



# Flatirons Facets

Flatirons Mineral Club of Boulder County, Colorado  
Volume 62, Number 2  
March-April, 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 More about Boulder's Flatirons from Dana Haushultz at the March 14 Club Meeting

Boulder's Iconic Flatirons. Are they special? Are they unique? In this talk we'll attempt to answer both questions. In this usage, "specialness" refers to their iconic character as depicted by the quantity of artwork inspired by the Flatirons. Several examples will be shown.

But are they unique? The bulk of this talk will present the geological story beginning with the formation of the Ancient Rockies, their subsequent erosion and deposition of the Fountain Formation, burial, lithification, and finally uplift to produce the city's scenic backdrop. Along the way, such questions as what makes them red and what is a cyclothem will be answered. In addition, Dana will be bringing in show-and-tell specimens from the Fountain Formation found along the Front Range and the Maroon Bells on the other side of the Continental Divide.



Club meetings begin at 7:00 pm at the Frasier Meadows North Community Room, 350 Ponca Place, Boulder, CO 80303. When you enter the building, ask the receptionist for directions to the meeting room.



## President's Message

Hello FMCers!

Since I'm snowbirding in Arizona I will miss the March general meeting of the club. And that means that I will miss our own Damon Hauschultz give his next program - this time it's about the Flatirons. His previous two talks were great. You are in for a fun and informative time.

Are you ready to go on field trips? The season kicks off with Dennis Gertenbach leading his annual North Table Mountain trip on April 20. If you haven't attended this trip yet you need to go! Also, this year we have been invited to join the Gold Prospectors of Colorado to go to their gold-panning claim on the Arkansas River on May 11. This trip is limited to only 20 members! Sign up online for these trips after logging into the club website.

And many thanks to the members who manned our table at STEAMfest - Gerry Naugle, Char Bourg, Eileen Fitzgerald, and Jeanne Orr.

Happy Rockhounding!

Gabi

## Free Club Name Tags for All Members

Are you coming to meetings and field trips anonymously? We want to put a name with a face!

Please log into the FMC website and order your free club name tag. Yes, everyone!

We are putting together a large order and will place it on March 31. Please take advantage of this free offer.



Example of a club name tag

## Annual Silent Auction on April 11

Our annual silent action will take place during our April meeting at the **Left Hand Grange in Niwot** (195 2nd Avenue, Niwot, 80544). It's a fun event and is a great chance to buy and sell rock and mineral specimens, as well as equipment and other related items. The auction starts at 7:00 pm and will feature minerals, crystals, fossils, and lapidary. Bring items to sell or just come to browse!

Sellers, email Eileen at [elfitz891@hotmail.com](mailto:elfitz891@hotmail.com) to get your seller number ahead of time and then use the bidding slips that are available at our website ([www.flatironsmineralclub.org](http://www.flatironsmineralclub.org)) and attached at the end of this newsletter. Fill in the slips at home and then print them on your home printer. Set-up starts at 6:00 pm.



Bidding on some great specimens at last year's auction. Photo by Brian Walko

There is also a flyer that advertises the auction at the end of this newsletter. Please help the club by printing out a few copies and posting them around your workplace or neighborhood.

## Field Trip Season is Approaching

With snow coming down, it's hard to believe that field trip season is just around the corner. The field trip committee is now putting together the field trips for the summer. If you have suggestions about where you would like to go, please contact Charlotte Bourg at [rckhnd4252@gmail.com](mailto:rckhnd4252@gmail.com). Even better, volunteer to lead a trip this summer.

Two field trips are already scheduled. You can sign up for these trips online after logging into the club website at <https://flatironsmineralclub.org/>.



Nice cluster of analcime crystals, surrounded by thompsonite crystals

### North Table Mountain to Collect Zeolite Minerals, April 20

North Table Mountain is a world-renown site for collecting zeolites. Dennis Gertenbach is leading this trip to collect thomsonite, analcime, chabazite, mesolite, and calcite, which are relatively common. Fluorapophyllite, levyne, garronite and cowlesite occur less frequently, but are found each year. The article at [http://www.minsocam.org/ammin/AM10/AM10\\_118.pdf](http://www.minsocam.org/ammin/AM10/AM10_118.pdf) describes some of the minerals found at the site. The site is a Jefferson County Open Space Park. The club has a special-use permit to collect minerals for this trip. Please note: Our permit only allows each person to bring home a maximum of 5 pounds of specimens.

### Gold Panning on the Arkansas River, May 11

The Gold Prospectors of Colorado and Ron Yamiolkoski – a member of the GPOC - are offering 20 members of our club the opportunity to experience one of the facets of Colorado's mining history – panning for gold on their claim. Their claim is on the Arkansas River outside of Wellsville, Colorado. "Yam" and the members of the GPOC will be there to show us the proper way to pan. They will also be running all sorts of gold extraction equipment...dredges, sluices, high bankers and gold cubes. Even if you're not interested in physically participating, it's a chance to watch how people in the past, and today, search for gold.



## Jr. Geologists Activities

Fossils! That was the theme at the Jr. Geologists meetings this winter. We learned how fossils are formed, the geologic timeline, and the different types of fossils. We ended with a fossil show-and-tell and a stegosaurus project to celebrate Colorado's state fossil, earning the Fossil badge.





Gerry Naugle leading fossil identification. Photo by Dennis Gertenbach



Aubrianna and Annika examine fossils. Photo by Susanne Peach



Craig Hazelton showing a dinosaur clavicle from the Nail Quarry in Como Bluff, Wyoming. Photo by Dennis Gertenbach

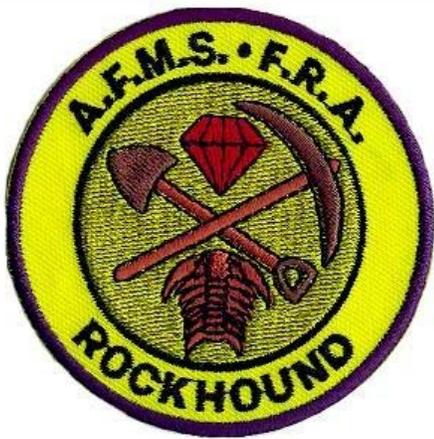


Noah and his mom completing his stegosaurus model. Photo by Dennis Gertenbach



Beginning in March, the Jr. Geologists begin working on the Earth in Space badge, learning about the geology of our solar system. The highlight of the program will be a behind-the-scenes tour of the Denver Museum of Nature and Science on April 27. One of the highlights of the tour will be a look at some of the meteorites in the museum collection, learning about the different types of meteorites found on earth and where they came from.

The Jr. Geologists program is open to all Flatirons Mineral Club families. Meetings begin at 6:30 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.



## Jr. Geologists Earn Rockhound Award

Jr. Geologists participating in the American Federation of Mineralogical Societies' badge program symbolically graduate from "future rockhound" to "full rockhound" status when they complete and earn at least 6 of the 20 individual badges offered in the program. To recognize and reward them for this accomplishment, they earn a Rockhound Badge.

Since the badge program began 15 years ago, 24 kids from Colorado have earned this award, all from the Flatirons Mineral Club. Now, four more Jr. Geologists have earned this award - Aden, Maxwell, Karina, and Annika. We congratulate these Jr. Geologists for their achievement.

For a list of all of the Jr. Geologists who have earned the Rockhound Award, see [http://amfed.org/fra/honor\\_roll.htm](http://amfed.org/fra/honor_roll.htm).



Aden, Karina, Maxwell, and Annika with their Rockhound Awards. Photos by Dennis Gertenbach

## Club Participates in STEAM Fest

The FMC had a table at the Rocky Mountain STEAM Fest March 2 and 3. The festival is designed to inculcate an interest in science and art in children; the STEAM stands for **S**cience, **T**echnology, **E**ntrepreneurship (innovation, engineering), **A**rt and **M**ath. Despite the snowy weather, there was a good attendance. Even Google was there, with a Drone Zone. Members with children might want to consider this activity next year.

The club members offered two matching games, one with minerals and another with fossils. As always, some of the kids are unexpectedly proficient at this. We also offered literature about the club for both parents and students. Club participants included Gerry Naugle, Char Bourg, Eileen Fitzgerald, and Jeanne Orr.



Jeanne Orr at the STEAM Fest. Photo by Charlotte Bourg

## Rocky Mountain Federation of Mineralogical Societies



On the first page of each newsletter, you may have seen this emblem for the Rocky Mountain Federation of Mineralogical Societies and wondered what this is and why our club is a member.

The purpose of the Rocky Mountain Federation is to have a close association of all clubs in the Society to promote the study of earth sciences, including the lapidary arts, the study of fossils and paleontology, and related crafts. The RMFMS was organized in 1941, and held its first annual convention at the Argonaut Hotel in Denver, Colorado.

The Rocky Mountain Federation has clubs in these states: Arizona (17), Arkansas (1), Colorado (20), Kansas (5), Nebraska (western portion of state) (1), New Mexico (7), Nevada (1), North Dakota (western portion of state) (1), Oklahoma (9), South Dakota (western portion of state) (1), Texas (1), Utah (7) and Wyoming (7).

The RMFMS became one of the original four founders of the American Federation of Mineralogical Societies when it was organized in 1947. The American Federation of Mineralogical Societies is now composed of seven similar regional organizations of gem, mineral, and lapidary societies.

So, why is our club a member of the RMFMS?

- The RMFMS offers insurance to member clubs at a very reasonable cost. Without this opportunity, our club would have to increase its annual dues substantially.
- Each month they issue a newsletter with interesting rockhounding articles and a list of upcoming club shows throughout our region. These newsletters can be accessed at <http://rmfms.org/newsletter>.
- They sponsor the Rockhound of the Year program, where clubs can honor one of their members each year for their contributions to their club.
- As part of the American Federation, clubs can enhance their programs for kids by offering the badge program. Our Jr. Geologists have been participating in the badge program for many years.

Each year, the RMGMS has a show where you can meet rockhounds from around the region. This year's show will be August 2-4 in Prescott, Arizona. Watch future club newsletters for more information about the show.



### Geologic Tour of Southeastern Utah

As mentioned above, the Rocky Mountain Federation issues a monthly newsletter. During the past three months, their newsletters have featured a series by Mike Nelson from the Colorado Springs Mineral Society about the geology of southeastern Utah from Monument Valley to Mexican Hat to Bluff. The articles discuss the geology of many sites in the region and come highly recommended by Gabi Accatino. These are perfect for planning a trip to this area, giving the background to many fantastic geological features you can visit.

Mexican Hat. Credit: Averette at Wikipedia, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=4>

The newsletters with these articles can be accessed at:

<http://rmfms.org/wp-content/uploads/2018-12-Dec-RMFMS-Newsletter.pdf>

<http://rmfms.org/wp-content/uploads/2019-1-Jan-RMFMS-Newsletter.pdf>

<http://rmfms.org/wp-content/uploads/2019-2-Feb-RMFMS-Newsletter.pdf>

## 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).

## Denver Museum of Nature and Science Seeks Input for Geology Topics

James Hagadorn, the Tim & Kathryn Ryan Curator of Geology in the Department of Earth Sciences at the Museum, is part of a team seeking public input about future display changes at the Museum. Here is his request:

Friends:

I am writing to ask you if you would be willing to please take a one-minute survey to help our colleagues at the Denver Museum of Nature & Science figure out what types of geology topics resonate most with our community.

The museum is planning a transformation of its first floor and is looking for topics that it can adapt into new visitor experiences. The museum has begun canvassing different communities at fairs, festivals, and other events, and they want to hear from our community, too! As thanks for participating, the museum is happy to provide free admission tickets to the Museum.

Background about the survey is at: <https://spark.adobe.com/video/aRiWrHLEK4p8T>

The survey is at: <https://www.surveymonkey.com/r/RWN2VSE>

If you have questions, please reach out to James Hagadorn ([jwhagadorn@dmns.org](mailto:jwhagadorn@dmns.org)) or Ellen Kleinheksel Roth ([Ellen.KleinhekselRoth@dmns.org](mailto:Ellen.KleinhekselRoth@dmns.org)).

Thanks for your time and best regards!

James W. Hagadorn, Ph.D.



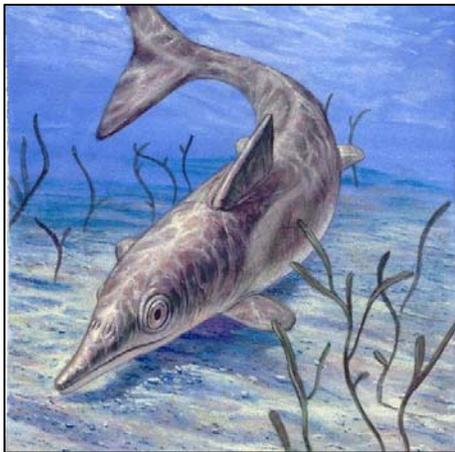


## Get Your Very Own Flatirons Mineral Club Baseball Cap

The club now has baseball caps in a variety of colors for sale, sporting the new Flatirons Mineral Club logo. Buy them at any meeting. The member price is \$10 each, while the non-member price is \$15.

## Fossils in the News

Dennis Gertenbach



An illustration of the ichthyosaur *Stenopterygius*. Credit: Mark Hallett

### Jurassic Ichthyosaur Was Warm-Blooded, Had Blubber and Camouflage

In the Jurassic, marine reptiles inhabited similar habitats as modern marine mammals. A new study reported in *Nature* showed that ichthyosaurs, an ancient marine reptile, not only resembled modern dolphins, but were warm blooded, had insulating blubber, and were similarly camouflaged. These traits were discovered through molecular and microstructural analysis of a *Stenopterygius* ichthyosaur from the Jurassic (180 million years ago).

The study of this fossil from the Holzmaden quarry in Germany was so well preserved that individual cellular layers in its skin could be examined. Researchers identified cell-like microstructures that held pigment organelles within the animal's skin. From this, they could show that the animal was darker above and lighter below, a similar camouflaging pattern as found in modern dolphins, whales, and other marine mammals. They also observed material chemically consistent with vertebrate blubber, which is only found in animals capable of maintaining body temperature, i.e. warm blooded. Previously, ichthyosaurs have been found to give live birth, another trait associated with warm bloodedness.

Information from <https://news.ncsu.edu/2018/12/ichthyosaur-blubber/>

### Dinosaurs Were Thriving before the Asteroid Strike

An ongoing debate among geologists asks the question, were dinosaurs in decline because of climate change during the period before the asteroid strike that wiped them out 66 million years ago? A new study demonstrates that dinosaurs were unaffected by long-term climate changes and flourished before their sudden demise by the asteroid strike.

Previously, researchers used mathematical predictions based on the fossil record to suggest dinosaurs may have already been in decline, with the number and diversity of species falling before the asteroid impact. This new study published in *Nature Communications* indicates that dinosaurs were likely not in decline



Artist's concept of the asteroid strike 66 million years ago.  
Credit: NASA and NCAR/UCAR

before the asteroid strike. The team focused their study on North America, where many Late Cretaceous dinosaurs are preserved, such as *Tyrannosaurus rex* and *Triceratops*. Instead of relying exclusively on the fossil record, the team employed 'ecological niche modelling'. This approach models which environmental conditions, such as temperature and rainfall, each species needs to survive. Using this information, the team then mapped where these conditions occurred across the continent and over time. The team found habitats that could support a range of dinosaur groups were actually more widespread at the end of the Cretaceous, but that these were in areas less likely to preserve fossils, explaining why scientists previously thought that dinosaurs were in decline before the asteroid strike.

Information from <https://www.sciencedaily.com/releases/2019/03/190306081711.htm>



Shark teeth showing more than 50 million years of shark tooth evolution. From earliest to latest (left to right): *Otodus obliquus*, *Carcharocles chubutensis*, and *Carcharocles megalodon*. Credit: Florida Museum photo by Kristen Grace

### The Evolution of Megalodon's Cutting Teeth

Megalodon, the largest shark that ever lived, is known only from its gigantic bladelike teeth, which can be more than 7 inches long. But these teeth took millions of years to evolve into their final form, as shown in study led by Victor Perez, a doctoral student in geology at the Florida Museum of Natural History.

To trace the evolution from these teeth to the megalodon super-shark, Perez and his collaborators carried out a "census of teeth," analyzing 359 fossils with precise location information from the Calvert Cliffs on the western shore of Maryland's Chesapeake Bay. Megalodon's earliest ancestor, *Otodus obliquus*, had three-pronged teeth that would have allowed grasping and tearing fast-moving fish. Teeth of megalodon's intermediate ancestor, *Carcharocles chubutensis*, showed that the three-

pronged tooth had evolved into a large center tooth flanked by mini-teeth known as lateral cusplets. The teeth of *C. chubutensis* were flatter and had serrations, more suitable for cutting. In comparison, the teeth of *Carcharocles megalodon* were wider, flatter, and had lost their cusplets. These teeth were suitable for hunting whales, dolphins, and other marine mammals. Megalodon's teeth suggest its hunting style was likely a single-strike tactic, designed to immobilize its prey and allow it to bleed out.

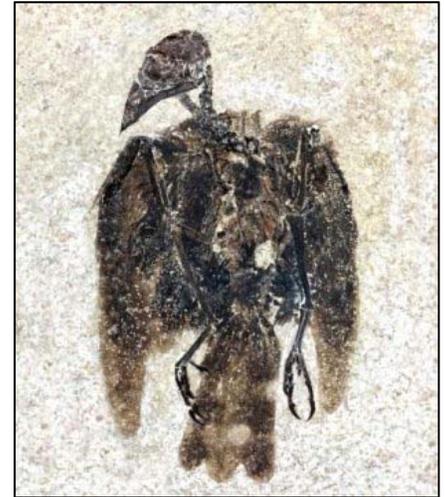
Information from <https://www.sciencedaily.com/releases/2019/03/190304134221.htm>

Note: Victor Perez explains his research in a short video found at <https://youtu.be/Bx3OqGcmob0>.

### Earliest Known Seed-Eating Perching Bird Discovered in Wyoming

Perching birds, or passerines, are the most common birds in the world today and include sparrows, robins, and finches. The passerines make up about 6,500 of the 10,000 bird species alive today. But at one time, they were very rare. In a new paper in *Current Biology*, scientists describe two earliest relatives of the passerines, including a 52-million-year-old fossil with a thick, curved beak for eating seeds.

The paper describes two new recently found fossil bird species, one from Germany that lived 47 million years ago, and another from Wyoming that is 52 million years old. Both of these are from the Early Eocene. The Wyoming bird, *Eofringillirostrum boudreauxi*, is the earliest example of a bird with a finch-like beak, similar to today's sparrows and finches. (*Eofringillirostrum* means "dawn finch beak.") Lance Grande, an author of the paper, remarked that "it is a complete skeleton with the feathers still attached, which is extremely rare in the fossil record of birds."

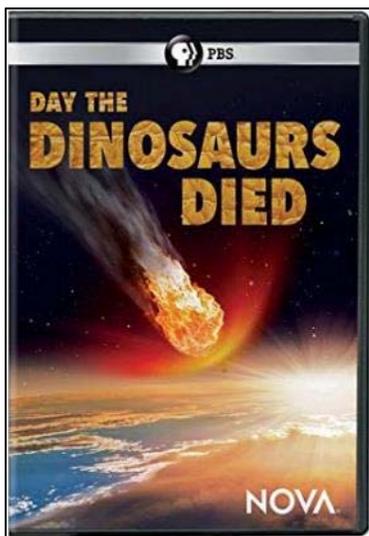


The 52-million-year-old fossil of *Eofringillirostrum boudreauxi*, the earliest known perching bird with a beak for eating seeds. Credit: Lance Grande, Field Museum

Information from <http://www.fieldmuseum.org/about/press/earliest-known-seed-eating-perching-bird-discovered-fossil-lake-wyoming>

*Note: Lance Grande of the Field Museum of Natural History-Chicago is speaking on "The Lost World of Fossil Lake. Snapshots from Deep Time" at the WIPS Symposium on March 23. For more information about the symposium and to register, please see [http://westernpaleo.org/symposiums/2019\\_pages/about-2019.php](http://westernpaleo.org/symposiums/2019_pages/about-2019.php).*

## NOVA Show: Day the Dinosaurs Died



For the most up-to-date thinking of scientists about the demise of the dinosaur and 75% of other life on earth 66 million years ago, Trick Runions recommends this NOVA show. At that time, a seven-mile-wide asteroid collided with Earth 66, triggering a chain of events that coincided with the end of the dinosaurs. But experts have long debated exactly what happened when the asteroid struck and how the giant beasts met their end. Now, scientists have uncovered compelling new clues about the catastrophe—from New Jersey to the wilds of Patagonia—and an international expedition of scientists has drilled into the impact crater off the coast of Mexico, recovering crucial direct evidence of the searing energy and giant tsunami unleashed by the asteroid. Join NOVA as scientists piece together a chillingly precise unfolding of the Earth's biggest cataclysm, moment by moment, and discover how our early mammalian ancestors managed to survive and repopulate the earth.

During the club field trip last fall to Trinidad Lake State Park, club members saw the clay layer in the sediments created from the debris of this asteroid strike.

The video can be watched at <https://www.dailymotion.com/video/x6d8tba>.

Pointing out the iridium-rich layer of the K-T boundary. Photo by Dennis Gertenbach



## Dinosaur-Killing Asteroid Triggered A Mile-High Tsunami across the Globe

In addition to the debris from the asteroid strike that blotted out the sun for years, created a fireball that scorched the Americas, and rained the material that created the clay iridium layer found in southern Colorado and around the globe, the impact also created a tsunami that reached across the globe.

The seven-mile-wide asteroid hit off shore of the modern-day Yucatán Peninsula in shallow seas. The impact created a mile-deep crater, blasting away sediment, part of the Earth's upper crust, and vaporized sea water. The impact crater then refilled with ocean water rushing in, forming secondary waves as they all collided at the center of the crater. Geologists mark this event with the change in the geologic time period from the Cretaceous to the Paleogene because of its significant impact on life and geology around the globe.



The Chicxulub Asteroid Strikes the Earth. Credit: Getty

To understand what the tsunami looked like, researchers modeled the impact, taking into account historical land and ocean topography. They found that a mile-high tsunami likely formed from the impact. To put this into perspective, the largest wave ever recorded in modern times was in May 2018 when a 78-foot-tall wave hit New Zealand. The tsunami created from the asteroid impact was 68 times its size. Imagine a tsunami that was taller than the Empire State Building, Statue of Liberty, Eiffel Tower, Great Pyramid of Giza, and One World Trade Center stacked one on top of the other.

As if the tsunami wasn't enough, the asteroid impact created shock waves in the Earth's crust that traveled across continents and threw up enough rock and dust into the atmosphere to cause friction-induced lightning, start forest fires, cook animals alive, block out the sun for years, and rain sulfuric acid.

The aftermath was that 75% of all species on Earth had died. Yet, life on earth began to rebuild. With the sudden disappearance of three quarters of life on earth, opportunities abounded for the surviving organisms to flourish and branch into new species. Thus, the Age of Mammals began, which eventually led to the evolution of modern humans.

Thanks to Gerry Naugle for submitting the site, <https://www.forbes.com/sites/trevornace/2019/01/08/dinosaur-killing-asteroid-triggered-a-mile-high-tsunami-across-the-globe/#609870dd46ae>, which was used for this article.

## Denver Gem & Mineral Show Mini Report

Year Two thousand nineteen  
Is sure to be keen!  
Join the Show Committee Now  
So you can say "Wow!  
I'm proud that I helped with the Show!"

Yep, that's right! The Show Committee needs your help. There are many jobs on the committee. In alphabetical order, these are: Admissions, Badges, Buildings & Grounds, Club Liaison, Database, Dealers, Door Prizes, Exhibits, Facebook, Fluorescent Room, Grab Bags, Historian, Hospitality Room, Information, Judging, Operation Procedures, Poster, Publicity, Ribbons, Saturday Evening Event, Schools, Security, Set Up, Show Pin, Speakers, Tear Down, Treasurer, Trophies, Volunteers, and Website. That's 40 different areas of responsibility. And each of these is supposed to have an assistant. So that represents a lot of members from the clubs. The committee needs more persons from the clubs to join and help out with these responsibilities. A new committee member does not need to take a major responsibility immediately. He or she may serve as a member at large until they decide which area suits their talents best. Other experienced people on the committee will help you get started in whatever area you decide upon. Talk to your club representative about joining the committee. Tag along with him or her to a meeting. We would warmly welcome you. Look over the list above and see if one of these appeals to you. Each one has a written job description and people to help you get started.



Right now, there are a couple of positions needing to be filled. Since George Daggett has assumed the Show Chair position, his former position of Grab Bag, Poster and Pin sales needs to be filled. George and his assistant, Mike Morian, can help you work into this easier and fun position, mostly selling grab bags to kids for \$1. Two positions that need assistants are Set Up and Tear Down. Set up is assembling the exhibit cases and covering tables with plastic. Tear Down is disassembling the cases and preparation of all show equipment for storage. For more information contact Set Up Chair Linda Burns at [burns.henley@gmail.com](mailto:burns.henley@gmail.com) or 303-263-0391 or Tear Down Chair Dan Wray at [Daniel\\_Wray@comcast.net](mailto:Daniel_Wray@comcast.net) or 303-922-0905. The current Treasurer is finding it necessary to step down and needs to be replaced. The show uses Quick Books software to manage the show's finances. The current Treasurer will assist you to understand and handle the show's finances.

A photography workshop is being planned for this year's show. The workshop would focus on photography of fluorescent minerals and feature experienced photographers Jeff Scovil, Michael Bainbridge, and possibly Brian Walko. It should be very interesting.

Don't forget the Denver Gem & Mineral Show, September 13 - 15, 2019. The theme this year is Minerals of Canada. The location is the Denver Mart, 451 E. 58th Avenue, Denver 80216 (I-25 and 58th Avenue, Exit 215 on I-25). The Show Chair is George Daggett, who can be reached at 303-453-9651 or [geoddaggett@hotmail.com](mailto:geoddaggett@hotmail.com). George is a member of the Denver Gem & Mineral Guild. George would welcome your input regarding the show. Respectfully submitted, Judy Knoshaug, Show Secretary

## 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.

- **Now through March 31:** The Conifer Historical Society hosts a special exhibit on “**Mining in Jefferson County**” at Conifer’s “Little White School House” meeting place at 26951 Barkley Road, Conifer. The exhibit will be open (no admission charge; donations accepted) just one day a week, every Sunday from 11 a.m. to 3 p.m. The exhibit/display are really superb and I'm sure you will enjoy seeing it!

A special program will be presented in conjunction with the exhibit on **Sunday, March 10** at 1:00 p.m. Ed Raines will present **Frontier Mining Methods**. Admission will be \$8/\$10 for members/nonmembers.

For more information about the Historical Society and the exhibit, or to make reservations to attend the lecture, see <https://www.coniferhistoricalsociety.org/events/>.

- **Thursday, March 14,** 7:30 p.m., bimonthly meeting of the **Friends of Mineralogy-Colorado Chapter**, featuring a presentation by **Graham Sutton**. Graham has been a mineral specimen miner, collector, and dealer; he has worked on mining ventures for Collectors Edge, including the Sweet Home mine, and at numerous other localities in the U.S. and worldwide. "It is safe to say that he has collected over half a million mineral specimens in his life so far." Graham received the 2019 American Mineral Heritage Award at Tucson for his field-collecting achievements. The FM meeting will take place at a new location, Berthoud Hall, on the Colorado School of Mines campus, Golden. All are welcome; more details will be posted at <https://friendsofmineralogycolorado.org/> as soon as they are available.
- **Saturday, March 16,** 10 a.m.-3 p.m., **Family Science Day** at Western Museum of Mining & Industry, Colorado Springs. Regular admission rates apply; see [www.wmwi.org](http://www.wmwi.org).
- **Thursday, March 21,** 7:00 p.m., “**A Cook's Tour of Colorado's Glacial Landscape**” by Dr. Vince Matthews. Monthly meeting of the Colorado Scientific Society, Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood; all are welcome. <http://coloscisoc.org/>
- **Friday-Saturday-Sunday, March 22-24, Fort Collins Gem & Mineral Show;** at Thomas M. McKee Building, at The Ranch/Larimer County Fairgrounds, 5280 Arena Circle, Loveland, CO (I-25 exit 259); hours 4-8 Fri., 9-6 Sat., 10-5 Sun. Sponsored by the Fort Collins Rockhounds Club.



- **Saturday-Sunday, Mar. 23-24**, WIPS (Western Interior Paleontological Society) semi-annual Founders Symposium, “**Lagerstätten: Exceptional Preservation, Extraordinary Fossils**”. To be held at Lowry Conference Center, 1061 Akron Way, Denver. Two days of lectures, educational exhibits, displays of fossils, paleo art show and sale with over a dozen artists. See [https://www.westernpaleo.org/symposiums/2019\\_pages/about-2019.php](https://www.westernpaleo.org/symposiums/2019_pages/about-2019.php).

**North Jeffco Gem & Mineral Club  
Silent Auction**

Friday, April 12<sup>th</sup>, 2019  
APEX Community Recreation Center  
6842 Wadsworth Blvd, Arvada, CO 80003

**Setup at 5:30 PM**  
Seller limits on number of items to sell:  
Club Members – No limit  
Non-members – Maximum of 30 items

**Auction Begins 6:45 PM**  
Checkout Begins Immediately After Auction  
No Early Checkout  
Free Parking, Free Admission

♦ jewelry ♦ gems ♦ minerals ♦  
♦ bake sale ♦ crafts ♦  
♦ free refreshments ♦  
♦ public invited ♦

If you need a finished piece of jewelry,  
rough material to fashion yourself,  
a specimen for your collection,  
or an interesting and fun evening,  
this is the place.

Sellers & Buyers Welcome

For more info call Bill Jones 303-503-6288  
Or email [sidewindermin@comcast.net](mailto:sidewindermin@comcast.net)

- **Friday, April 12, North Jeffco Gem, Jewelry, Mineral and Fossil Silent Auction** at the APEX Community Recreation Center, 6842 Wadsworth Blvd, Arvada, CO 80003. Jewelry, gemstones, mineral & fossil specimens, cabochons, craftwork, and rock-craft equipment may be available for sale. Seller limits on number of items to sell: Club Members – No limit; Non-members – Maximum of 30 items. Setup starts at 5:30 pm, sale begins at 6:45 pm, checkout starts about 9:15 pm. No early checkout. Free admission, free parking, and free refreshments will be served. Visitors welcome. Cash or check only. For more information, call Bill Jones at 303-503-6288 or email at [sidewindermin@comcast.net](mailto:sidewindermin@comcast.net)
- **Friday-Saturday-Sunday, April 12-14, Colorado Mineral and Fossil Spring Show**, Crown Plaza Hotel /Convention Center, 15500 E 40th Ave., Denver, Colorado, 10-6 Fri. & Sat., 10-5 Sun., free parking & admission.
- **Sunday, May 19, Friends of Mineralogy, Colorado Chapter, Silent (+Vocal) Auction**. Noon to 4 p.m., Clements Community Center, 1580 Yarrow St., Lakewood CO. All are welcome to attend.
- **Friday-Saturday-Sunday, May 31-June 2, Pikes Peak Gem & Mineral Show**, Norris-Penrose Event Center, 1045 Lower Gold Camp Road, Colorado Springs, CO 80905. Sponsored by the Colorado Springs Mineralogical Society.

# Officers, Directors, and Other Volunteers

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## President

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open

## Facebook Chair

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## Meeting Door Prize Chair

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### Program Chair

open

### Dealer Chair

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## Denver Show Club Table

Dennis Gertenbach, 303-709-8218  
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## A friendly reminder to pay your 2019 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 2019 dues must be received by January 20th, 2019 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 2019 FMC membership card.



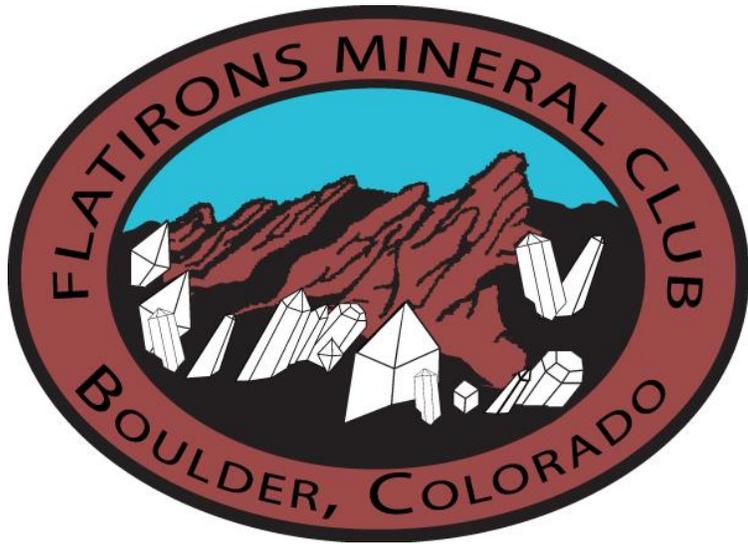
Flatirons Facets  
P.O. Box 3331  
Boulder, CO 80307-3331

## First Class Mail

### *Upcoming Events*

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Thursday, March 14 at 7:00 pm	Club meeting featuring Dana Haushultz on the Fountain Formation. See page 1	Frasier Meadows North Community Room, 350 Ponca Place, Boulder
Wednesday, March 20 at 6:30 pm	Jr. Geologists meeting working on the Earth in Space badge. See page 3	Meadows Branch Library at 4800 Baseline Rd, Boulder
Thursday, April 11 at 7:00 pm.	Silent Auction, see page 2	Left Hand Grange, 195 2nd Avenue, Niwot
Wednesday, April 17 at 6:30 pm	Jr. Geologists meeting continuing work on the Earth in Space Badge. See page 3	Meadows Branch Library at 4800 Baseline Rd, Boulder
Saturday, April 20	Field trip to collect zeolites and other minerals, see page 3	North Table Mountain near Golden, Colorado
Saturday, April 27 at 9:00 am	Jr. Geologists museum tour, see page 4	Denver Museum of Nature and Science
Saturday, May 11	Gold panning field trip, see page 3	Arkansas River outside of Wellsville



# ANNUAL SILENT AUCTION

**Thursday April 11 7:00pm**

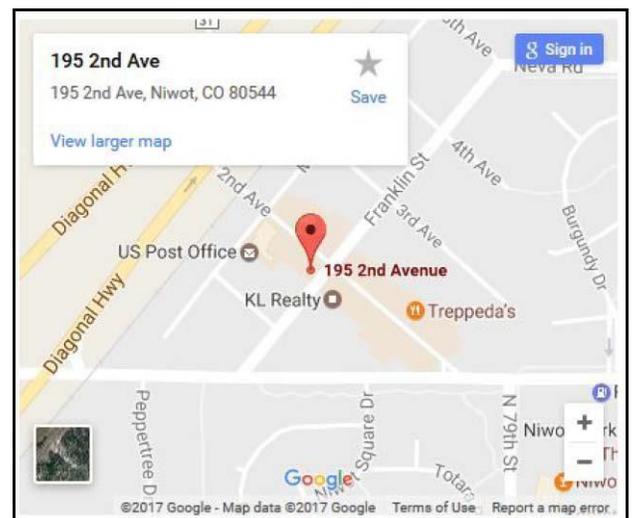
**Minerals Crystals Fossils Lapidary**

Bring items to sell or just come to browse!

**Great Location!**

**Left Hand Grange  
in Niwot**

**195 2nd Ave, Niwot CO 80544**



**Sellers:** Set-up starts at 6:00pm

To get a seller number before the event  
email Eileen at: [elfitz891@hotmail.com](mailto:elfitz891@hotmail.com)

**All sellers MUST use 2017 or newer bid slips**

[flatironsmineralclub.org](http://flatironsmineralclub.org)



