

# Flatirons Facets

Flatirons Mineral Club of Boulder County, Colorado  
Volume 63, Number 1  
January-February, 2019

The Flatirons Mineral Club is a non-profit Organization which is dedicated to developing and maintaining interests in Earth science and associated hobbies. The purpose of this Club includes, but is not limited to, studying geology and Earth science, teaching others about our hobby, including young people, collecting gem, mineral and fossil specimens and learning lapidary skills.

The Flatirons Mineral Club is affiliated with the Rocky Mountain Federation of Mineralogical Societies, the American Federation of Mineralogical Societies, and the Greater Denver Area Council of Gem and Mineral Societies.



## Learn about Boulder County's Tungsten Mining and Hawai'i's Kilauea Volcano

We have two great speakers for our club meetings in January and February.

### Ed Raines on January 9

January will feature Ed Raines, one of our favorite speakers, discussing **Tungsten Mining in Boulder County**. As prospectors combed the hills west of Boulder in search of gold and silver in the 1800s, they encountered rocks of a heavy black mineral they called "heavy iron," "barren silver," or "black iron." Prospector after prospector had the rocks assayed, but it always showed to contain no silver or gold. However, in 1899, a

miner/pro prospector/developer with experience in Arizona, where he had encountered ferberite-bearing tungsten ore, realized the value of this black mineral. Boulder County's tungsten production began to supply this valuable metal to harden steel. Come to the meeting to learn more about this fascinating story.



### Leilani Arthurs on February 13



In this presentation, **The Life & Legends of Hawai'i's Kilauea Volcano**, Dr. Leilani Arthurs will discuss the geologic history of Kilauea Volcano and weave in Hawaiian legends about this area of both geologic and cultural import. This will be an interactive presentation and attendees are invited to participate in discussion and other activities to the extent they are able. Leilani is from the Big Island of Hawai'i, worked for the Hawaiian Volcano Observatory for five years, and is currently an Assistant Professor of Geological Sciences at the University of Colorado at Boulder.

Club meetings begin at 7:00 pm at the Frasier Meadows Assembly Room, 350 Ponca Place, Boulder, CO 80303. This is a new room for our meetings with a better audio/visual system, bigger screen, and more space. When you enter the building, ask the receptionist for directions to the meeting room.

## *Board Member's Message - 2019 Rock & Rails Show Summary*

*This month's message is from Brian Walko, one of our club's Board Members*

What does it take to put on a successful 2019 Rock & Rails Show? A year's worth of planning, preparation, and a lot of volunteers. A group of FMC members participated on the Rock & Rails Show Steering Committee (Brian Walko – Show Chair, Gerry Naugle – Show Chair AA, Ray Gilbert – Show Chair Emeritus, Kevin Notheis – Dealers & Club Artisans, Charlotte Bourg – Kid's Area & Volunteer Coordinator, Mel Bourg – Parking, Donald Layden – Internet & Social Media Advertising, Tally O'Donnell– Setup & Floor Plan, Dennis Gertenbach – Display Cases & Rocks R Magic Shows) along with our colleagues from the Boulder Model Railroad Club.



Many thanks to the other club members who volunteered for Setup/Takedown, Admissions, Security, Kid's Area, Rocks R Magic and creating grab bags.

As a result of everybody's efforts, our attendance was 2,100 paid visitors, greater than the average attendance of 1,900. Club proceeds from the show were \$4,806, about \$200 shy of the all-time show record of \$5,010 that was set a number of years ago. This year's proceeds are well above the average of level of \$4,400. It will support our expenses for the upcoming year. The kid's games and grab bag sales added \$750 to our scholarship funds which will support our annual college scholarship to a Colorado student seeking a geology-related degree.

### **In this newsletter**

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If you helped with the show, please plan to attend the Volunteer's Party on Thursday, January 16 at the Boulder County Fairgrounds Clover Building in Longmont (see below for more details about the party).

Brian

### **The 2019 Show Volunteers Party**

As a thank you to all the club members who made this year's Rocks & Rails show such a great success, we will have a party for show volunteers on January 10 starting at 7:00 pm. If you helped with the show for at least two hours, you are invited to join us at the Clover Building at the Boulder County Fairgrounds in Longmont for the party. The club will provide refreshments and there will be great prizes for all who helped.



Char Bourg setting up the Kids' Area for the show. Photo by Trick Runions

**Pictures from this year's Rocks & Rails show start on page 7**

## Club Elections Postponed

Because the snow cancelled October's meeting, the election for club officers and Board directors has been postponed until the January 9 club meeting. Our club is run by volunteers, including the offices listed on page 18 in this newsletter. Consider volunteering to help the operation of the club by becoming an officer or helping with one of the committees. You will have lots of help from experienced club members as you learn your job.

For more information about the duties of these officers or to volunteer to serve on the Board for the next year, please contact Gabi at [accatino@colorado.edu](mailto:accatino@colorado.edu).

## Field Trip Ideas for 2019

Although it is cold outside with snow on the ground, the field trip committee is already planning trips for this summer. What would you like to collect this year? Where would you like to see the club visit?

If you have an idea for a field trip location, please send your ideas to Gabi at [accatino@colorado.edu](mailto:accatino@colorado.edu). Even better, if you would like to lead a field trip, just let Gabi know. We would like to have a variety of places to go this summer, including several new sites.

## Will This Be Your Last Club Newsletter?

Your 2020 dues are now due. Dues are still only \$18 per individual and their immediate family. You can pay two ways:

- **PAY** Gerry Naugle, Treasurer and Membership Chair, at any FMC monthly meeting. Gerry is at or near the sign-in table when you enter the room for the monthly meetings.
- **SEND** a check made to "Flatirons Mineral Club" or "FMC" to P.O. Box 3331, Boulder, CO, 80307. Please do not send cash in the mail.

Remember that your dues for next year must be received by January 20 in order to stay current with your member benefits, which include electronic club newsletters containing the information about club activities, club field trips, annual show opportunities, silent auction opportunities, the annual club summer picnic, and access to the club website.

## Club to Participate in STEAM Fest 2020

For the second year, the Flatirons Mineral Club will have a table at the Rocky Mountain STEAM Fest March 7 and 8. The festival is designed to promote interest in science and art in children; STEAM stands for **S**cience, **T**echnology, **E**ntrepreneurship (innovation, engineering), **A**rt and **M**ath. Featured are exhibitors, activities, entertainment, education and more, where children can touch it, interact with it, test it, experiment with it and sometimes even take it home!

Our club will have two matching games, one with minerals and another with fossils. It is amazing how good some kids are with this. We will also have literature about the club for both parents and students. Plan to volunteer at our table this year by contacting Char at [rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com).



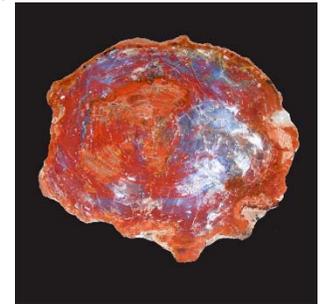
Jean Orr at last year's STEAM Fest.

Photo by Charlotte Bourg



## Vibrating Lap Machine Available for Club Members to Use

The club owns the Hustler 10-inch vibrating lap shown in the attached photo. If you would like to try your hand at polishing larger cut material, then check out the machine to try at home. It has a supply of grit, instruction manuals, and even eye protection. You can pick up the machine at the January 9 club meeting, or you can contact Dennis at [gertenbach1@gmail.com](mailto:gertenbach1@gmail.com) to arrange to pick it up.



## Jr. Geologists Activities

The Jr. Geologists have been quite busy over the past two months, plus we have lots of fun activities planned for the winter.

### November's Meeting

The meeting started with a new monthly program to learn about the geology of the rocks in the Boulder area. Craig Hazelton demonstrated with several experiments how sediments from rivers, lakes, and oceans settle and compact into rocks. Many of the different rock formations in our area were created this way.

The rest of the meeting was spent learning about fluorescent minerals, short- and long-wave ultraviolet lamps, and safety when using these lamps. Each of the Jr. Geologists received several fluorescent mineral samples for their collection, plus completed several of the requirements for the Fluorescent Mineral badge during the meeting.



Craig Hazelton demonstrates how pressure consolidates sediments into rock. Photo by Dennis Gertenbach



Aden, one of the GeoExplorers, demonstrates fluorescence with the Jr. Geologists. Photo by Dennis Gertenbach

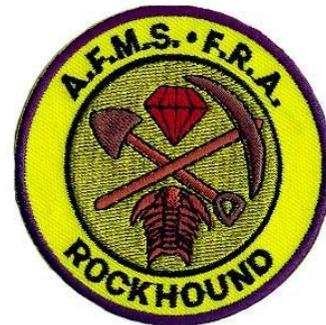


Willemite samples for the juniors provided by Brian Walko. Photo by Dennis Gertenbach

### Jr. Geologist Earns His Rockhound Badge

The Jr. Geologists can earn 20 badges on a variety of earth science and rockhounding subjects. When they earn six badges, they are eligible for the Rockhound Badge.

Braden Derouin is the latest Jr. Geologist to earn this badge. He joins the other 28 Colorado juniors who have earned this badge since its inception nearly 15 years ago.



Braden receiving his Rockhound Badge. Photo by Jacque Mahan

### Introduction to Lapidary

In November, several more Jr. Geologists were introduced to lapidary. Several small groups of juniors learned about cutting and polishing rocks using the club's water saw and Genie. With help from adults, the juniors cut pieces "Turritella agate" and stromatolite material from Wamsutter, Wyoming, in addition to other rocks they brought. They then polished pieces using the club's Genie capping machine. We hope this will spark an interest in our juniors to continue learning more about lapidary techniques.



Karina and Maxwell cutting rock for polishing. Photo by Dennis Gertenbach



Jr. Geologists polishing rocks on the club's Genies. Photo by Dennis Gertenbach

Orion examining his polished "Turritella agate" for fossils ostracods. Photo by Dennis Gertenbach



## Helping with the Rocks & Rails Show

Many of the Jr. Geologists came to Rocks & Rails not only to see the show, but to help in the kids area. Thanks to all of the juniors for their help at the show.



Connel demonstrates mineral properties at the Rocks R Magic Show. Photo by Dennis Gertenbach



The juniors help with the shark tooth screening activity. Photo by Dennis Gertenbach

## Coming in January and February

At our January 15 meeting, Craig Hazelton will be teaching the juniors how to wire wrap rocks, minerals, and fossils. It should be a fun night. The February 19 meeting will be Mars Night, where we will learn about some of the recent discoveries about the geology of Mars.

Also, at each meeting there will be the Mystery Mineral of the Month for you to identify and the next chapter in our series about the geology of Boulder.

The Jr. Geologists program is open to all Flatirons Mineral Club families. Each month we learn about different aspects of geology, minerals, and fossils, plus earn badges for different earth science activities. Meetings are at the Meadows Branch Library at 4800 Baseline Rd, Boulder, CO 80303 (behind the Kaiser Permanente medical offices). For information about the Jr. Geologists program, please contact Dennis at [gertenbach1@gmail.com](mailto:gertenbach1@gmail.com) or 303-709-8218.



Connel with his first-place display case. Photo by Dennis Gertenbach

## Rocks & Rails Display Cases

For many, the fantastic displays of rocks, minerals, and fossils is one of the highlights of the Rocks & Rails show. Members fill a display case with specimens from their collections. Then, the public votes on their favorites. This year's winners were:

Seniors: first place - Dennis Gertenbach; second place - Ray Gilbert  
Juniors: first place - Connel Casson; second place - Seiji and Koji Yamaguchi

Thanks to everyone who put together a display case this year.

# Highlights from the Rocks & Rails Show

Photos from Brian Walko

Here is a look back at last month's Rocks & Rails show. This great show was only possible with the help of all of the club members who volunteered to help with the show.



© Earth Extractions, LLC



One of our many dealers at the show displaying wonderful specimens for sale



Don Layton with his fabulous kimberlite spheres

More Rocks & Rails highlights



Club members selling items at the Artisan's Table



Kids at the show lined up to polish rocks on the club's Genies



Kaz Yamaguchi runs games in the kids area



Braden demonstrates magical mineral properties at the Rocks R Magic Show



Another dealer with wonderful Green River Formation fish fossils

## More Rocks & Rails highlights



Karina demonstrates how vermiculite behaves like popcorn



Char Bourg selling grab bags and small specimens at the kids table

## November's Towel Show

This year's towel show, our annual show-and-tell, brought many great displays of specimens that members collected over the year and lapidary and jewelry projects completed this past year. Everyone had a great time looking at what people displayed and voting for their favorites. Here are the winners in each category.

### Seniors

- Club field trip: first place - Maryanne Himmelsbach; second place - Dennis Gertenbach
- Personal field trip: first place tie - Terry O'Donnel and Tally O'Donnel
- Lapidary/jewelry: Katrina Kruse
- Best mineral: first place - Brian Walko; second place - Mary Maxwell
- Best fossil: first place - Dennis Gertenbach
- Ugliest rock: first place - Dana Haushultz; second place - Char Bourg
- Best towel: first place - Mary Maxwell; second place - Dennis Gertenbach

### Juniors

- Lapidary/jewelry: first place - Charlie Bonvillian
- Best mineral: first place - Charlie Bonvillian
- Best fossil: first place - Charlie Bonvillian
- Best towel: first place - Charlie Bonvillian

And, here are photos by Brian Walko of this year's Towel Show.



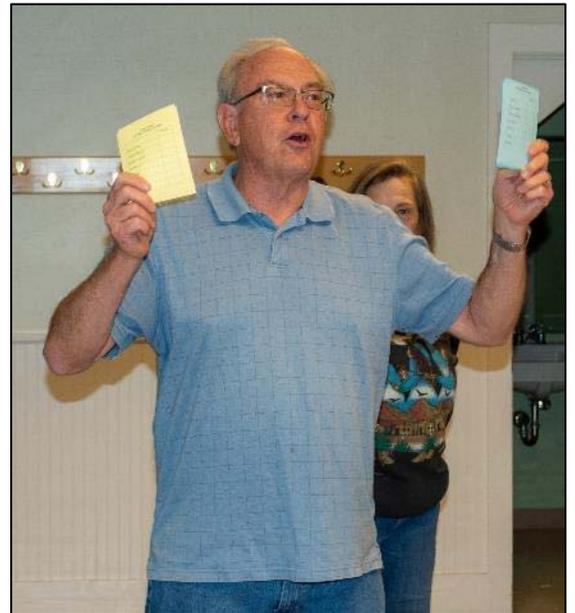
Charlie explaining where he collected his specimens



Brian Walko's Towel Show display



Members conferring about their favorites



Dennis Gertenbach announcing the winners



Dana Haushultz' specimen



Maryanne Himmelsbach talks about her specimens



Katrina Kruse with her wonderful lapidary and jewelry work

## Annual Holiday Party

With the Rocks & Rails show over, it was time to relax at the club's annual holiday party. The gift exchange was great fun, and with all of the trading, you never knew what gift you would end up taking home. Plus, the holiday goodies were a treat.

Here are some photos from the evening from Brian Walko.



Kemper with his gift



Nadia Maxwell unwraps her gift. Was this the one she ended up taking home?



Enjoying the party



Koji shows his gift

## Could Colorado's Most Recent Active Volcano Erupt Again Anytime Soon?

Although much of Colorado's landscape was shaped by volcanic activity, most Coloradans think that there are no active volcanoes in their state. But they are wrong. A volcano outside of Dotsero erupted only 4,150 years ago, much less time than the 10,000 years that geologists require to classify a volcano as extinct. This was one of the youngest volcanic eruptions in the continental U.S.

So, the Dotsero volcano is technically dormant. But could it erupt again? If so, when and how destructive would it be?

Located in north-central Colorado near the small town of the same name – Dotsero – one drives right over the last lava flow from the volcano as you head west into Glenwood Canyon on I-70. The lava flow is a bit hard to see as you travel along the highway, as brush covers the area. But if you look carefully, you can spot the lava on either side of the highway. And, as you look north from the interstate, you can spot where the lava flowed down two small canyons into the open area along the Eagle River.

Besides the lava flow, the most visible sign of the volcano is the crater, known as a maar. A maar is what is left behind after a volcanic explosion. According to the USGS, this explosion occurred when magma beneath the earth encountered water. This resulted in a blast that created a crater 2,460 feet in diameter and an estimated depth of 1,300 feet. Today, the crater depth is only around 250 feet, as it has been filled with debris over time. The crater is surrounded by cinders, which have been mined to make cinder blocks and for landscaping. There are also several small scoria cones near the crater.

When it comes to the question of whether or not the Dotsero volcano could erupt again, the USGS seems to think there is a chance. Scientists believe any volcano that has erupted in the last 10,000 years could become active again. Thus, Dotsero is rated as a moderate threat for its potential to spew volcanic ash into the air at such altitudes that it could disrupt airplane traffic. However, the USGS states that the volcano is unlikely to erupt within the lifetime of anyone currently alive.

### Getting there

If you want to visit this spot, you can. The GPS coordinates for the Dotsero maar are N. 39.663°, W. 107.032°. To reach the Dotsero Crater Recreation Site, take the Dotsero exit (Exit 133) on I-70, traveling east along the highway access

road until reaching Road 8460. At this point, drive north until you find the recreation site. For more information about the Dotsero volcano, visit the BLM site at <https://www.blm.gov/visit/dotsero-crater>.



A Google Earth satellite photo pinpointing the Dotsero crater, north of the town.

## Fossils in the News

Dennis Gertenbach



An artist's impression of *Kupoupou stilwelli*. Credit: Jacob Blokland, Flinders University

### When Penguins Ruled after Dinosaurs Died

In the Southern Hemisphere, penguins swam through the seas soon after the dinosaurs went extinct. Some were giant, human-size. But, a newly described penguin, *Kupoupou stilwelli*, more similar in size to modern king penguins, also swam in the same seas. Fossils of *K. stilwelli* were discovered on the Chatham Islands near New Zealand's South Island and are from the oldest known penguin with proportions close to its modern relatives. *K. stilwelli* had proportionally shorter legs than some other early fossil penguins. In this respect, it was more like the penguins of today, meaning it would have waddled on land but was a great swimmer. It lived between 62.5 million and 60 million years ago at a time when there was no ice cap at the South Pole and the seas around New Zealand were tropical or subtropical. This new

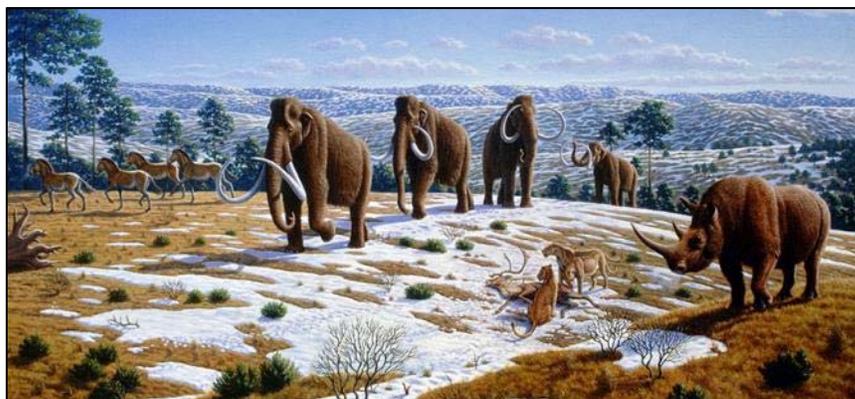
fossil provides further evidence that penguins rapidly evolved after the demise of the dinosaurs.

Information from <https://news.flinders.edu.au/blog/2019/12/12/when-penguins-ruled-after-dinosaurs-died/>

### Did an Extraterrestrial Impact Trigger the Extinction of Ice-Age Animals?

The Younger Dryas Impact Hypothesis, controversial from the time it was presented in 2007, proposes that an asteroid or comet hit the Earth about 12,800 years ago causing a period of extreme cooling that contributed to extinctions of more than 35 species of megafauna including giant sloths, sabre-tooth cats, mastodons, and mammoths. It also coincides with a serious decline in early human populations such as the Clovis culture, and is believed to have caused massive wildfires that could have blocked sunlight, causing an "impact winter" near the end of the Pleistocene Epoch.

Archaeologists present new evidence furthering this theory. Their study builds on similar findings of platinum spikes -- an element associated with cosmic objects like asteroids or comets -- in North America, Europe, western Asia and recently in Chile and South Africa. The current study of core samples from White Pond near Elgin, South Carolina, found similar platinum spikes from this time period. They also found that fungal spores associated with the dung of large herbivores decreased at the same time, suggesting a decline in ice-age megafauna beginning at the time of the impact.



Ice-age megafauna may have become extinct because of an extraterrestrial impact. Credit: Mauricio Antón, Public Library of Science

Information from [https://www.sc.edu/uofsc/posts/2019/10/10\\_chris\\_moore\\_research.php#.Xg\\_tUEdKiUk](https://www.sc.edu/uofsc/posts/2019/10/10_chris_moore_research.php#.Xg_tUEdKiUk)

### Hunting with Massive Fangs and a Death Crush

An international team of paleontologists pieced together the fossilized skeletons of a new species of tetrapod called *Parmastega aelidae* that lived 370 million years ago. It had a skull that resembled a crocodile -- a unique feature among the earliest tetrapods -- with eyes situated well above the top of its head, suggesting it was capable of watching unsuspecting prey while swimming close to the surface of a tropical lagoon. *P. aelidae* predates the previous record of a complete or almost complete tetrapod skeleton by nearly 12 million years. Living tetrapods include amphibians, reptiles, birds, and mammals.

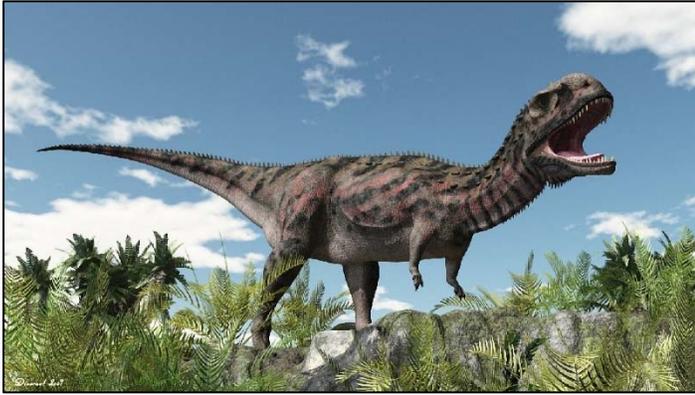
The unusual combination of anatomical features casts a new light on how this animal hunted and its lifestyle.



The tetrapod *Parmastega aelidae* stalks its prey 370 million years ago. Credit: Mikhail Shekhanov/Ukhta Local Museum

Researchers believe it would have used its slender needle-like teeth and elastic jaw to snatch prey before crushing it to death with massive fangs protruding from its palate. The team also found that part of its skeleton consisted of cartilage, indicating it probably spent most or all its time in water. This 3-foot predator probably feasted on large arthropods such as millipedes or sea scorpions at the water's edge. The concentration of the fossil remains suggests that it may have lived in large groups.

Information from <https://www.lincoln.ac.uk/news/2019/10/1572.asp>



*Majungasaurus* may have replaced its teeth every couple of months. Credit: Raul Lunia

### **A Carnivorous Dinosaur Regrew All Its Teeth Every Few Months**

A meat-eating dinosaur species that lived in Madagascar some 70 million years ago replaced all its teeth every couple of months or so, a new study has found, surprising even the researchers. *Majungasaurus* grew new teeth roughly two to 13 times faster than those of other carnivorous dinosaurs, says paper lead author Michael D. D'Emic, an assistant professor of biology at Adelphi University. *Majungasaurus* would form a new tooth in each socket every couple of months. "This meant they were wearing down their teeth quickly, possibly because they were gnawing on bones," D'Emic says. "There is independent evidence for this in the form of scratches

and gouges that match the spacing and size of their teeth on a variety of bones -- bones from animals that would have been their prey." By gnawing on bone, they may have also ingested nutrients, similar to modern-day rodents.

Information from [https://anthropology.adelphi.edu/au\\_news/adelphi-professors-new-study-reveals-that-a-carnivorous-dinosaur-species-replaced-all-its-teeth-every-few-months/](https://anthropology.adelphi.edu/au_news/adelphi-professors-new-study-reveals-that-a-carnivorous-dinosaur-species-replaced-all-its-teeth-every-few-months/)

## **Club Lapidary Equipment Available**

Now that you have collected petrified wood, agate, and other materials over the summer, you are probably anxious to cut and polish some of this material. The club has 2 locations where the club's lapidary equipment can be used by our members.

One of our big saws and a Genie are at Tim Ruske's house in Superior. To use this equipment, please call Tim at 303-807-4234 and leave a message to arrange a time.

Another saw is at Terry O'Donnell's house. His email address is [whee0297@msn.com](mailto:whee0297@msn.com).

## **Member Nametags**

Would you like a Flatirons Mineral Club name tag to wear at club events and field trips? The club places orders for nametags several times a year for members.

If you would like a nametag, please log onto our website and choose the "Request a Nametag" link in the Members Area. Add your name to the list as you want it to appear on your name tag and it will be ordered for you. Your first nametag is free!

Example of a club name tag



## Other Rockhounding Events and Activities in the Area

Here is a list of rockhounding-related activities in the area for both adults and juniors that you might be interested in. Thanks to Pete Modreski of the USGS for providing many of these notices.

- **Monday, Jan. 6**, 7:00 pm, is the monthly meeting of the Western Interior Paleontological Society (WIPS), “**The Cartographic Roots of Colorado**”, by Wes Brown. In Petroleum Hall, at the Green Center, 924 16th St., on the Colorado School of Mines campus, Golden. All are welcome; come at 6:15 for social time & refreshments. Meeting starts at 7:00. See <https://www.westernpaleo.org/> for more info and an abstract of the presentation.
- **Thursday, Jan. 9**, 7:30 pm, is the bimonthly meeting of the Friends of Mineralogy, Colorado Chapter, “**The Pala Gem Pegmatite District, San Diego County, California**”, by Ryan Bowling. All are welcome; Berthoud Hall, Room 241, Colorado School of Mines campus, Golden.
- **Thursday, Jan. 16**, 7:00 pm. **Deciphering the timing and causes of Great Unconformity erosion: An example from Pikes Peak, Colorado**, by Rebecca Flowers, Univ. of Colorado. At the monthly meeting of the Colorado Scientific Society, Berthoud Hall, Room 241, Colorado School of Mines campus, Golden. All are welcome; come for social time & refreshments at 6:30, meeting at 7:00. See abstract & more info at <https://coloscisoc.org/>.
- **February 13-16** is the **66<sup>th</sup> Annual Tucson Gem and Mineral Show**, sponsored by the Tucson Gem and Mineral Society (TGMS), Tucson Convention Center, Tucson, AZ. “The main show” in Tucson; other commercial shows in the city are open beginning January 26, 27, 28, 29, or earlier. See <http://www.tgms.org/show/>
- **Friday-Sunday, Feb. 28-Mar. 1**, is the **Denver Gem & Mineral Guild, Jewelry, Gem, and Mineral Show** at the Jefferson County Fair Grounds, 15200 W. 6<sup>th</sup> Ave., Golden, CO. Free parking and free admission; hours 10-6 Fri. & Sat., 10-5 Sun. See <https://denvergem.org/Shows.html> for more details.



**JEWELRY, GEM & MINERAL SHOW**

**Gems**  
**Books**  
**Displays**  
**Minerals**  
**Sculptures**  
**DEMOS:**  
**Flint Knapping**  
**Wire Wrapping**  
**Fluorescence**  
**Polishing**  
**Faceting**

**Fossils**  
**Geodes**  
**Jewelry**  
**Crystals**  
**Activities for kids**  
**DEALERS:**  
**Over 20 Sellers**

**Free Admission!**

**February 28 – March 1, 2020**  
**Hours: 10-6 Friday & Saturday 10-5 Sunday**  
**JEFFERSON COUNTY FAIRGROUNDS**  
**15200 W. 6<sup>th</sup> Ave. – (W. 6<sup>th</sup> Ave. & Indiana, Golden)**

**No food available onsite; restaurants nearby**  
Grab Bag Sales proceeds applied to scholarship at Colorado School of Mines  
**Sponsored by the DENVER GEM AND MINERAL GUILD**  
[www.denvergem.org](http://www.denvergem.org)  
Photos: Robert Johnson

## Denver Gem & Mineral Show Mini Report

**FLUORITE!** - Fluorite is the 2020 theme.

It may be blue, pink, purple, yellow or green.  
It exhibits varied marvelous shapes too.  
Cubes, octahedrons and twins are a few.  
2020's dazzling displays are sure to be keen!

Yes, that's correct. Fluorite is the theme for the 2020 Denver Gem & Mineral Show. Fluorite is a fabulous mineral, ranging in all colors of the rainbow due to impurities. Pure fluorite is calcium fluoride  $\text{CaF}_2$  and is colorless. Since it belongs to the cubic crystal system, fluorite also comes in many shapes and twins easily. Fluorite is a common mineral - DO NOT EQUATE that with boring. Fluorite is found in Colorado and worldwide. The number of locations producing beautiful fluorite specimens is large. All mineral collectors probably have fluorite in their collections. So, the expectation for spectacular exhibits at the 2020 Denver show is high. It's not too early to start thinking about the fluorite in your collection and planning your or your club's exhibit for the show. See picture below from the 2019 show - a preview of fluorite. The exhibit was by the Littleton Gem & Mineral Club Mineral Study Group and the picture is by Show Historian Bob Johnson.

The Denver Gem & Mineral Show will be September 18-20, 2020, at the usual Denver Mart, 451 E. 58th Avenue. The Show Chair is George Daggett, who can be reached at [geoddaggett@hotmail.com](mailto:geoddaggett@hotmail.com) or 303-453-9651. George is always open to constructive suggestions for improvement of the show. The show is sponsored by the Greater Denver Area Gem & Mineral Council, which is composed of the eight local gem, mineral, and fossil clubs. The focus of the show is to be the best-of-the-best show for the local mineral and fossil community, as well as the national and international mineral and fossil community.

Since the show is put on by the group of local clubs, it depends upon the generosity of club volunteers for its planning, organization, and operation. The Show Committee is the group that plans and operates the show. Currently there are about 50 members of the committee; however, there are still openings for additional members. Each chair needs to have an assistant so here are the positions needing an assistant. Dealers, Badges, Door Prizes, Public Sector, Security, and Tear Down. In addition, the Schools Chair will be retiring in a couple years. It is desirable to have an assistant who would learn the job and assume the chair responsibility at that time. So please think about joining us. The show is the greatest event for the mineral and fossil hobbies. There is so much to do, learn, and enjoy. But we cannot put on this show without the help of all the clubs. If you are interested, contact your club representative. The representatives are: CMS - Amber Brenzikofer; Flatirons - Gerry Naugle; FM - Larry Havens; Guild - Kathy Honda; Littleton - Lynette Warren; North Jeffco - Ron Knoshaug; RAMS - Judy Knoshaug; WIPS - Nancy Kimber.

Respectfully submitted, Judy Knoshaug, Show Secretary



# Officers, Directors, and Other Volunteers

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## President

Gabi Accatino, 303-809-4666  
[accatino@colorado.edu](mailto:accatino@colorado.edu)

## 1<sup>st</sup> Vice president: Program Chair

Jean Orr  
[jporr@mindspring.com](mailto:jporr@mindspring.com)

## 2<sup>nd</sup> Vice President: Field Trip Chair

Charlotte Bourg, 970-278-0975  
[rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com)

## 3<sup>rd</sup> Vice President: Annual Show Chair

Brian Walko, 303-931-4283  
[earthextractions@gmail.com](mailto:earthextractions@gmail.com)

## Secretary

Eileen Fitzgerald, 303 666-1399  
[elfitz891@hotmail.com](mailto:elfitz891@hotmail.com)

## Treasurer

Gerry Naugle, 303-591-2830  
[gnaugle@earthlink.net](mailto:gnaugle@earthlink.net)

## Board of Directors

Tally O'Donnell, 303-494-6061  
[phantom@indra.com](mailto:phantom@indra.com)

Kevin Notheis, 303-325-5666  
[knotheis@gmail.com](mailto:knotheis@gmail.com)

Brad Willkomm, 303 249-8877  
[bpwillkomm@yahoo.com](mailto:bpwillkomm@yahoo.com)

Anita Colin, 720-556-9889  
[anitacolin@hotmail.com](mailto:anitacolin@hotmail.com)

Dennis Gertenbach, 303-709-8218  
[gertenbach1@gmail.com](mailto:gertenbach1@gmail.com)

## Web Master

Gabi Accatino, 303-809-4666  
[accatino@colorado.edu](mailto:accatino@colorado.edu)

## Membership

Gerry Naugle, 303-591-2830  
[gnaugle@earthlink.net](mailto:gnaugle@earthlink.net)

## Newsletter Editor

Dennis Gertenbach, 303-709-8218  
[gertenbach1@gmail.com](mailto:gertenbach1@gmail.com)

## Scholarship

Donald Layden  
[donald@pmgresources.com](mailto:donald@pmgresources.com)

## Junior Geologists

Dennis Gertenbach, 303-709-8218  
[gertenbach1@gmail.com](mailto:gertenbach1@gmail.com)

## Denver Show & Council Rep

Tally O'Donnell, 303-494-6061  
[phantom@indra.com](mailto:phantom@indra.com)

## Field Trips Committee

Charlotte Bourg, 970-278-0975  
[rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com)

Kevin Notheis, 303-325-5666  
[knotheis@gmail.com](mailto:knotheis@gmail.com)

Tally O'Donnell, 303-494-6061  
[phantom@indra.com](mailto:phantom@indra.com)

Donald Layden  
[donald@pmgresources.com](mailto:donald@pmgresources.com)

## Club Claims

Brian Walko, 303-931-4283  
[earthextractions@gmail.com](mailto:earthextractions@gmail.com)

## Club Hospitality Chair

open

## Facebook Chair

Anita Colin, 720-556-9889  
[anitacolin@hotmail.com](mailto:anitacolin@hotmail.com)

## Meeting Door Prize Chair

Brad Willkomm, 303 249-8877  
[bpwillkomm@yahoo.com](mailto:bpwillkomm@yahoo.com)

## Grab Bags

Anita Colin, 720-556-9889  
[anitacolin@hotmail.com](mailto:anitacolin@hotmail.com)  
Charlotte Bourg, 970-278-0975  
[rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com)

## Mineral Specimens Chair

Don Mock  
[donmock@hotmail.com](mailto:donmock@hotmail.com)

## Club Show Committee Members

### Show Chair

Brian Walko, 303-931-4283  
[earthextractions@gmail.com](mailto:earthextractions@gmail.com)

### Past Show Chair

Ray Gilbert 303-774-8468  
[Hoss@q.com](mailto:Hoss@q.com)

### Volunteer Chair

Charlotte Bourg, 970-278-0975  
[rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com)

### Program Chair

open

### Dealer Chair

Kevin Notheis, 303-325-5666  
[knotheis@gmail.com](mailto:knotheis@gmail.com)

### Show Advertising and Admissions

Gerry Naugle, 303-591-2830  
[gnaugle@earthlink.net](mailto:gnaugle@earthlink.net)

### Kid's Corner Chair

Charlotte Bourg, 970-278-0975  
[rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com)

Eileen Fitzgerald, 303 666-1399  
[elfitz891@hotmail.com](mailto:elfitz891@hotmail.com)

### Other Show Committee Members

Gabi Accatino, 303-809-4666  
[accatino@colorado.edu](mailto:accatino@colorado.edu)

## Denver Show Club Table

Dennis Gertenbach, 303-709-8218  
[gertenbach1@gmail.com](mailto:gertenbach1@gmail.com)

## A friendly reminder to pay your 2020 annual dues

Dues are still only \$18 per individual and their immediate family. You can pay in two ways:

**PAY** Gerry Naugle, Treasurer and Membership Chair, at any FMC monthly meeting. Gerry is at or near the sign-in table when you enter the room for the monthly meetings.

**SEND** a check made to "Flatirons Mineral Club" or "FMC" to P.O. Box 3331, Boulder, CO, 80307. Please do not send cash in the mail.



Your 2020 dues must be received by January 20, 2020 in order to stay current with the member benefits, which include electronic club newsletters containing the information about club activities, club field trips, annual show opportunities, silent auction opportunities, the annual club summer picnic, and access to the club website. Your receipt is your new annual 2020 FMC membership card.



Flatirons Facets  
P.O. Box 3331  
Boulder, CO 80307-3331

## First Class Mail

## *Upcoming Events*

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|                                 |   |   |
|---------------------------------|---|---|
| Thursday, January 9, 7:00 pm    | Club meeting with Ed Raines talking about Tungsten Mining in Boulder County, see page 1                         | Frasier Meadows Assembly Room, 350 Ponca Place, Boulder |
| Friday, January 10, 7:00 pm     | Show Volunteer Party, see page 2  | Clover Building, Boulder County Fairgrounds, Longmont   |
| Wednesday, January 15, 6:30 pm  | Jr. Geologists meeting with wire wrapping, see page 5   | Meadows Branch Library, 4800 Baseline Road, Boulder     |
| Thursday, February 13, 7:00 pm  | Club meeting with Dr. Leilani Arthurs talking about The Life & Legends of Hawai'i's Kilauea Volcano, see page 1 | Frasier Meadows Assembly Room, 350 Ponca Place, Boulder |
| Wednesday, February 19, 6:30 pm | Jr. Geologists meeting featuring Mars Night, see page 5   | Meadows Branch Library, 4800 Baseline Road, Boulder     |