



Littleton Gem and Mineral Club February 2021 Highlites Newsletter.



February (no meeting)

President's Message

February 2021

One of the main reasons we join LGMC is the field trips to collect rocks and minerals. Field trips are an important activity for many club members. Who doesn't have great stories of finding amazing specimens; seeing others find one and; spending time together on the trips. It's fun!

One of the challenges that our hobby faces is losing access to traditional collecting sites. In addition, these localities are not being replaced with new ones. This is a common issue raised by clubs and rockhounds across the country. Next week, I'll participate in a Roundtable with other clubs to discuss the situation and potential actions that we can undertake individually and as a group working together. Our shared vision is preserving access to historic localities for new rockhounds and future generations.

We are fortunate to have a seasoned field trip coordinator, Jim Hooten. Jim has been instrumental in organizing our trips to classic locations; working with other clubs, and; maintaining relationships with claim owners so that we can continue visiting their sites. I'm certain that he's planning to have us visit some of our old favorite sites, as well as a few new places for us to try this year. If you have questions, he is a fantastic resource willing to share his experience and knowledge about sites and minerals.

Not having in-person General Meetings has made organizing activities and socializing a challenge. I've always looked forward to our meetings and connecting with other members. We've had monthly Zoom meetings to try filling the gap but it's been a very limited success. If you have ideas for future meetings until we can get together again, let me know. I'm open to any ideas that keep us connected and are fun.

It's going to be cold this weekend, so it'll be a good time to get last season's rocks cleaned and polished. Warm(er) weather and rock collecting season is just around the corner! Ok, I'm an optimist but I'm looking forward to getting outside in the sunshine again and enjoying the great outdoors.

Ron Wankner
President LGMC



Selected upcoming LGMC and Earth Science Events

February 16th, 7:30pm **Faceters and Cabbers** - The Faceters and Cabbers group continues to use Zoom for our regular monthly meetings. Our next meeting will again be on the third Tuesday of the month, February 16th, at 7:30pm. For February's discussion we decided to again make it "cutter's choice" for any cabbing material and faceting material we want to share. We will continue meeting on Zoom for now. If you need suggestions on how to share your work in a Zoom session or if you would like to join our group, and are not on our email list, contact me at jkleber@att.net for meeting information.

February (no meeting) **LGMC Meeting, no meeting this month, we will see you in March.**

Grab Bag News



February Grab Bag News

If you would like to sew some bags while stuck at home, contact Lynette Warren at flywithle123@comcast.net or 303-956-4634 if you need any information on that. We would welcome any that you can make during our time of social distancing.

If you have any specimens at home to donate for grab bags, let me know and I can arrange to pick them up. I can also arrange for supplies if you need any. Contact John Kleber at jkleber@att.net or 303-570-8164 to make arrangements.

Thanks to Tom Henderson who donated specimens recently.

The Bag Party Lady and the Bag Begger
Lynette Warren and John Kleber

Denver Mineral Show Update

Fellow Rock Hounds;

This year the long-time venue for the Denver Gem and Mineral Show, the Mart, has been placed in receivership awaiting sale in March. The Mart has consequently cancelled all events booked to begin after April 1. With no venue, the Show Committee has been forced to cancel the Denver Gem and Mineral Show for 2021. For the second year in a row, we have been impacted by forces beyond our control.

It is the desire of the Council to continue having an annual show. At this time what that show will look like is unknown. Do we find a new venue or possibly merge with another show? I have been contacted by the 3 entities that are still having shows in Denver this fall, Denver Show at the National Western Complex run by Lowell Carhart, Hard Rock Summit 2021 at the Denver Convention Center run by Christoph Keilmann, and The Colorado Mineral and Fossil Show at the Crown Plaza run by Sandra Gonzales. At this time, we are in the very early stages of our discussions with these shows, but we need input from the clubs to determine what that partnership will look like, what we expect from the show organizer and what the show organizer expects from us.

Before we tackle these issues, the clubs need to look at the purpose and goals of the show. Once we have developed these, we need to decide whether our purpose and goals are fully served by finding a new venue or a partnership with one of the 3 shows. We need to determine how the addition of our influence (club booths, awards, children's activities, exhibits) benefit the show?

Our bylaws state the following: The purposes for which this non-profit organization is formed are: for exhibition, exploration, experimentation, and education in the earth sciences: for the discovery, development, and preservation of minerals and mineral deposits; and for the advancement, encouragement, and utilization of the principle of art and craftsmanship as applied to gems and minerals. In furtherance of these principles, it shall do all things and exercise all powers granted to this corporation by the laws of the state of Colorado, including but not limited to the sponsorship of an annual gem and mineral show and the receipt and disbursement of grants or gifts of money for the advancement of the arts and sciences within the field of interest of the Council.

The Council is requesting that clubs and their members discuss what they feel is our purpose and goals.

Please send your thoughts to me at GatorGann@msn.com.

Sincerely,

Dale Gann
President
Greater Denver Gem and Mineral Council

Geology Corner

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 quit 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): basalt, quartz and calcite" Mineralium Deposita vol. 38, p.1007

Club Announcements

Welcome to Our New Members:

Teresa & Kyle Gordon,

Jeff & Koren Gross

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 **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.

LGMC Website

Our website has been updated!

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 2020 dues!

Thanks,
Gus

Its Dues Time Again!

2021 Membership Dues Slashed!!!

We're celebrating the end of 2020 and the arrival of 2021 with the hope for a return to more "normal" activities. Imagine....awesome field trips, general meetings, parties, picnics, incredible rock & mineral displays and even getting free rocks!! We're sharing our enthusiasm with existing 2020 members by **slashing the 2021 annual dues to only \$10** (from \$20.00)!! Yes, you read that right, **ONLY \$10!!!!**.

Don't delay!!! Send your 2021 dues before the end of the year to:

**LITTLETON GEM AND MINERAL CLUB
P.O. BOX 283
LITTLETON, COLORADO 80160**

Ian Duncanson

LGMC dues for 2021

Name(s) _____

Dues payment (\$10) _____ Renewal

Email address: _____



Like us on FaceBook

LIKE and FOLLOW us @LittletonGemAndMineralClub

What are you working on?

Send us what you are doing and we will include it in next month's newsletter.

Jacobstammy80@gmail.com

Thanks to everyone who contributed to the newsletter!
~Tammy

☞ 2020 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
President elect	<i>Ron Wankner</i>	303-618-5549
Program Chairman	<i>Brittany MacRostie</i>	630-699-2415
Field Trip Chairman	<i>Jim Hooten</i>	303-770-7177
Highlites Newsletter Editor	<i>Tammy Jacobs</i>	303-489-7525
Trustee (Year of 2019 as past President)	<i>Travis Leach</i>	303-887-9787
Trustee (2-year term 2019 & 2020)	<i>Lynette Warren</i>	303-956-4634
Trustee (2-year term 2018 & 2020)	<i>Charlie Wall</i>	303-933-0368

☞ Chairpersons & Appointed Officers ☞

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>	
Facebook Editor	<i>Nicole Bolger</i>	720 344-5280
Hospitality	<i>Nick North</i>	303-840-1177
Grab Bags	<i>John Kleber</i>	720-851-8510
Web Administrator	<i>Gus Hansen</i>	480-489-3978
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.

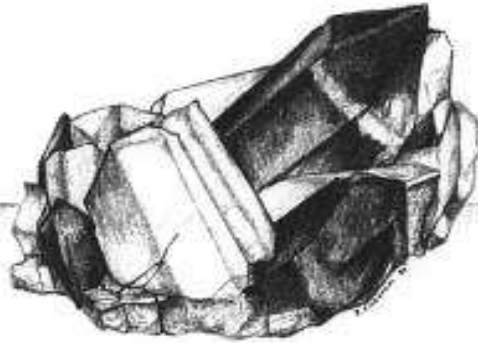
Any material contained in the HIGHLITES may be reproduced, as long as credit is given, unless otherwise indicated. Contribution articles are welcome. ****The deadline for submissions is the 1st Friday of each month.** Please send your material by email to jacobstammy80@gmail.com.

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



HighLites

LITTLETON GEM & MINERAL CLUB



HARRIS PARK AMAZONITE & SMOKY QUARTZ

LITTLETON GEM & MINERAL CLUB
P.O. Box 283
Littleton, Colorado 80160

FIRST CLASS MAIL

