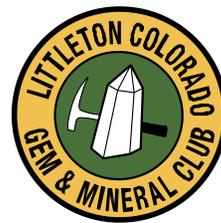

Littleton Gem and Mineral Club

February 2020 Newsletter.



February Program:

Time and Place: February 21, 7:30 PM, St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128.

Speaker: **Bruce Geller**

"A Brief Introduction to Ultraviolet Fluorescence in Minerals and Other Materials." If you have a few fluorescent minerals bring to the meeting and let's look at them under UV light.

Presidents Message

February 2020

It's time to take a break from all the snow shoveling the driveway and get out for some fun! It's not only time for Valentine's Day but also our February Club meeting on Friday, February 21st. Where else will you see fluorescent minerals and meet great people during a wintery February?

Well, I guess that you might be able to find them at the world's largest gem and mineral show held annually in Tucson, Arizona during February. The Tucson Gem & Mineral Society hosts the main event, the Tucson Gem & Mineral Show. Their purpose at the first show in 1946 was to further the knowledge and appreciation for a hobby that was just beginning to grow. There are many other shows in Tucson throughout the month where vendors offer the full range of specimens from bulk rough material to amazing, new minerals that can viewed for the first time. Many of our more experienced members make the pilgrimage to Tucson in search of that special specimen (or 2 or 3, or....) to add to their collection. If you visited any of the Tucson shows this year and found a special piece, bring it to the March meeting and show us. We'd love to see it and hear the stories of your trip!

Our speaker this month is Bruce Geller. He's an annual fixture at our annual auction closely examining ALL the specimens at the tables under his magnifying glasses and flashlight. He will be talking about ultraviolet fluorescent minerals and demonstrate how some common looking rocks look amazing under ultraviolet (UV) light. Bruce's talks are always fun and educational. In fact, if you have fluorescent minerals (fluorite, calcite, opal, etc.) bring a few to the meeting and we'll see how much it "pops" under UV light. It should be an interactive and fun night.

We've had such a fantastic response to the Perfectly Twisted wire wrapping class and we've added a second class on Sunday March 15, 2020; 1 to 5 pm at Lithos Mineral & Fossil Shop in Olde Town Arvada. The Club is subsidizing \$20 of the cost per student so members cost is only \$40. Susan Gardner will be at the meeting to show samples of what you can make and collect payments from attendees. This is the first of many experiences that we plan to offer our members. It's a great way to learn new skills and an opportunity to get to know other members.

Ron Wankner
President LGMC

Selected upcoming LGMC and Earth Science Events

Fri Feb 21 **LGMC February Meeting**, 7:30pm, St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128. Speaker Bruce Geller.

We are still in need of volunteers to bring snacks for upcoming meetings Thank you!

Tue Feb 18th **Faceters and Cabbers** - The Faceters and Cabbers group will meet on Tuesday, February 18th, starting at 7:30 PM at St. Philip Lutheran Church, and we will share and discuss our creations and other items. The discussion topics will be Opal, as the cabbing material and Tourmaline, as the faceting material. All Littleton members and guests are welcome to join us. If you are planning to attend and not on our email list, send me an email at jkleber@att.net for any last minute updates.

Grab Bag News Update

If anyone has any grab bag stuff; either rocks, bagged specimens, or left-over supplies, bring them to the February club meeting. I'll also have specimens anyone can pick up to bag over this winter.

Thanks for a recent donation of specimens from Nancy Kimber and Chauncey Walden.
John Kleber
The Bag Beggar



Calendar of Coming Earth Science Events!

Here is a list of upcoming earth science-related events and activities for coming months.

Sun, Feb. 16, noonish, at the monthly FSS (Florissant Scientific Society) meeting, Jay Temple (geologist) and Jennifer Heiny (Garden of the Gods Visitors Center) will give a presentation “**Behind the Scenes at Garden of the Gods**”, followed perhaps by a short field trip. Meeting place and exact time TBD. All are welcome to attend—the FSS has no formal membership, other than an email list of persons interested in geology. Contact Beth Simmons, cloverknoll@comcast.net, for details or to be put on the FSS mailing list.

Tues., Feb. 18, 10:30-11:30 a.m., USGS Rocky Mountain Science Seminar, **Global metal resources; land of plenty or are we running out?** Dr. Simon Jowitt, University of Nevada, Las Vegas. Building 25 auditorium, Denver Federal Center, Lakewood CO.

Tues., Feb. 18, 3:00 p.m., Denver Museum of Nature and Science M. Ray Thomasson Earth Sciences Colloquium, **Last gasp of the Cretaceous: Insights from North Dakota**, Clint Boyd (North Dakota Geological Survey). The DMNS Earth Sciences Department has named its 2020 Colloquium series in honor M. Ray Thomasson, a longtime Earth Sciences volunteer at the museum. Link to the series schedule for the whole year:

<https://sites.google.com/view/dmnsdes2020colloquiumschedule/home>

Thurs., Feb. 20, 7:00 p.m., **Petrologic evolution of Platoro magmatic system after the eruption of the Chiquito Peak Tuff, San Juan Volcanic Locust, Colorado**, by Amy Gilmer, US Geological Survey.

Monthly meeting of the Colorado Scientific Society, Berthoud Hall Room 241, Colorado School of Mines campus, Golden; all are welcome; social time & refreshments at 6:30, meeting at 7:00. See an abstract (and a map) on the Sci Soc website, <https://coloscisoc.org/>.

Fri.-Sat.-Sun., Feb. 28-Mar. 1, Denver Gem & Mineral Guild, Jewelry, Gem, and Mineral Show, Jefferson County Fair Grounds, 15200 W. 6th Ave., Golden, CO. Free parking & free admission; hours 10-6 Fri. & Sat., 10-5 Sun.

Peter J. Modreski

Thank you once again to Pete Modreski for sending us all the upcoming science events!

Geology Corner

False Forms

You can't always tell a book by its cover or mineral by its shape. Most people know that minerals can replace organic material while preserving the organic structure (such as quartz reserving wood). One mineral can also replace another mineral, preserving the outer form of the original mineral. Such replacements are called pseudomorphs (literally, "false forms"). These replacements indicate changes in the physical and chemical environment during a rock's history, hence tell an interesting story about the specimen.

When describing or labeling pseudomorphs one mentions both minerals, saying for example "malachite after (or replacing) azurite."

In some pseudomorphs there are no chemicals in common between the minerals involved. An example is a sample I found near Hazel Green, Wisconsin having galena (PbS) replacing calcite (CaCO₃). The galena which ordinarily forms cubes, had instead the outer shape of a calcite rhombohedron. How could such a change occur? One possibility is that fluids dissolved away the original calcite, leaving a rhombohedron-shaped hole in the rock. This hole was filled by galena precipitated from later fluids.

In many pseudomorphs the two minerals have some chemicals in common. The replacement represents a gain or loss of some of the chemicals. A common case is when pyrite (FeS₂) or marcasite (FeS₂) are replaced by goethite (HFeO₂). This replacement occurs readily when the sulfides encounter oxygen and water near the earth's surface. It is, in effect, rusting. The exact shapes and even the striations on the pyrite or marcasite crystals are often preserved. The tarnish that forms on many minerals is the starting phase of such reactions. Probably the most beautiful pseudomorphs are those formed by the replacement of rich blue azurite (Cu₃(CO₃)₂(OH)₂) by bright green malachite (Cu₂(CO₃)₂(OH)₂). This is a rather fast reaction. Azurite was often used as the base of blue pigment in paints. One can recognize paintings in which this was done because they now show green, rather than blue skies. China clay after feldspar, chlorite after garnets and gypsum after anhydrite are other common examples of these sorts of pseudomorphs.

Finally in some pseudomorphs, both minerals contain exactly the same chemicals but have different internal crystalline structures. A good example is calcite (CaCO₃) after aragonite (CaCO₃). Aragonite forms under a rather restricted range of conditions. Once formed, it inverts slowly but progressively to calcite. Many specimens sold as aragonite are really calcite. One can tell by looking for calcite's distinctive rhombohedral cleavage on any broken edges of the sample. Quartz also changes from a high temperature (the mineral high quartz) to a low temperature structure (the mineral low or common quartz). This change occurs virtually instantly at 573 C at 1 atmosphere pressure. This internal change introduces a lot of internal flaws (called transformation twins or Dauphine twins). Quartz that is being grown synthetically for use in watches or radios must not experience temperatures over 573 C because the flaws that would result as it cooled down would impair its use as an oscillator.

Pseudomorphs thus tell interesting stories about minerals, and are a lot more common than people think. In fact, while driving around a few days ago, I spotted a sample of rust pseudomorphs after a Chevrolet.

- Dr. Bill Cordua, University of Wisconsin- River Falls



Denver Gem & Mineral Show Mini Report February 2020

The Denver Gem & Mineral Show will be an exciting show this year (course in my opinion, it is always exciting). The show dates are September 18 - 20, 2020 and the theme is Fluorite. The show venue is the usual Denver Mart, 451 E. 58th Avenue. The Show Chair is George Daggett, who can be reached at geoddaggett@hotmail.com or 303-453-9651. George is always open to conversing with club members regarding 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 Show Committee is the group of dedicated volunteer club members who plan and operate the show. As with any volunteer group, the committee is in need of some new folks to assist with the show. The mini reports frequently focus on the need for new volunteer members because it is so important and without them the show cannot go on. So this report will again inform you all about the needs for the committee. An Assistant Treasurer is needed for Treasurer Debbie Baldwin (debaldwin.geo@gmail.com or 303-717-1518). Debbie is an easy person to work with and she will train you for this position. Most of the work occurs at show time in September. An assistant is needed for Dealer Chair, Regina Aumente (raumente@aol.com or 505-604-9585). Regina has been Dealer Chair for many years and will help the new person to learn the job. Another position needing an assistant is Schools. The current chair Judy Knoshaug (jrknoshaug@comcast.net or 303-423-2923) may retire from this position in a couple years plus is converting to a paperless process as much as possible. It would be nice to have a computer whiz to help with the conversion. Security Chair Amber Brenzikofer (amberbrenzikofer@gmail.com or 720-480-5234) also needs an assistant.

Many of your club members are already on the Show Committee and you surely know them. Here are some of them: Dealers - Regina Aumente; Treasurer - Debbie Baldwin; Security - Amber Brenzikofer; Speakers & Exhibits - Larry Havens, Dale Gann and Dave Bunk; Club Liaison - Ron Knoshaug; Set Up - Linda Burns and Barb Melby; Volunteers - Anita Colin; Show Chair - George Daggett; Admissions - Kathy Honda and Angela Green Garcia; Historian - Bob Johnson and Mark Jacobson; Schools - Judy Knoshaug; Hospitality - Brenda and Dan Wray; Fluorescent Room - Gerry Naugle and Conrad North; Trophies & Saturday Evening - Nick North; Show Pin - Lesley Sebol; Door Prizes - Eva Siemonsma; Operations - Ron Snelling; Publicity and Program - Gloria Staebler; Grab Bags - Joe Walkowich; Public Sector - Dan Zellner; International Room - Sandy and Chauncey Walden; Tear Down - Dan Wray and Bob Landgraf; Scout Liaison - Ryan White; WIPS representative - Nancy Kimber; Littleton representative - Lynette Warren.

So pick out someone you know and talk to them about the Show and the Show Committee. We all belong to these clubs because we are so smitten with the gem, mineral and fossil hobbies. The show is the most fabulous local event where you can fully engage in your passion. You don't have to travel out of state nor spend a lot of money to enjoy the show. If you volunteer, you get in free. So do something for yourself. You will meet new fellow hobbyists and learn so much.

Respectfully submitted, Judy Knoshaug

The Show Committee meets the first Tuesday of every month except February, July and December at 7 pm at the Colorado School of Mines Geology Museum conference room opposite the museum entrance. Hope to see you there!

Respectfully submitted, Judy Knoshaug, Show Secretary

Field Trip News

Friday, May 1 - Tuesday, May 5, 2020. Joint Field Trip to the Thomas Range (near Delta, Utah) with RAMS Club and Lake George Club. Trip Leaders: Chris Rayburn (RAMS); Dave Alexander (Lake George G&MC); and Jim Hooten (LGMC).

The LGMC will be joining 2 other Clubs on a 3-day dig in western Utah. The schedule calls for collecting at **Searle Canyon Mine, the Solar Wind Mine, and the Maynard Mine**. The order for collecting at the 3 mines is to be determined later. Travel to the area will be on Friday, May 1st; and travel back to Denver will be on Tuesday, May 5th.

Searle Canyon will allow a unique opportunity to collect a very rare and valuable gemstone known as **Red Beryl** (also referred to as red emerald). Red Beryl is much rarer than diamonds. The working mine is world famous and you will have a chance to find your own gems—**Red Beryl, Topaz, Bixbyite, Amethyst and more**.

The **Solar Wind Mine** will provide an opportunity to collect **Bixbyite, Pink Topaz, Pseudobrookite, Amethyst and more**. As with all of the mines, you get to keep everything you find, at no extra charge—only the standard dig fee. You dig and screen you own rock. You should bring your own tools for all 3 locations (Screens, Rock Hammers, Chisels and Screwdrivers).

The **Maynard Mine** will allow you to dig for world class **Topaz** specimens, unmatched for their clarity and color (“root beer”). The Maynard is also the type locality for Bixbyite and Red Beryl, found in the 1800’s by Maynard Bixby, for which the Mine, and the mineral, are named.

The claim owners have set up a private payment portal for all participants. This will provide information on the 3 claims, costs, and payment options. Here is the link: <https://gem.tours/product/coloradodig/>

The required password is denver (all lower case).

You can pay with PayPal, credit card, check, or cash. You can pay ahead using the above link, or you can pay “on-site” (but only by using either cash or check, cash preferred). If you pay in advance and have a last-minute conflict that keeps you from attending, the claim owners allow cancellation with full refund within 72 hours of the trip. Inside of 72 hours they will work with you to find a later date for a visit.

COST: If you participate in collecting at all 3 localities, the cost is expected to be \$40 per claim per person, or \$120 per person for all 3 claims).

The primary trip leader organizing this adventure is **Chris Rayburn (RAMS)**. Chris has set a **RSVP DATE of APRIL 17** by which time he would like all interested individuals to contact either him directly, or you can contact the representatives from the other participating Clubs. These contact emails are:

Chris Rayburn (RAMS): crayburn319@gmail.com

Dave Alexander (Lake George): dave@davealex.com

Jim Hooten (LGMC): jahooten@msn.com

This date of 4/17 was set by Chris to provide the claim owners (and the organizers of the trip) with plenty of advance notice on the number of participants. From the owner’s perspective, people are welcome to join right up until the date of the trip. It is best, however, if those who are interested in attending would please contact one of the trip leaders with your name and the number of participants in your group prior to 4/17/2020.

Finally, the owners of the claims will be sending Chris information on lodging options, including good camping sites near the three collecting areas, as well as motels in and around Delta, UT. As soon as Chris receives this information, it will be made available to those who have RSVP’d. It will be easier to share lodging information with confirmed participants, rather than trying to incorporate it into the initial communications at this time.

Official MEETING TIME AND PLACE will also be made known to confirmed participants.

Hope you can make it. Sounds like a FUN ADVENTURE!

More Field Trip News

Saturday, May 9, 2020, Trip to Blanchard Mine in Bingham, NM. Allow for travel there and back on Friday, May 8th and Sunday, May 10th. Invitation from mine owner, Ray DeMark. This is a make-up trip from the same time last year. That trip was cancelled. Collect fluorite, barite, galena, etc. Watch for more details in next month's Newsletter, or in a special Club email sent to Club members. Email Jim Hooten (jahooten@msn.com) if you wish to attend.

Shout out!

- Thank you to Dave Bunk Minerals for the donation of petrified wood, capping slabs and rough material.
- Thank you to Bob and Kate Chavez for donating Mineralogical Record Magazines for our meeting Door Prizes.
- Thank you to Nancy Kimber for bringing fossil specimens to the January meeting for our Jr. Rockhounds and members.



Club Announcements

Welcome new members! Brittany and Danny McRostie, Alec Rodriguez, Art and Vickie Weeast

Moving? Change of Address, Email or Phone Number? Ready to go paperless? Please notify **Ian Duncanson** of any changes at idunc@q.com or 303-798-9174.

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



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.

Club Membership Dues

The annual membership dues are \$20.00 per family or individual per year and are due in January each year. **Ian Duncanson** will have a table setup at the Monthly meeting to renew membership dues or you can mail them in to LGMC P.O. Box 283, Littleton, CO 80123

LGMC dues for 2020

Please bring the following form to the next meeting with your \$20 check:

Name(s) _____

Dues payment (\$20) _____ Renewal

Email address: _____



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Thanks to everyone who contributed to the newsletter! ~Tammy

JEWELRY, GEM & MINERAL SHOW

Gems **Fossils**
Books **Geodes**
Displays **Jewelry**
Minerals **Crystals**
Sculptures **Activities for kids**
DEMOS: **DEALERS:**
Flint Knapping Over 20 Sellers
Wire Wrapping
Fluorescence
Polishing
Faceting

Free Admission!

February 28 – March 1, 2020
Hours: 10-6 Friday & Saturday 10-5 Sunday
JEFFERSON COUNTY FAIRGROUNDS
15200 W. 6th Ave. – (W. 6th 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
Photos: Robert Johnson

*Rocky Mountain Federation of Mineralogical Societies convention
&
Wyoming State Mineral & Gem Society show*

Gem & Mineral Show 2020



***ROCK & ROLL WITH
WYOMING ROCKS***

Hosted by the Sublette County Rock Hounds

June 19th, 20th, & 21st

at the Sublette County Fairgrounds
10937 Hwy 189, Big Piney, Wyoming

Friday & Saturday 9-5, Sunday 9-4

*Dealers, lectures, demonstrators, exhibits, field trips, Mr. Bones, Fossil
Butte National Monument walking fish fossil, fluorescent mineral
display, kids' activities, food concession & more!*

Admission: \$2.00 adults, kids free



and a funding contribution made by Pinedale Travel & Tourism Commission www.VisitPinedale.org

Contact: jimgray@wyoming.com

☞ **2020 Board of Trustees** ☞

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Trustee (2 year term 2018 & 2020)	<i>Dan Lovitt</i>	303-791-3112

☞ **Chairpersons & Appointed Officers** ☞

Sunshine Chairperson	<i>Lynette Warren</i>	303-956-4634
Refreshments	<i>Anne Jenkins</i>	303-730-7696
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Show Committee Representative	<i>Lynette Warren</i>	303-956-4634
RMFMS & AFMS Representative	<i>Larry Havens</i>	303-757-6577
Denver Council Representative	<i>Nick North</i>	303-840-1177
Cabbers & Faceters Group	<i>John Revis</i>	720-569-6685
“ “	<i>John Kleber</i>	720-851-8510
Mineral Study Group	<i>Bob Zartman & Nick North</i>	303-973-0405

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, 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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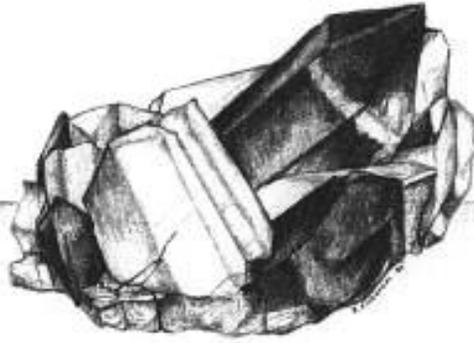
****The deadline for submissions is the 1st Friday of each month.** Please send your material by email to jacobstammy80@gmail.com.

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HighLites

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