m., Annual Open House (all are invited) at the **Colorado School of Mines Geology Museum**, 1310 Maple St., Golden. Refreshments, music, preview new displays, and meet museum staff. Held during the week of the Denver Gem and Mineral Show. For more information see <https://www.facebook.com/LikeCSMGeoMuseum> .

**Thurs., Sept. 17**, 7:00 p.m., monthly meeting of the Colorado Scientific Society, **Development of the Rio Grande rift between 25-10 Ma based on low-temperature thermochronology** by Dr. Shari Kelley, New Mexico Bureau of Geology and Mineral Resources. At Shepherd of the Hills Presbyterian Church, 11500 W. 20th Ave., Lakewood. All are welcome; see <http://www.coloscisoc.org/> .

**Fri.-Sun., Sept. 18-20**, the **Denver Gem and Mineral show** will take place at **The Denver Mart, 58<sup>th</sup> Ave. and I-25 (exit 215)**; 2015 theme, “Minerals of the American Southwest”. 9-6 Fri., 10-6 Sat., 10-5 Sun. See <http://www.denvermineralshow.com/> . The show will include mineral displays by museums and individuals, dealers, booths by all the local gem and mineral clubs and by nonprofit and public sector institutions, kids activities including gold panning, and a lecture program featuring talks about many mineral localities in the Southwest. Several commercial “satellite” mineral and gem shows also take place around town this same week, including at the Denver Coliseum, Denver Marriott West (Golden), and Ramada Plaza Hotel (Denver).

**Sat., Sept. 19, the Edgar Mine** (Colorado School of Mines Experimental Mine) in Idaho Springs is celebrating its **150<sup>th</sup> Anniversary**. It will host a free “Gold Rush Era” public event, 9 a.m. – 2 p.m. Activities for kids and adults will include, Underground mine tour with a blast simulation; Historical and proposed renovation displays; Kids photo booth; Gold panning; Mine Rescue Team demonstration; Grizzled prospector costume contest; Mining collectibles silent auction. Park at the Elks parking lot or Schoolhouse parking lot; shuttles to the Edgar mine will run every 10-20 minutes. For more information see <http://www.minesnewsroom.com/press-releases/colorado-school-mines%E2%80%99-edgar-mine-celebrates-150-years-sept-19> .

**Tues., Sept. 22**, 10 a.m. – 12 noon, an open invitation to join in a **Planning Meeting** to organize a summer, 2016 **Symposium on Pegmatites** to be held in Colorado. Dates, detailed theme, sponsorship, meeting location, and locations for field trips are all still to be determined. Interested persons are invited to meet in the Colorado School of Mines Geology Museum Conference Room, 1310 Maple St., Golden. For more information contact Mark Jacobson, [markivanjacobson@gmail.com](mailto:markivanjacobson@gmail.com) .

**Thurs., Sept. 24**, 4:00-5:00 p.m., Van Tuyl lecture series at Colorado School of Mines, **Utah’s belly button: unraveling the origin of Upheaval Dome and the importance of field observations in the scientific process**”, by Bruce Trudgill, CSM. Berthoud Hall, Room 241, all are welcome. See <http://warnercnr.colostate.edu/geo-news-and-events/departments-seminars> for the complete Van Tuyl weekly lecture schedule.

**Thurs., Sept. 24**, 7:30 p.m., Friends of Mineralogy Colorado Chapter, bimonthly meeting: **The Grossular Locality at Sierra de Cruces (Lake Jaco), Coahuila, Mexico**, by Dennis Beals. In the VIP Room, Denver Museum of Nature & Science. All are welcome.

**Wed., Sept. 30**, 7:00-8:30 p.m., **Horned Dinosaurs, free public talk at the Dinosaur Ridge Visitor Center** (16831 W. Alameda Parkway, Morrison, C-470 and Alameda). “Join us for an evening lecture on ceratopsians, the dinosaurs with the amazing horns and frills! Have you ever wondered just how many different types of horned dinosaur there was and which ones lived in your backyard? Come on over this evening to see a presentation done by Erin LaCount on these odd but beautifully displayed dinosaurs!” These talks are geared towards adults, ages 12 and up 303-697-3466 x107.

**Sat. Oct. 3**, 2<sup>nd</sup> glacial geology field class led by Vince Matthews, **Glaciers of Eagle and Summit Counties**; see description listed above under the Sept. 12 class.

**Sat., Oct. 10**, 10 a.m. – 2 p.m., monthly “**Dinosaur Discovery Day**” at Dinosaur Ridge, Morrison. Guides are stationed all along the ridge to show and explain the fossils and geology, plus educational booths and activities by the Visitors Center. Walk up & down the ridge, or ride a tour bus for \$4. See [www.dinoridge.org](http://www.dinoridge.org) . This date will feature “Girl Scout Day”, with special activities for Girl Scouts.

**Oct. 11-17 is annual “Earth Science Week”**, sponsored by the American Geosciences Institute. For educators, the USGS will have available, complimentary copies of an Earth Science Week Teachers Packet. USGS geologist Pete Modreski will lead a public geology hike some day during this week (date not yet scheduled). For ESW public & educational resources see <http://www.earthsciweek.org/> .

**Wed., Oct. 14**, 3:00 p.m., Denver Museum of Nature & Science, Earth Science Seminar, "**Conodonts: Deep time clue to mass extinctions in Colorado**", by Jeff Over, SUNY-Geneseo, VIP Room at DMNS. Free lecture, museum admission not required.

**Wed., Oct. 14**, 4:00 p.m., CU Geological Sciences Seminar, Boulder, **Was the Cambrian Explosion an Artifact of True Polar Wander?**, by Joe Kirschvink, Caltech.

**Thurs., Oct. 15**, 7:00 p.m., Colorado Scientific Society, **“Field Methods Past and Present”**, by Jim Reed, Director of Research and Development, Rockware Incorporated. Shepherd of the Hills Presbyterian Church, 11500 W. 20th Ave., Lakewood.

**Tues., Oct. 20**, 5:30 p.m., Rocky Mountain Map Society monthly meeting, featuring **Examining 100 Years of USGS Topographic Maps in a Web-Based Platform**, by Dr. Joseph Kerski, ESRI. Denver Public Library, Gates Room, Fifth Floor; public welcome. See <http://rmmaps.org/> for more info.

**Sat.-Sun., Oct. 24-25, Fall Mineral, Book, and Fossil Sale at the Colorado School of Mines Geology Museum**, 9 a.m. – 4 p.m. each day. “Most prices will be reduced during the course of the event.” 1310 Maple St., CSM campus, Golden CO.

**Nov. 1-4, Geological Society of American Annual Meeting, Baltimore, MD.**

**Nov. 12**, 7:30 p.m., Friends of Mineralogy, Colorado Chapter bimonthly meeting; speaker, Dan Wray, **Cave Minerals in 3-D**. Denver Museum of Nature & Science, VIP Room; no charge and all are welcome.

**Nov. 14-15, New Mexico Mineral Symposium, Socorro, NM.** This promises to be an extra good symposium; it will feature a reception for the Grand Opening of the new Mineral Museum (Headen Center) at the NM Bureau of Geology. The featured speaker will be Dr. Robert Cook, “An overview of five great American gold specimen location”. The symposium runs from Friday evening (Museum reception) through Sunday afternoon (silent auction), with talks all day Saturday and Sunday morning. See <https://geoinfo.nmt.edu/museum/minsymp/home.cfml> for full details.

**Thurs., Nov. 19**, 7:00 p.m., Colorado Scientific Society, **“Geology of Ore Deposits”** , by John Ridley, Colorado State University. Shepherd of the Hills Presbyterian Church, 11500 W. 20th Ave., Lakewood.

**Fri., Nov. 20, Colorado Science Conference for Professional Development** (a.k.a. Colorado Science Teachers’ Conference), held at the Denver Mart, 58<sup>th</sup> Ave. at I-25. The year’s major educational conference for all fields of science teachers in Colorado. See <http://coloradoscience.org/> for full information about registration and presentations. The keynote presentation will be by Dr. Scott Sampson of the Denver Museum of Nature and Science, author of “How to Raise a Wild Child” as well as “Dinosaur Odyssey: Fossil Threads in the Web of Life”.

***Special exhibits continuing in 2015:***

**The Mining Art of Buck O’Donnell**, special exhibit at the Western Museum of Mining & Industry. “JC (Buck) O’Donnell created a series of pen and ink drawings for various mining related supply and informational magazines during the early to mid-20th century. His work appeared in magazines like Shaft and Development Machines and Machinery Center, Inc. O’Donnell’s works served to provide visual evidence of how miners

lived, how they worked, and what the western mining boom looked like to those who lived it.” The exhibit opened on Sept. 10; regular admission charge. See [www.wmmi.org](http://www.wmmi.org) for more details.

**Steps in Stone: Walking Through Time**, at the University of Colorado Museum of Natural History, CU campus, Boulder. “A new exhibition that features real fossil tracks and trackways from the University of Colorado Museum of Natural History collections”. Open 9-5 weekdays, 9-4 Saturdays, 10-4 Sundays; closed on university holidays. Exhibit runs through December 2015; see <http://cumuseum.colorado.edu/>.

**Explore Colorado's Mining and Mineral Heritage:** Colorado minerals, gemstones, and mining history material from the Colorado School of Mines Geology Museum and Colorado's State Mineral Collection continues on display on the third floor of the Colorado State Capital Building in Denver, at least through the end of the year. You can explore this online by following this link to the Friends of the CSM Geology Museum facebook page (you don't need to have a personal Facebook account to view this information.):  
<https://www.facebook.com/pages/Colorado-Mining-and-Mineral-History-on-Display/358587847669017>

*For more lecture series during the year see:*

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/departement-seminars>

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

Denver Mining Club (Mondays, noon), 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/>

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**Answers to the mineral photo quiz:**

A. Pyromorphite, Daoping mine, Guilin, China; \$950 - 3 correct guesses

B. Ettringite, N'Chwaning, South Africa; \$7800 – 1 correct guess (Bill)

C. Beryl var. heliodor, Volodarsk-Volynskii, Ukraine: (*can't quite read the price clearly, tag was curled—it was either \$2500 or \$7500, I think the former but not sure*) – 2 correct guesses

D. This was my ringer; it's a Jolly Rancher candy, lime flavor. Attractively displayed without any label by Leonard Himes in his showcase. Leonard said that very few people made any remark or inquiry about it.

E. Diopside, Merelani, Tanzania; \$10,000 – *no one guessed this correctly, but one guess of peridot was “close”*.

Other guesses for the minerals included apatite, calcite, diopside (not the right specimen), hedenbergite, sulfur, torbernite, tremolite. And by comparison to the price of all the others, the Jolly Rancher was “a steal”—I picked one up myself, complimentary; it was quite tasty.