
Littleton Gem and Mineral Club

April 2023 Newsletter



Time and Place: April 21 In-person Meeting

St. Philips Lutheran Church, 7531 S. Kendall Blvd., Littleton, CO 80128

April Program: “Meteorites and Solar Eclipses” by Dan Wray

Speaker Bio: Dan Wray

Although I studied Geology I ended up with a degree in marketing from Metropolitan University. A former Army artillery officer and Vietnam veteran, the Army moved us to Colorado Springs in 1970 from Ohio. I am a member of Colorado Mineralogical Society, Denver Astronomical Society, and the Colorado Meteorite Society. These are just some of the many clubs that I belong to that feed my many interests and hobbies. I always say that one lifetime is not enough for all my interests. I have been a volunteer at the Mines Museum of Earth Science for over 15 years. I got started there working on the meteorite collection and have been able to contribute in many ways to this world class museum. I have been a rock and mineral collector all my life and after joining the Denver Astronomical Society in 1989 followed the logical progression to collecting space rocks. I now have 454 meteorites in my collection, one of which I actually found. I also have many telescopes, some of which I made.

I will be talking about meteorites and how to identify them and then about the upcoming solar eclipses.

President's Letter

In the news recently... big rocks! Specifically, Stonehenge, in Wiltshire, England. The bluestones are composed of dolerite, tuff, rhyolite, or sandstone. The igneous bluestones appear to have originated in the Preseli hills of southwestern Wales, about 140 miles from the monument. The sandstone Altar Stone may have originated in east Wales. But what do these rocks mean? What is the purpose of the monument? It has been thought that it served as a type of calendar. However, a new study, by two scientists who specialize in ancient astronomy, mathematician Giulio Magli of the Polytechnic of Milan and astronomer Juan Antonio Belmonte of the Institute of Astrophysics of the Canary Islands, says that Stonehenge wasn't accurate enough to serve as a solar calendar. They say it served mainly as a memorial to the dead. Either way, it is a stunning monument, and well deserving of a visit, for anyone who enjoys geology, astronomy, or history. If you'd like to learn more:

<https://en.wikipedia.org/wiki/Stonehenge> <https://www.livescience.com/was-stonehengean-ancient-calendar-a-new-study-says-no>

Now to a topic a bit closer to home! Our fearless and tireless Field Trip Chairperson, Jim Hooten, is ramping up planning for summer field trips, and is requesting assistance. Everyone loves our field trips, but they do require some effort to plan and execute. Please consider giving a little bit back to the club and helping with field trips this summer. You absolutely do not need to be an expert to help with some of the trips. Enthusiasm counts for a lot and is much appreciated. And, you never know, you might just find an Odiorne Award winning specimen on your trip. Karma IS a thing, you know! We will be meeting via Zoom on April 12th, at 7:00pm. If you have any trip ideas, or can help with a trip, please join us. For anyone interested in participating, but unable to join the Zoom meeting on the 12th, please call or text Jim (see contact info at the bottom of this newsletter) with your interest and/or comments.

Meeting ID: 835 6207 7091, Passcode: 388401, Link:

<https://us02web.zoom.us/j/83562077091?pwd=UFhuMHEwanhWRnVlQThHVtI4ZUNWQT09>

Thank you, Jim Hooten, for all your hard work in planning and leading our wonderful field trips over the years. I am looking forward to another fabulous summer!

In March, we heard from our own President Elect, Kollin Olsen, about “Tungsten Minerals and Tungsten Mining in Colorado” and drooled over his beautiful specimens. Kollin himself so enjoyed giving his talk, that he didn’t get a photo of his display case. If any of you happened to get one, please consider sharing it with Kollin!

After getting snowed out in February, last week I attended the March meeting of the Mineral Study group. Didn’t I say something similar last month? LOL, such is life in Colorado in the winter. Because I am still such a newbie in the world of gems and minerals, the extracurricular meetings of the Mineral Study group and the Faceters and Cabbers group are especially helpful to me. I’d rather not stand up in front of you all and embarrass myself! This month, the Faceters and Cabbers group did a “smörgåsbord”, and the Mineral Study group studied colors in minerals. Who knew there were so many causes of color in the gems and minerals we love so much? Some minerals have intrinsic color, meaning the color is built in to its chemical formula, and some minerals get their color from inclusions. We saw beautiful examples of both types.

If you can, please join us for the next meetings, at the same place as our regular meetings!

- Faceters and Cabbers group: April 18, 2023, 7:00 pm
- Mineral Study group: April 26, 2023, 7:00 pm

For our April 21st General Meeting, I am looking forward to hearing from Dan Wray about Meteorites and Solar Eclipses. I’ve already got tentative plans for the October 14th, 2023, annular solar eclipse (New Mexico), and the April 8, 2024 total solar eclipse (Texas). I hope you will be inspired by Dan’s talk and make arrangements to travel for one or both of these celestial events, because total eclipses in particular are other-worldly, not-to-be-missed experiences.

Thank you for renewing your LGMC membership. You will continue to receive Highlites and monthly meeting invitations and be eligible to sign up for field trips!

For “Colorful Rock of the Month” this month, I give you Spring-y yellow! One of my niches / mini collections is Beryl. So, these are all from my growing Beryl collection. I gathered them, and others, to show at the recent Mineral Study

meeting, so I had them readily available. Ok, who am I kidding... “readily available” means that I hadn’t put them away yet, and they were sitting on my kitchen counter, taunting me! Hope you enjoy them!

Golden beryl/Heliodor



Photos by Nancy Kimber, except for portrait of Nancy taken by Mark Jacobson

Nancy Kimber, 2023 LGMC President

NKK9960@hotmail.com

(303) 807-8919

Faceters and Cabbers News

The Faceters and Cabbers group will meet April 18th, the third Tuesday, at 7:00pm, in our usual room at the church. We will share our work.

Topic was picked to be anything with the color purple.

If you would like to be added to our Faceters and Cabbers email list for an email reminder, or need directions, let me know at ikleber@att.net.

John Kleber & John Revis

Mineral Study Group

Mineral Study Group meetings will be held on the last Wednesday of the month from September through May starting at 7:00pm. The next meeting is April 26th, at the St. Philips Lutheran Church. We will be using the same meeting room as our Faceters & Cabbers Group.

The March meeting was presented by Richard Parsons, who did a fabulous job discussing color in minerals. For the April meeting topic, we will start introducing the crystal systems.

Remember if we need to cancel due to the weather, I will try to send an email by no later than 5 pm of the day of the meeting. Co-chairs Lesley Sebol and Richard Parsons

Grab Bag News Update



If you have any minerals or sewn grab bags to contribute, bring them to a meeting or contact me, John Kleber, at jkleber@att.net or 303-570-8164, or Lynette Warren at flywithle123@comcast.net.

John Kleber, The Bag Beggar

LGMC FIELD TRIPS (Repeated from February)

IMPORTANT---REQUESTING ASSISTANCE WITH LGMC FIELD TRIPS

I have been organizing the LGMC Field Trips now for approximately 26 years and leading the majority of them myself. I have loved doing this and want to continue doing it in a decreased capacity. A number of factors lead me to ask for more Club involvement for the future. Other Clubs in the Council have a more inclusive participation in planning and leading their trips, and I want to move in that direction also. It will require a much greater participation from LGMC members, but I truly believe that there are sufficient members who continue to enjoy the field trips, and hopefully will be able to step forward to help.

I will still be involved, alongside any others who can help. My main request is for **ALL LGMC members**, especially, but not limited to, those who have been active in attending the Club field trips in the past, to give some serious thought to the Club's future Field Trip activities. Please think of trips that you think would be interesting and fun. Of course, there will still be some of our previous "stand-by" trips that are always fun and/or educational. I want to organize a Zoom Meeting in the next month or two, with what I hope will be a good number of interested Club members. I will want member's input for field trip ideas, especially if you have knowledge of (or direct access to) some new areas. I will ask that Club members be able to organize a trip and hopefully serve as Trip Leader. I currently have a few members who are interested and able to do this, but I would like to have a greater number of regular participants.

I will send out a notice, either in the Newsletter, at the monthly General Meeting, or through a special batch email, informing everyone of when this Meeting will take place. The hope is that, through the Zoom connection, we can discuss some new, and old, trip ideas and actually complete a calendar of dates and locations for a full season of Field Trips. Like I said, I will have made some contacts already for some of the Trips, but I want some new ideas from others. Hopefully, each member can plan on leading one (or more) of the Trips.

This notice is being sent to the full LGMC membership so you all can start thinking of how you can help with this very important aspect of our LGMC membership. Don't be intimidated if you are a new Club member, or if you haven't done this before. It's something that anyone can do, and needs to be done, if we want to continue having a fun and exciting time digging for our favorite treasure---**Minerals** (and don't forget that Fossils are also something that many people would enjoy).

So, watch for upcoming communication regarding this new approach to our LGMC Field Trips. In the meantime, do some serious thinking regarding this important Club activity. I truly do appreciate your help.

Jim Hooten
LGMC Field Trip Coordinator

[Editor's Note: Field trips are extremely important if we want our club to grow and retain the new members.]

ADDITIONAL FIELD TRIP INFORMATION

Jim Hooten still plans on conducting a Zoom meeting on April 12, to get input from LGMC members regarding their desire to volunteer to organize and/or lead a field trip for this season.

Before then, here is a list of suggested field trips for consideration. Some have already been chosen by Club members. Some trips are actually educational in nature, with no actual collecting. These are still great fun.

Please review the list and see if any particular trip(s) looks like one(s) you would be interested in signing up for. Of course, if you know of any other trip(s) that are available, and not listed, and that you could organize and lead, please share your knowledge.

Many thanks in advance. Jim
Hooten jahooten@msn.com
303-548-7412

Partial List of Possible Trips

Honey Bee/Queen Bee (Club Claims)
Devil's Head
Hartsel Barite
Purple Dragon (Red Feather Lakes)
Smoky Hawk (have leader)
Topaz Mountain (have leader)
Magnetite Ridge
Collector's Edge Tour (Educ)
Wolf Creek Pass (have leader)
Two Creeks Barite
State Bridge
Missouri Ridge
Coffee Pot Springs (have leader)
Teller County Tourmaline (have leader)
Littleton Gem and Mineral Club

Cripple Creek Mine Tour (Educ)
Georgetown Train & Mine Tour (Educ w/gold panning)
Lone Pine Peridot
North Table Mountain zeolites (have leader)
Western Utah assorted localities (????)
Dinosaur Ridge Tour (Educ)
Fairburn Agate-Crawford, NE
Colorado School of Mines Museum Tour (Educ)
Tour of Steve Jorgensen's home fossil collection (have leader)

Geology Corner

Zeolite minerals, and Table Mountain zeolites

By Pete Modreski, pmodreski@aol.com; updated April 2023



Zeolites are a group of over 100 different minerals, known for their variety of attractively formed, delicate crystals. All are aluminosilicates which also contain water and combinations of sodium, calcium, potassium, and other elements. The name means *boiling stones* because they readily release water and may fuse and bubble when heated in a flame. The crystal structure of zeolites contains large (on a molecular scale) channels which allow water, ions, and also gases and organic molecules to move in and out and be absorbed or released from the mineral. Both natural and synthetic zeolites are used as ion exchangers to purify water, and to absorb or purify gases.

Most zeolite minerals are white or pastel-colored, but their forms are very diverse. Some of the best-known zeolites include **analcime** (white, trapezohedral [24-sided] crystals); **chabazite** (white to pink rhombohedral crystals); **stilbite** (white or pale pink or yellow, bladed crystals, sometimes in bow-tie shaped sheaves); **heulandite** (white to pink, often "coffin-shaped" crystals with a silky luster); and **natrolite**, **mesolite**, **mordenite**, **scolecite**, and **thomsonite**, all of which can form radiating clusters of white, needle-like to bladed crystals. A few minerals are not technically zeolites but are similar and often occur with them; for example, **apophyllite**, which forms tetragonal (4sided) pyramidal, colorless to green crystals, and **prehnite** which forms green, botryoidal crusts.

Zeolites usually occur in volcanic rocks, and the best-known ones form within vesicles (gas bubbles) in basaltic lavas. The most spectacular worldwide occurrence of zeolites is in the huge volume of “flood basalt” lava flows of the Deccan Plateau (Poona) area of western India. Colorado has two notable occurrences of zeolite minerals: the lava flows of North and South Table Mountain in Golden, and the lavas near Treasure Falls on the west side of Wolf Creek Pass, in the San Juan Mountains. The most common zeolites at the Table Mountains are **analcime**, **chabazite**, and **thomsonite**, whereas **mordenite** is most abundant at Wolf Creek Pass. Some other worldwide areas famous for their zeolite minerals include Iceland; Nova Scotia; Paterson, New Jersey; and the Columbia Plateau of Washington and Oregon. The Table Mountain lava flows are, technically, *shoshonite*, which is slightly more alkali- and silica-rich than basalt and is classed as a potassium-rich basaltic andesite.

Some 27 different minerals are known from the Table Mountain lava flows, of which 15 are zeolite minerals. The zeolites are most abundant on North Table Mountain and are mostly found in the vesicular zone at the top of the lower (earlier) of the two main, mesa-capping lava flows. The only area on North Table Mountain designated by Jefferson County Open Space as open to rock and mineral collecting is the old paving-stone quarry located on the south side of the mountain. Individuals or groups of friends may collect here without special permission; if an organized group is planning a hiking or collecting trip, a General Use Permit (no charge) should be applied for; see

<https://www.jeffco.us/1512/Permits-Reservations> . [An extra note,

one zeolite mineral, not listed among the more common ones but which is particularly abundant at the old paving-stone quarry, is *cowlesite* (pronounced, “*coalsite*”; named after amateur mineralogist John Cowles). It forms compact, solid, light grayish-white radiating masses with a slightly silky luster, and it often completely fills small vesicles there.]

Below are two figures proved by Pete showing (1) the geology of North and South Table Mountain and (2) a cross section of the Golden area.

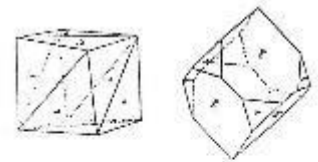


Table Mountain zeolite minerals

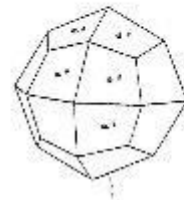
Thomsonite

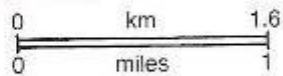
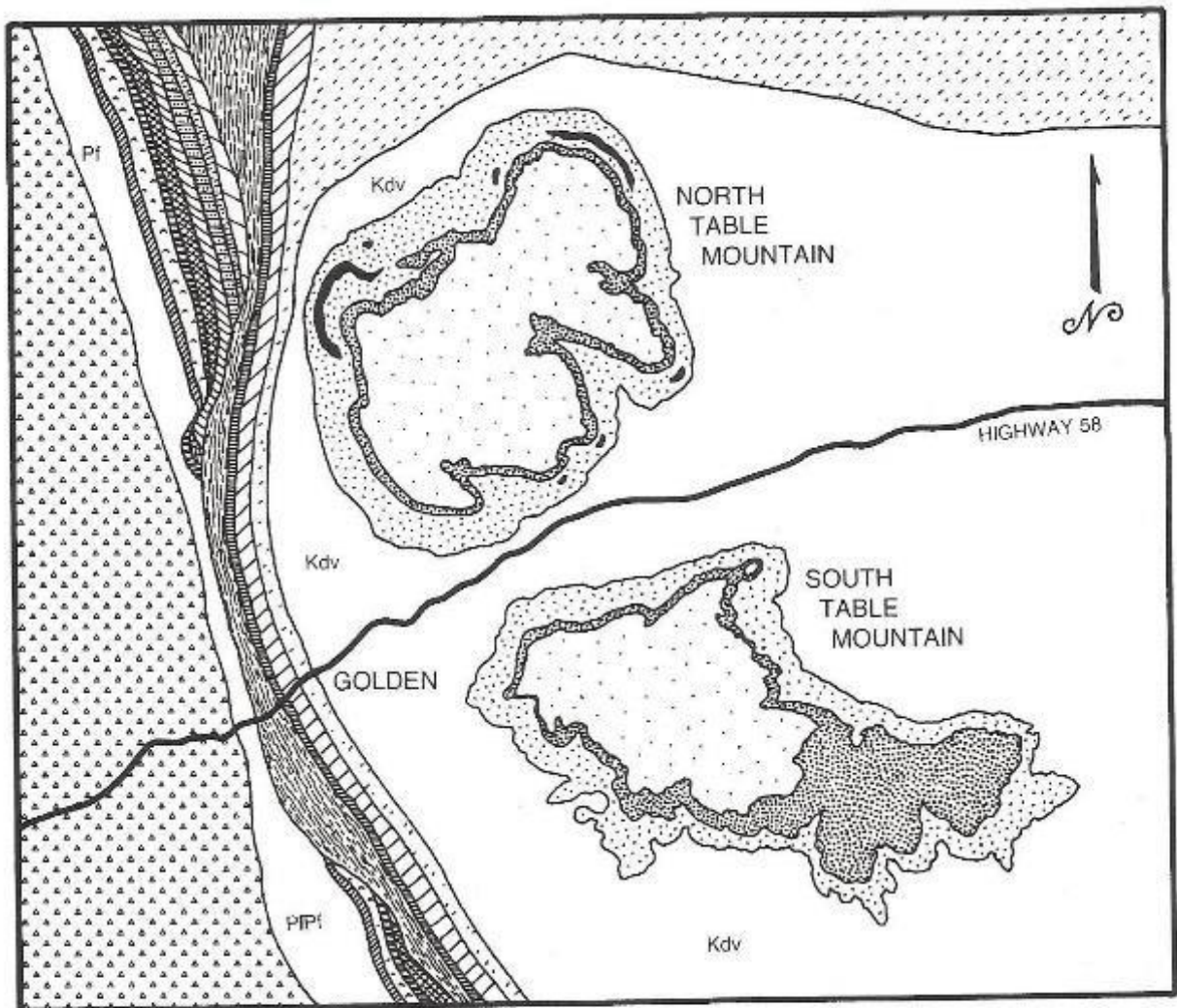


Chabazite



Analcime





- | | |
|---|--|
| Table Mountain Shoshonite, third flow | Niobrara Formation, Fort Hays Limestone Member |
| Table Mountain Shoshonite, second flow | Benton Shale |
| Table Mountain Shoshonite, first flow | Dakota Group |
| Denver Formation (Tertiary) | Morrison Formation |
| Denver Formation (Cretaceous) | Ralston Creek Formation |
| Arapahoe Formation | Lykins Formation |
| Laramie Formation | Lyons Sandstone |
| Fox Hills Sandstone | Fountain Formation |
| Pierre Shale | Precambrian schist and gneiss |
| Niobrara Shale, Smoky Hill Shale Member | |

Figure 4. Areal geology of the Table Mountain locality (adapted from Van Horn, 1957 and 1972, Scott, 1972, and Smith, 1964).

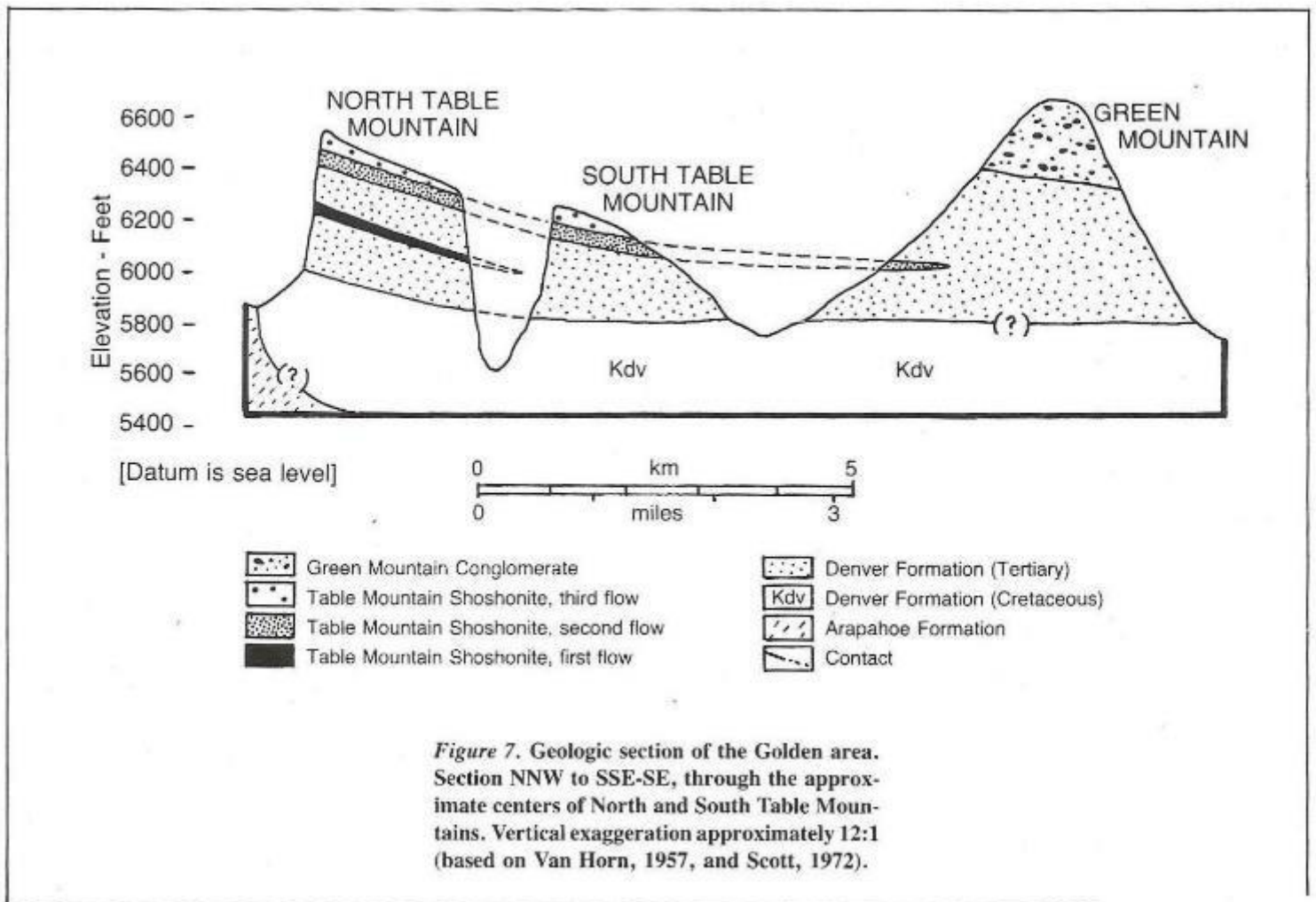


Table Mountain zeolite minerals – references:

- Bartos, Paul J., 2004, Table Mountain zeolites: The Colorado School of Mines perspective. *Rocks & Minerals*, v. 79, no. 4, p. 240-244.
- Drewes, Harald., 2008, Table Mountain shoshonite porphyry lava flows and their vents, Golden, Colorado: U.S. Geological Survey Scientific Investigations Report 2006–5242, 28 p.
- Eckel, Edwin B., 1997, *Minerals of Colorado*, Updated and Revised; Fulcrum Publishing, Golden, CO, 665 p.
- Kile, Daniel E., 2004, Zeolites and associated minerals from the Table Mountains near Golden, Jefferson County, Colorado. *Rocks & Minerals*, vol. 79, no. 4, May/June, p. 218-238.
- Kile, Daniel E. and Modreski, P., 1988, Zeolites and related minerals from the Table Mountain lava flows near Golden, Colorado. *Mineralogical Record*, vol. 19, no. 3, May/June, p. 153-184.

Upcoming LGMC and Earth Science Events

Fri.-Sun., Apr. 7-9, Colorado Mineral and Fossil Spring Show, Crowne Plaza Hotel DIA, 15500 E. 40th Ave., Denver. <https://www.coloradomineralandfossilshows.com>. Free admission; 10-6 Fri. & Sat., 10-5 Sun. **Tues, Apr 18: LGMC Faceters & Cabbers meeting** 7:00 pm, St. Philips Lutheran Church

Fri, Apr 21: LGMC meeting 7:30 pm, St. Philips Lutheran Church

Sat.-Sun., Apr. 22-23, Southern Colorado Gem and Mineral Show, Pathfinder Regional Park & Event Center, Florence, CO. "Earth Day weekend". This is a new gem and mineral show to Colorado, just now being organized. See <https://socorockandmineralshow.com/> or www.facebook.com/socorockshow for more info (forthcoming).

Wed., Apr 26: LGMC Mineral Study Group meeting 7:00 pm, St. Philips Lutheran Church

Sat. May 6, Colorado Mineral Society Silent Auction, at Wheat Ridge United Methodist Church, 7530 W. 38th Ave., 11 a.m. – 4 p.m.; see <http://www.coloradomineralsociety.org/> for details.

Tues., May 16: LGMC Faceters & Cabbers meeting 7:00 pm, St. Philips Lutheran Church

Fri., May 19: LGMC meeting 7:30 pm, St. Philips Lutheran Church

Sat., May 20, 12 noon – 4 p.m., Friends of Mineralogy Silent Auction, Wheat Ridge United Methodist Church, 7530 W. 38th Ave. <https://friendsofmineralogycolorado.org/>

Wed., May 31: LGMC Mineral Study Group meeting 7:00 pm, St. Philips Lutheran Church



Colorado Mineral Society's Silent and Verbal Auction Saturday May 6, 2023

*Minerals, fossils, faceted stones, lapidary equipment and
materials, books, jewelry, and fluorescent minerals*

- Verbal auction at 1:30pm of museum quality specimens donated by supporters
- One or more auction tables reserved for only children to bid on
- Special fluorescent minerals room
- Free parking and easy handicap access
- Limited refreshments so, if needed, bring your lunch
- Cash, Check, and Credit Card will all be accepted at the auction

LOCATION:

**Wheat Ridge United Methodist Church,
7530 W. 38th Ave, Wheat Ridge CO.**

Directions: from Wadsworth head east on 38th to first street (Vance St).
Turn right onto Vance St; parking is behind the building or on Vance St.

Time:

11:00am to 4:30pm

Checkout will begin at 3:00pm

****A special invitation is extended to non-CMS members to participate as sellers and buyers****

Sellers Setup:

Starts at 10:00am (must go through check in desk, so arrive early)

Note for sellers: BID SLIPS MUST BE FILLED OUT PRIOR TO ARRIVING AT THE AUCTION!

Limit of sales to three flats of materials. Sellers can get copies of bidding slips on our club website:

http://www.coloradomineralsociety.org/Silent_Auction_Bid_Slip.pdf

Contact Leslie Osgood, for a bidder number and/or seller letter, preferably by email at
iandlosgood@gmail.com or at 303-986-4488 (leave a message and she will call you back)

General questions about the auction should be directed to Lesley Sebol by email at:
lesleysebol@gmail.com

www.coloradomineralsociety.org



General Club Announcements



Moving? Change of Address, Email or Phone Number?

Please notify **Ian Duncanson** of any changes at idunc@q.com or 303-798-9174. For email address changes, please also email editor.lgmc@gmail.com

Club Vests: Show your club support at the meetings and other events! **Ian Duncanson** has club vests available for sale. Price includes vest, sewed on club patch (on back) and a club pin.

\$18 for small and medium sizes

\$19 for large and X-large sizes

\$20 for XX-large and XXX-large

Sunshine Cards: *Do you know someone who could use some sunshine?* Nobody knows everybody. If you know of a club member or family who is having a health problem or other problem, and who could be encouraged by receiving a thinking-of-you card, please let us know so that we may encourage them. Send a note to our sunshine coordinator and let her know, **Lynette Warren**, flywithle123@comcast.net.

Thanks to everyone who contributed to the newsletter! Don't forget to send in your own field trip reports with photos. Email them to editor.lgmc@gmail.com. Make sure to label each photo with the trip and who is in the photo. If you did not take the photo, add that info also so proper credit can be given. Also send club-related photos to our Club Historian at Gail Tracy at gctracer@gmail.com.

Cheers, Lesley



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LGMC Website

Please check out the new "Member" section of the website! We'll archive Newsletters, share photos, and get details of upcoming field trips. To view the "Member" section, you must register as a member of the website: <https://littletongemandmineralclub.com/register/>

As only LGMC members will have access to this material, we'll be checking your name against the current club roster, so if you haven't yet, reach out to Ian Duncanson to pay your 2023 dues!

P.O. Box 283, Littleton, CO 80160

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

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Cabbers & Faceters Group	<i>John Kleber, John Revis</i>	720-851-8510
Mineral Study Group	<i>Lesley Sebol/Richard Parsons</i>	L: 720-999-1372

Meetings: The Littleton Gem & Mineral Club meets the third Friday of each month, September through May, at the St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128. Doors open at 7:00 p.m. and the meetings begin

at 7:30 p.m. All meetings are open to the public. Club and section meetings may deviate from their regular schedules due to holidays, shows, inclement weather, pandemic, etc.

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

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HighLites

LITTLETON GEM & MINERAL CLUB



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