



LGMC December Meeting

December Program: *Christmas Party and Chili Cook-off*
Time and Place: December 20, 6:30 PM, St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128.



Presidents Message

December 2019

Merry Christmas & Happy Holidays!

I can't wait to see all your beaming, smiling faces at our big Holiday Party on December 20th. It's been a busy year and we have a lot to celebrate. Remember that **we're starting at 6:30 pm** rather than 7:30 pm so that we have plenty of time to mingle and get to know our new members better. We've had a lot of new

rockhounds join the club so it's important that we spend some time to get to know each other. We'll start setting up at 5:30 and can use your help if you have time.

Be sure to bring your top secret chili concoction for the Chili Cook-off, red, green, or white, beans or no beans, savory or sweet, meat (which kind?) or meatless. I'm sure that we'll have a challenge choosing a winner! We'll also have chicken available and of course the traditional holiday potluck (A-R bring main/side dish; S-Z bring dessert. Who's bringing the fruitcake and sugar plums this year?

We've been very fortunate to have St Philip's as our new host for club meetings. They have been very good to us. To show our appreciation, I'd like club members to support their "Sharing with Sheridan" program by donating new winter hats, gloves and socks. St. Philips has a long term program to help citizens in Sheridan which is the poorest district in Colorado and one of the poorest in the country. If you'd like to donate food, we are also helping St. Philips collect canned tuna and canned chicken this month.

We're also having a gift exchange (\$20 max) this year. If you bring a gift you'll receive a ticket which will allow you to choose another. White elephant, cool gag gifts and useful rockhounding items are all welcome.

We have a busy night planned so be prepared for a fun filled, festive night celebrating the season and a fantastic 2019!

Ron Wankner
President LGMC

Christmas Party! Friday Dec 20th, at 6:30PM

Where: St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128.

We will be doing a chili cook-off!



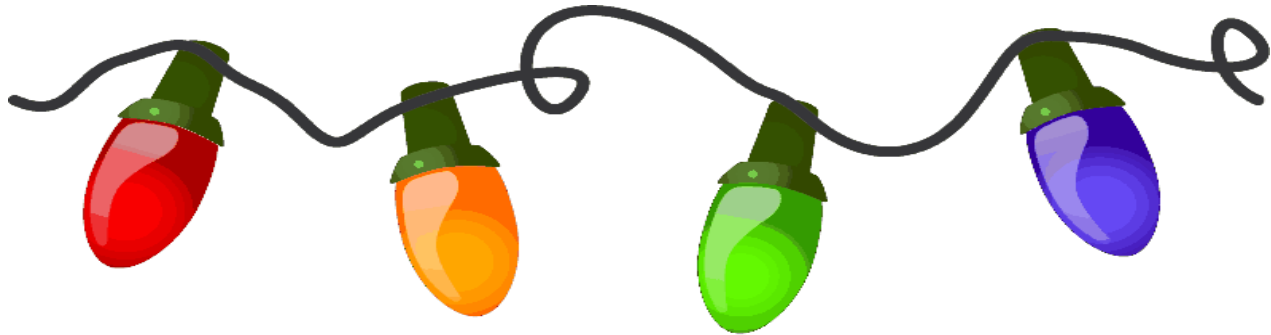
If you can arrive a few minutes early to help set up the tables and chairs, thank you.

Santa's many helpers at the club make this holiday event extra special for everyone.

The Odiorne award will be presented at the party.

CHILDREN WILL ALSO BE ABLE TO VISIT WITH OUR OWN LGMC SANTA!!!

Santa will be at our December party. If you want to bring a gift for Santa to give to a child or grandchild that you are bringing, make sure the name is on the package, and give it to an elf at the holiday table when you sign in and they will see that it gets in Santa's bag. Get your gift in as soon as possible. No one can forget Santa's grand entrance. Children always enjoy meeting Santa.



GET YOUR RECIPES READY...

The LGMC Annual Chili Cook-off is back!

Bring your best Red, Green, White, Meat, Vegetarian, or Vegan Chili in your own crockpot or heated serving dish.

The club has access to the church kitchen and electric outlets but we also need power strips and extension cords brought to accommodate all entries.

In addition to the Chili Cook-off this event is also a POTLUCK! The club will supply paper goods and utensils, but all are encouraged to bring something to share based on their last name.

A-R is asked to bring a side dish or chili alternative (think casseroles, veggies, salads)

S-Z is asked to bring desserts



Give A Gift — Get A Gift

We're hosting an optional gift exchange at this year's Holiday Party!

Members are encouraged to bring a small wrapped present of under \$20 value to swap. Bring your gift to the holiday table at the back of the hall where you'll get a ticket to participate in the gift exchange. Later in the evening all gift tickets will be drawn for their holder to come and pick out which gift they would like to receive.

Gag gifts are welcome, let's have some fun!!!



through our Holiday Party on December 20th.

HATS & GLOVES:

The church outreach is also looking for warm hats and gloves for children and adults. Please donate new items at our holiday event.

LGMC is supporting St Phillip's Holiday Drive!

Help make this holiday warmer and fuller for those less fortunate in our community.

FOOD DRIVE:

While out shopping for your Thanksgiving or Winter Holidays why not pick up a few extra items for those in need? Bring your canned and non-perishable goods to the church donation bins in the lobby. Donations accepted now

Selected upcoming LGMC and Earth Science Events

- Dec 13-15** **Flatirons Gem & Mineral Show, "Rocks & Rails"**, Boulder County Fairgrounds, 9595 Nelson Rd., Longmont CO, Main Exhibit Building. 10 a.m. – 5 p.m. each day. Held in conjunction with the Boulder County Model Railroad Club Show.
- Fri Dec 20** **LGMC December, Christmas Party Chili Cook-off**, 6:30pm, don't forget we are at our new location, St Philip Lutheran Church, 7531 S. Kendall Blvd, Littleton, CO 80128. Bring your best chili! If you can arrive at 5:30 pm, we could use some help setting up.
- January 21** **Faceters and Cabbers** - Faceters and Cabbers group will NOT meet during December to give us time to be with our families and to finish our lapidary creations in time to be Christmas gifts.

We will meet again on Tuesday, January 21st, starting at 7:30 PM. Our meeting will be at the St. Philip Lutheran Church, and we will share and discuss our creations and other items. The discussion topics will be Jasper, as the capping material and Garnet, 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

When we think back about all the work club members put into another successful year with grab bags, we must especially thank all of you for your super generosity. Many of you donated specimens, sewed cloth grab bags, labeled and bagged specimens and then stuffed the cloth bags with the specimens at our picnic.

We could not have been so successful without the generosity of each and every one of you. Thanks!

John Kleber
The Bag Beggar



Junior Rockhounds

December 2019

No meeting this month

If your children or family want to join the LGMC Junior Rockhounds and receive the program materials send an email to rwankner@msn.com.



LGMC Summary Minutes Board Meeting, 11/18/2019

Location: St. Philips Church

Called to order at 7:00 pm by Vice-President Ian Duncanson, subbing for Pres. Ron Wankner.

In Attendance: Larry Havens, Ian Duncanson, Lynette Warren, Lesley Sebol, Dan Lovitt, and Nicole Bolger.

Minutes of the October meeting – motion to accept – Lynette; second – Dan. Approved as published.

Treasurer's Report: Lesley reviewed the report for the financial activity for the period 8/31/19 to 10/31/19. Income was from dues, silent/verbal auction, misc. Expenditures included club brochure printing (Lesley shopped around and was able to get a very competitive price.), refreshment expenses, prize checks for post-show specimen contests, rental for auction room at Heritage United Church, and payouts to auction sellers. She also presented a breakdown of the income and expenditures for this year's auction. Nicole suggested we should explore getting free passes for things like the Georgetown Loop Train. Perhaps dealers might donate gift certificates in lieu of specimens. Lesley noted with regret that there were very few items donated for the Sunshine Table (funds sunshine comm. expenses). The need to donate to this aspect of the auction needs to be clarified and advertised better. For various reasons, the income this year was much better than last year's. Raising the club share of selling price for auction items was discussed and further discussion encouraged for future meetings. Nicole broached the subject of seeking higher interest rates for savings. To be further explored.

Motion to accept treasurer's report by Bolger; second by Warren; motion carried.

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

Membership: None this period though it was noted that some may have joined on field trips. Ian will check with Jim Hooten.

Old Business: Ian noted that club didn't follow through on opportunity to support church through food and clothing donations. Could rectify at Holiday party. Publicity needed.

Larry still needs to provide letter designating official signers for the accounts.

Field Trips: Jim Hooten sent a report by email that focused mostly on his role for the Party. He prepares “presents” to be used as door prizes.

Programs: December Holiday party.

Facebook: Nicole Bolger has a new job (Yay), and that has limited her on-line activity as she makes her transition. Wants to bring in more jewelry and wire wrapping, etc. Exploring suggestions led to consideration of possible classes that might be explored for the club – mineral art, wire wrapping, etc.

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

Mineral Study Group: Nothing scheduled for the rest of the year. Should check to see if we could use the meeting room at the church.

New Business

Remaining focus of the meeting addressed the auction and Holiday Party in December.

We will continue having members bring their favorite chili versions (for the cook-off) and to have chicken (decided about a 1/3 picnic quantity would be needed) as an alternative choice for non-chili consumers.

Nicole Bolger has finished the center pieces for the party tables. She has small sampler cups for the initial tasting portion of the chili contest. There were 13 crockpots last year so there is a need for extra surge protectors and extension cords.

Ian will be Santa. Gifts for kids (parent brings to add to Santa’s bag; Ian wraps up little presents; Nicole says she can help with that project); Gift exchange ??? – Adult exchange (bring one – get one) ?? need somebody in charge. Probably discuss for next year?? Nicole said, “There’s a whole month “Then ended up volunteering to run an exchange.

Open Floor:

Lynette wanted to review the auction – what went well and what didn’t.

We should have the foyer next year for check-out.

Might need more tables. Light was inadequate, but what to do? Battery operated desk lamps?

Church personnel were very helpful.

It was noisy, but what to do, especially during the verbal auction. Ian has sound system to use during the auction.

Kitchen set-up worked well.

Advertising suggestions: other club newsletters, fliers/pamphlets, big sandwich board outside at entrance driveway to the church, post cards, advertising at all local schools. Bookmarks.

Need to revamp check-out process.

Miscellaneous:

Ian asked permission to advertise petrified wood museum in Ogallala, Nebraska on I-80. He will pay for 5 months @ \$20 per.

In the January newsletter, Ian will publish a notice that he will purge the non-paying members from the membership list on 4/1/2020.

Next Board Meeting: 1/11/20 – Location TBD

Meeting adjourned 8:25 pm.

Respectfully submitted,

Larry Havens, Secretary

Calendar of Coming Earth Science Events!

Happy holidays to all!

Let me mention--I will have a USGS booth at the Flatirons Mineral Show (Flatirons Mineral Club, from Boulder, held at the Boulder County Fairgrounds in Longmont, Dec. 13-15), and this may well be the LAST gem and mineral show at which we'll have a booth, as I am planning to retire from the USGS (after 40 years!) in a few more months. I'll miss representing the USGS at all these local events! At the booth, I'll have some USGS "government surplus" topo maps to give away (some are of the Mt. St. Helens Quadrangle), including some that you are welcome to take, just to save & use as unique wrapping paper! I'll also have the very last remaining copies of our 2019 Earth Science Week Teacher Packets, so, please look for them there (if you really want one of the Teacher Packets, you might want to write to me and I'll reserve a copy for you, as we only have less than 10 copies left). Earth Science Week 2019 was October 13-19.

Pete Modreski

Calendar of Coming Events

Fri.-Sat.-Sun., Dec. 13-15, Flatirons Gem & Mineral Show, "Rocks & Rails", Boulder County Fairgrounds, 9595 Nelson Rd., Longmont CO, Main Exhibit Building. 10 a.m. – 5 p.m. each day. Held in conjunction with the Boulder County Model Railroad Club Show. *We'll have a USGS booth here—with free topo maps—use them for gift-wrapping, or whatever you like!*

Thurs., Dec. 19, 5:30 p.m., Colorado Scientific Society Annual Meeting, 2019 President's Address (Tom Casadevall, USGS), and potluck dinner. Featuring **"Geological heritage: a new frontier for the Earth Sciences"** (or something related to that topic) by Dr. Tom Casadevall, Scientist Emeritus, U.S. Geological Survey, and 2019 CSS President. Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood. All are welcome. It's a good time to come and join the Society! Regular dues are \$20 if paid before Jan. 30. For more info, see <https://coloscisoc.org/>.

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

Geology Corner

The Fire of Opal

When one says opal, one thinks immediately of those rare gemstones showing gorgeous flashes of colors as they turn. Opal is actually a very common mineral, but most opal lacks this intense play of colors. What is opal and what causes it to show its colors, from time to time?

Opal is closely related to quartz in that both are mainly composed of silicon and oxygen. In quartz, the silicon and oxygen atoms are bonded together in a three dimensional orderly pattern forming crystals. In opal, the silicon and oxygen atoms are almost randomly distributed, and no opal crystals exist. The silicon and oxygen atoms in opal do coagulate as tiny spheres ranging in diameter from 0.00001 to .002 inches. The spaces between the spheres are filled with water or air. The spheres look like a bunch of Styrofoam balls packed together in a glass. The angular holes between the spheres are the pores. If you pour water into the glass it flows readily from pore to pore. Since the water is only loosely bonded into opal's structure, it can leave easily, causing some opals can dry out (dehydrate) and crack.

Quartz and opal are told apart by simple tests. Opal is much softer (H = 5-6 on the Mohs' scale) than quartz (H = 7). Thus some opal can be scratched by a knife blade or nail (H = 5.5) and all of it can be scratched by a streak plate (H =



6.5). Also, if ground up opal is heated in a test tube it will release water vapor that condenses as drops on the cool end of the tube.

The reason opal can show such beautiful plays of color was discovered in the 1970's and well described in the Scientific American article written by an Australian research group (Darragh et. al., 1976). They discovered that in precious opal the silica spheres had a uniform diameter between .00004 and .00007 inches and were stacked up in a regular fashion. Opal lacking a play of colors was either made of larger spheres, smaller spheres or a mixture of sphere of different sizes. This special arrangement of spheres is important because it makes pores of similar size to the wavelengths of visible light. When white light enters opal it is thus diffracted by this regular array of pores and split into colors as though it had entered a prism. Each color has a different wavelength and is split off at a different angle. The particular color we see and, indeed, whether we see any color at all, depends on the angle at which we are holding the opal. This is why the colors change as the stone is rotated. A gem opal commonly shows regions of different colors. This is caused by the presence of regions within the opal where the silica spheres have a slightly different spacing or size, affecting the way the light is split.

When opals dehydrate, they may lose their play of colors and become chalky. This is because the pores in the opal can collapse as the water leaves, messing up the pattern that causes the light to split.

The formation of precious opal rather than common opal requires a precise set of geologic conditions. Darragh et. al. (1976) describe these conditions as "an undisturbed space in a rock holding a clean solution (no clays or salts) of silica from which water is slowly removed over a period of thousands of years". This causes the colloidal silica to slowly grow uniform spherical shells around a nuclei and settle or plate out in a regular fashion. Groundwater moving through porous rocks in a desert could provide such conditions, accounting for the opal fields in the Australian "outback". Slow movements of warm silica-rich water through porous areas in lava flows can also produce gemmy opal such as those from Queretaro, Mexico. Sometimes the gem opal forms in pores in fossil wood such as in the Virgin Valley of Nevada.

Whatever the source, the play of colors of gem opal reminds us of how physics, chemistry and geology unite to form material that human skills can convert to art.

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

Reference: Darragh, P.J., A.J. Gaskin and J.V. Sanders, 1976, "Opals", Scientific American, vol. 234 p. 84-95

Club Announcements

New Members:

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**

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.



has

Field Trip



A new field trip has been added that is a trip hosted by Lake George GMC, in conjunction with RAMS and LGMC. An email announcement has been sent to LGMC members that describes the collecting areas, the start date, and a place to respond. This information is repeated below for those not receiving emails.

LGMC has received an invitation to join The Lake George Gem and Mineral Club, and the RAMS club, for a 5-day trip next spring to western Utah to collect at 3 different claims (Searle Canyon, Solar Wind, Maynard). Two days driving (there and back), 3 days collecting). It will be from Saturday, May 2 thru Wednesday, May 6, 2020. Unfortunately, this is just a few days prior to our already scheduled trip to the Blanchard Mine in Bingham, New Mexico from Friday, May 8 to Sunday, May 10, 2020. That makes it difficult for someone to do both (although not impossible). Just a lot of driving and being gone a lot. Contact Jim Hooten if you are interested in doing one or both of these trips, preferably by email at Jahooten@msn.com.

There is a fee for collecting at these 3 claims. If there are 10 or more participants (which there should be), there will be a fee of \$40 per person, per claim, for a total of \$120 for collecting at all 3 claims. No fee is required for the New Mexico trip.

Field Trip Name: UTAH: Searle Canyon, Solar Wind and Maynards Mines (with Mile Hi RAMS and LGMC clubs)

Field Trip Date: 2020-05-02 at 09:00:00

Meetup Location: TBD

Trip Leader: Dave Alexander (LGGMC), Chris Rayburn (RAMS), Jim Hooten (LGMC)



- CAN WE BE FRIENDS?

Our LGMC Facebook Page is a great place for club members to hear about upcoming events, learn interesting facts, have a laugh, share mineral and field trip photos, and engage with other rockhounds in Colorado and beyond!

LIKE and FOLLOW us @LittletonGemAndMineralClub

See you on Facebook! Nicole Bolger

Thanks to everyone who contributed to the newsletter! ~Tammy

🌀 **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
President elect	<i>Ron Wankner</i>	303-618-5549
Program Chairman	<i>Stefanie Hughes</i>	720-364-6850
Field Trip Chairman	<i>Jim Hooten</i>	303-770-7177
Highlites Newsletter Editor	<i>Tammy Jacobs</i>	303-680-8830
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 & 2019)	<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
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.

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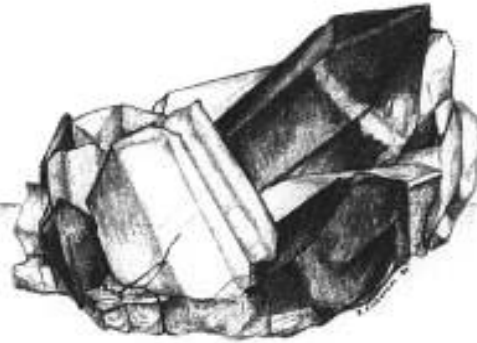
****The deadline for submissions is the 1st Friday of each month.** Please send your material by email to jacobstammy80@gmail.com.

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



HighLites

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