
Littleton Gem and Mineral Club

March 2019 Newsletter.



LGMC March Meeting! Will be Friday, March 15th, at 7:30PM.

Guest Speaker Phil Persson of Collector's Edge

Letter from the President

March is an exciting month! Mardi Gras, St. Patrick's Day, the 1st day of Spring....and our first "Introduction to Cabbing and Faceting Class" of 2019! The first of 3 sessions was held last weekend. There was a lot of energy (as well as, grinding and polishing sounds) in the air. It was fun to watch our members exchanging ideas, concentrating on their work, asking questions and helping each other. Thanks to Keith Sheel for sharing his knowledge, wisdom, equipment and humor for this class.

Our founders organized LGMC to build a club where members assisted each other in the enjoyment, of finding, procuring, collecting, processing, identifying, exchanging and displaying gems, minerals, fossils and jewelry as a hobby. The cabbing and faceting class is just one program, along with our field trips, mineral study group and cabbing & faceting group that supports our mission. One of my key roles is to help ensure that we are serving the needs of our members, as well as, to make sure we emphasize the "enjoyment" part of our mission.

During the coming year, I will be seeking your input as to the programs and activities that interest you. My goal is to offer several classes or programs that utilize our large base of seasoned, veteran members, like Keith, to teach newer members who are interested in particular topics. As I've mentioned before, I originally joined LGMC for the field trips but in a short time I was learning about mineral cleaning techniques, making cabochons, faceting gemstones, silversmithing, and volunteering for the Denver Gem & Mineral Show to learn about mineral display presentation. The main reason that I keep taking classes, volunteering and hanging around these seasoned rockhounds is because they have interesting stories (some are amazing) and are fun to be around. Thanks to all those veterans who spent time with me at field trips, classes, and meetings or just hanging out at a burger barn after a hard day of digging.

If you're willing to share your experience, knowledge or positive energy with the next generation of rockhounds let me know and we'll get something going!

Ron Wankner

President LGMC

Attention Club Members:

The Denver Gem and Mineral Show will be coming up soon this fall. The dates are September 13-15, 2019, located at the Denver Merchandise Mart, 451 E. 58th Ave., (exit 215 on I-25).

The show is run by volunteers and it takes lots of volunteers to put on the show. There are many easy jobs available and if you work at least 4 hours, your admission into the show is free on all three days. Below is a list of volunteer opportunities and a description of the jobs.

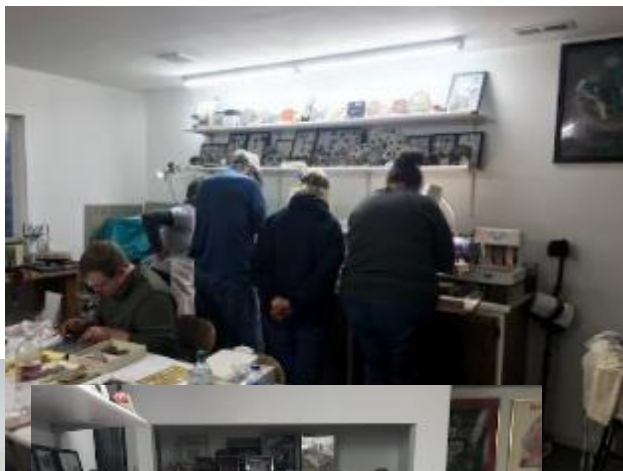
We will be sending around a sign-up sheet at the meetings through May. The sign-up sheets will be forwarded onto the chair person in the fall. The chair person will get in touch with you as we get closer to the show date. For more information, please contact the chair person in charge of that area of interest to you. Many of you are new members to the club, this is an excellent opportunity to see, learn, and become part of the show.

Lynette Warren, Club Rep.

LGMC Faceters and Cabbers Beginners Class

Six members got to learn hands-on how to shape and polish stones. Classes are free for club members, first reserved. March classes are booked. Be on the lookout for other classes soon!

Thank you to Keith and Maxine Sheel for opening up your home and sharing your knowledge and equipment!





Selected upcoming LGMC and Earth Science Events

Fri March 15th **LGMC March Meeting**, 7:30pm – guest speaker will be Phil Persson of Collector's Edge

March refreshments – Carol Nielson Alt.

We are still in need of volunteers to bring snacks for upcoming meetings, please sign up at the welcome table at the March meeting. Thank you!

Tue March 19th Faceters and Cabbers group will meet on Tuesday, March 19th, at 7:30PM at Columbine Hills Church. We will discuss the display case which was set up at the January meeting and other items. 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.

Pebble Pups

We have several families interested in starting a Pebble Pups group. If your family is also interested, send an email to Ron Wankner at rwankner@msn.com.



LGMC Summary Minutes, Board Meeting

LGMC Summary Minutes Board Meeting, February 18, 2019
Location: Columbine Hills Church

Called to order at 7:05 pm by President Ron Wankner.

In Attendance: Ron Wankner, Larry Havens, Ian Duncanson, Lynette Warren, Dan Lovitt, Nicole Bolger (Facebook) and Kollin Olsen.

Minutes of the January meeting were approved as published.

Treasurer's Report: Lesley emailed the report for the financial activity for the period 1/1/19 to 1/31/19. Income was from dues, a mini-auction and sale of a vest. Expenditures included an auction seller's proceeds, web site domain charge, annual POB fee, picnic reservation, refreshment expenses and a speaker's honorarium.

A question: "Should we poll the membership to see if members favor the continued use of the party favors (table centerpieces)?" posed at the last meeting was not revisited.

Motion to accept treasurer's report by Wankner; second by Olsen; motion carried.

Reminder: Any club member may ask the Secretary to see the treasurer's report at any regular club meeting.

Membership: Ian reported no new applications. He mentioned one new member's application that included a full page letter discussing her interests and intent to participate to the full. Ron noted that a little more than ¼ of the membership had paid their dues in January.

Old Business: Bank account signatures status is still pending.

Review still needed of checking account options to avoid requirement for a \$10K minimum.

Ron received a full page description of the RMFMS General Liability Insurance Plan to which we Subscribe. (Sheet entered as an exhibit into these minutes.)

New Business: Ron reported on the status of the New Meeting Location Search. He presented a list of 16 potential sites he has attempted to contact with inquiries. To date 8 have replied. Ron intends to visit all sites that may meet our needs for space and price range. Other members of the Board commented on other locations and reacted to several of those listed by Ron. Discussion on this issue was extensive. When he narrows down the list, he proposed that a small sub-committee of the Board make follow-up visits. (List entered as an exhibit into these minutes.)

Ron noted that the club should generate an "Accident and Liability Release Form".

Programs: March: Phil Persson of Collector's Edge; April to be determined.

Facebook: Nicole discussed what she has been doing with the club's Face Book page. The Board thanked her for her excellent content and effort. She reported on some of the numbers regarding viewership and asked for suggestions for content. She was encouraged to keep the light, colorful and entertaining elements she has featured to date.

Website – Kollin presented a full page of observations regarding the website, including a current overview (reaching the conclusion that a full overhaul/redesign and modernization was required); his proposed vision for the site with numerous content bullets, and finishing with areas of concern such as privacy issues, and members only content. (List entered as an exhibit into these minutes.) His suggested time table for updating the website is:

- March Board meeting – have website design ready for board review, including page tabs and layouts.
- April Board meeting – have the final design of the site complete and ready for Beta testing.
- May general meeting (Founders' Day) – Launch the new website.

Ron cautioned Kollin to pace himself and set achievable goals and content (or better words to that effect). Kollin needs to resolve a problem with access to the site. Ron will assist with this as needed.

Show Committee – Lynette Warren (our rep. to the show comm,) noted that Nancy Kimber wanted to step down from the job of finding workers for the club booth at the show, and so we need to replace her.

Faceters/Cabbers: 3rd Tuesday of every month at the church.

Mineral Study Group: No meeting in February

Next Board Meeting: 3/18/19 at the church

Meeting adjourned 8:50 pm.

Respectfully submitted,
Larry Havens, Secretary

How Amethyst Cathedrals Form

One of my fondest memories of the Tucson Gem and Mineral Show is coming upon a parking lot full of enormous amethyst geodes ("cathedrals") 6 feet or more high, resting partly in the sawdust of their packing crates. The bulbous to tubular geodes were big enough for an adult to sit in, and lined with deep purple gemmy amethyst, sparking in the Arizona sunlight. All for sale! How do such wonders form?

These excellent geodes come from a region along the Brazil-Uruguay border. The genesis of deposits on the Brazil side of the border has recently been extensively researched by an international team of geochemists lead by H. Albert Gilg of Technische University Munchen in Germany (Gilg, et. al., 2003). The geodes are mined from several lava flows belonging to the Parana Continental Flood Basalt Province. This was one of the largest outpourings of basalt lava known. An estimated 800,000 cubic kilometers of lava extruded over an 11 million year time span. For comparison, this would be enough to cover Minnesota with a pile of basalt lava over 2 miles high. The lava outburst occurred as part of the opening of the South Atlantic Ocean during Cretaceous time about 130 million years ago. Of all these flows, however, only a few are known to host amethyst cathedral geodes.



Gilg et al. proposed a 2-stage model for their formation. In the first stage the large hollows form. This was caused as volcanic gases were released from certain lavas as they cooled. Not every lava has enough dissolved gas to form such big openings. As gas bubbles emerged from the congealing lava (much as bubbles emerge when beer or soda pop is poured) they coalesced as they rose. The lava was cooling fast too, and soon became so thick and sticky that bubbles quite rising and were trapped. The bulbous to tubular shapes thus point towards the top of the flow, a fact easily seen when the geodes are in place in the mines. These cavities, though, were empty of crystals.

The second stage was the formation of the amethyst, plus celadonite, calcite and gypsum fillings. An important clue to this event is the presence of small gas and liquid bubbles (called fluid inclusions) trapped within these minerals. These are samples of the mineral-forming liquids caught as the crystals grew. Fluid inclusions are treasure troves of information when studied with sophisticated instruments. Analyses of the fluid inclusions in the amethyst, calcite and gypsum show them to be filled with slightly salty water. This water had a temperature of no more than 100 degrees C, and possible less than 50 degrees C, during mineral formation. These cannot be fluids related to the magma that formed the lavas.

What was the source of these fluids? An amazing story unfolds from the radiometric dating of the minerals. The basalts formed about 130 million years ago, but the green celadonite, which makes up the rinds of the geodes, formed about 70 million years ago. For 60 million years these enormous cavities sat empty of crystals. Trace element data from the fluid inclusions gives another important clue to the source of the mineral-forming fluid. Below the lavas is a large aquifer (the Botucatu aquifer) filled with ground water that closely resembles the fluid inclusion liquids. Uplift and tilting of the area about 70 million years ago would force water out of the aquifer into the porous areas of the overlying lava. In the lava flow these waters would have found volcanic glass. Glass breaks down over geologic time and makes silica and other chemicals available in a form that is readily soluble in water soaking through the rocks. The water carried these chemicals into the cavities, where the amethyst and other minerals grew due to cooling and pressure release.

The special combination of geologic circumstances, unfolding over millions of years, is not often duplicated. Understanding the process gives geologist tools to prospect more efficiently for these wonders.

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

Reference:

Gilg, H. et. al, 2003, "Genesis of amethyst geodes in basaltic rocks of the Serra Geral Formation (Ametista do Sul, Rio Grande do Sul, Brazil): a fluid inclusion, REE, oxygen, carbon, and Sr isotope study on basalt, quartz and calcite" Mineralium Deposita vol. 38, p. 1009-1025.

Upcoming Geology Events:

Calendar of Coming Events, 2019

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. Two special programs will be presented in conjunction with the exhibit; admission to each program will be \$8/\$10 for members/nonmembers:

Sun. Mar. 10, 1:00 p.m., Frontier mining methods, by Ed Raines

In addition, there will be a special “**Bring your favorite rocks and minerals**” (and a School of Mines geology student will identify them) day.

Thurs., Mar. 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.

Fri.-Sat.-Sun., Mar. 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 Rock hounds Club.

Sat.-Sun., 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. **Colo. Sci. Soc. will have a display table at this Symposium—we are looking for CSS members to be at the table and talk to people!** (There is a registration fee to attend the symposium—none to just see the exhibit hall and/or to help staff the CSS table. Please contact one of the CSS officers, if you are interested in helping!) For full information on the Symposium, see https://www.westernpaleo.org/symposiums/2019_pages/about-2019.php .

Apr. 2-11, geologist Lew Kleinhans is leading a 9-Day Grand Canyon Geology float trip from April 2-11 which has between 5 and 10 spaces remaining. This is scheduled at a time few get to float the river and generally is more attractive to the more adventurous adventurers, owing to variable temperatures (generally between 55 and 85); i.e., great hiking, fishing, sleeping, and occasional swimming weather and lots of wildflowers. For more info, please contact Lew, lewis.oysterclub@gmail.com , or write to me (pmodreski@gmail.com) and I’ll forward you a flier about the trip.

Fri.-Sat.-Sun., Apr. 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.

Sun., 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.

Fri.-Sat.-Sun., 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.

For more lecture series during the year see:

Colorado Beer Talks (2nd Tuesday, 6-8 p.m.), Windy Saddle Café, 1110 Washington Avenue, Golden, “Golden’s grassroots version of TED talks, Expand your mind with a beer in your hand”,
<http://goldenbeertalks.org/>

Colorado Café Scientifique in Denver, monthly lectures on science topics held either at Blake Street Station or Brooklyn’s, Denver; open to the public, no charge other than refreshments you may choose to purchase; see <http://cafescicolorado.org/> .

Colorado Scientific Society (3rd Thursday, 7 p.m.), see <http://coloscisoc.org/> . Meets at Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood CO, except when noted.

CU Geological Science Colloquium (Wednesdays, 4 p.m.) see
<http://www.colorado.edu/geologicalsciences/colloquium>

CSU Dept. of Geoscience Seminars (Fridays, 4 p.m.), see
<https://warnercnr.colostate.edu/geosciences/geosciences-seminar-series/>

Van Tuyl Lecture Series, Colorado School of Mines, (Thursdays, 4 p.m.):
<https://geology.mines.edu/events-calendar/lectures/>

Denver Mining Club (Mondays, 11:30), see <http://www.denverminingclub.org/> .

Denver Museum of Nature and Science, Earth Science Colloquium series, 3:00-4:00 p.m., VIP Room unless noted, day of the week varies. Museum admission is not required; see
<http://www.dmns.org/science/research/earth-sciences/>

Denver Region Exploration Geologists Society (DREGS; 1st Monday, 7 p.m.),
<http://www.dregs.org/index.html>

Florissant Scientific Society (FSS); meets monthly in various Front Range locations for a lecture or field trip; meeting locations vary, normally on Sundays at noon; all interested persons are welcome to attend the meetings and trips; see <http://www.fss-co.org/> for details and schedules.

Nerd Night Denver is a theater-style evening featuring usually 3 short (20-minute) TED-style talks on science or related topics; held more-or-less monthly at the Oriental Theater, 4335 W. 44th Ave., Denver; drinks are available; for ages 18+. Admission is \$6 online in advance, \$10 at the door. See
<https://www.nerdnitedenver.com/> .

Rocky Mountain Map Society (RMMS; Denver Public Library, Gates Room, 3rd Tuesday, 5:30 p.m.),
<http://rmmaps.org/>

Western Interior Paleontological Society (WIPS); beginning January 2019, WIPS will meet on the 1st Monday of the month, 7 p.m., at Lowry Conference Center, 1061 Akron Way, Denver. See
<http://westernpaleo.org/> .

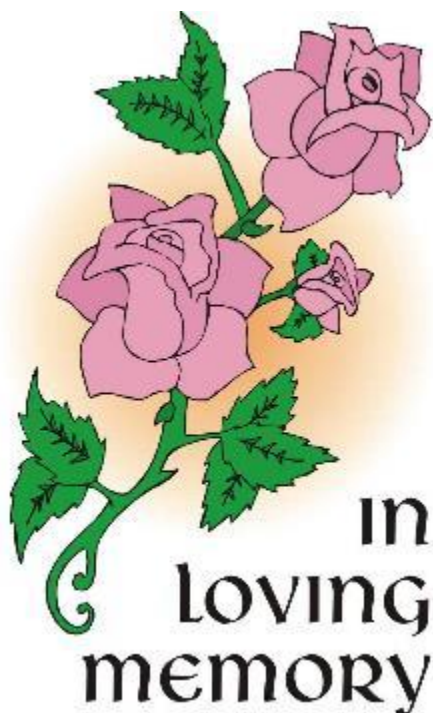
Thank you to Pete Modreski for the information!

Club Announcements

Friends we lost

Jack Thompson passed away 2/21. Jack was an avid collector, mineral judge, and exhibitor. Over the years he gave numerous talks to our club. He was a good friend to the club and will be profoundly missed. A memorial service is planned for 3/27

Contact Lawrence Havens if you wish to attend lwrnchavens@comcast.net



Moving? Change of Address, Email or Phone Number? Ready to go paperless? Please notify [Ian Duncanson](mailto:ian@duncanson.com) of any changes at [idunc@q.com](mailto:ian@duncanson.com) or 303-798-9174.

Do you know someone who could use some sunshine? Send a note to our sunshine coordinator and let her know, [Lynette Warren](mailto:lynette@warren.com), flywithle123@comcast.net or 303 956-4634.

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](mailto:ian@duncanson.com) 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 2019

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

Name(s) _____

Dues payment (\$20) _____ Renewal

Email address: _____

Club Vests Show your club support at the meetings and other events! [Ian Duncanson](mailto:ian@duncanson.com) has club vests available for sale.

\$18 for small and medium sizes

\$19 for large and X-large sizes \$20 for XX-large and XXX-large
patch (on back) and a club pin

Price includes vest, sewed on club



CAN WE BE FRIENDS?

Thank you to everyone who has LIKED or FOLLOWED our Facebook page — we continue to grow our online community and appreciate your participation. Please continue to share and comment on your favorite posts so newcomers can see what an active and engaged club we are!

Find us at LittletonGemandMineralClub on Facebook.

Join us at <https://m.facebook.com/LittletonGemMineralClub/> or tag us @LittletonGemMineralClub

See you on Facebook! Nicole Bolger

Thanks to everyone who contributed to the newsletter! ~Tammy

North Jeffco Gem & Mineral Club Silent Auction

Friday, April 12th, 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**

☞ **2019 Board of Trustees** ☞

President	<i>Ron Wankner</i>	303-618-5549
Vice President and Membership Chairman	<i>Ian Duncanson</i>	303-798-9174
Secretary	<i>Larry Havens</i>	303-757-6577
Treasurer	<i>Lesley Sebol</i>	720-999-1372
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Trustee (2-year term 2019 & 2020)	<i>Lynette Warren</i>	303-956-4634
Trustee (2-year term 2018 & 2019)	<i>Dan Lovitt</i>	303-791-3112

☞ **Chairpersons & Appointed Officers** ☞

Trustee-at-Large	<i>Lou Conti</i>	303-797-3205
Trustee-at-Large	<i>Dale Gann</i>	720-981-5526
Sunshine Chairperson	<i>Lynette Warren</i>	303-956-4634
Refreshments	<i>Anne Jenkins</i>	303-730-7696
Librarian	<i>Mary Davis</i>	303-680-5112
Historian	<i>Open</i>	
Photographer	<i>Open</i>	
"	<i>Open</i>	
Hospitality	<i>Nick North</i>	303-840-1177
Grab Bags	<i>John Kleber</i>	720-851-8510
Web Administrator	<i>Kollin Olsen</i>	303-233-9492
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 Columbine Hills Church, 9700 Old Coal Mine Avenue, Littleton, CO 80123. 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.

Advertising Rates: \$50 / Full Page. \$30 / Half Page. \$20 / Quarter Page.



Highlites

LITTLETON GEM & MINERAL CLUB



HARRIS PARK AMAZONITE & SMOKY QUARTZ

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