



Bulletin of the Mineralogical Society of Southern California

Volume 91 Number 11 - November, 2018

The 962nd meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

November, 9th, 2018 at 7:30 P.M.

Pasadena City College

Geology Department, E-Building, Room 220

1570 E Colorado Blvd., Pasadena

Program : 21st Century Jade: Why it's Prized and How It's Tested and Valued:
Presented by Renée Newman

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Remember: If you change your email or street address, you must let the MSSC Editor and Membership Chair know or we cannot guarantee receipt of future Bulletins

About the Program: 21st Century Jade: Why it's Prized and How It's Tested and Valued: Presented by Renée Newman



Jadeite and nephrite prices are continuing to reach record highs at jewelry auctions. When gem materials go up in value and popularity, the desire to imitate and treat them increases. Some fakes are obvious, while others aren't. In addition, treated jade, may be worth less than some fakes. In her presentation to our club, Newman will give practical tips on how to distinguish fake and treated jade from natural jade using examples of modern jade jewelry and carvings. Her presentation will help you:

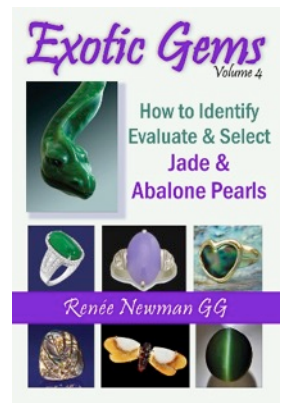
- Understand why jade is so prized
- Tell the difference between jadeite and nephrite
- Determine which types of jadeite and nephrite are most valued. Their value factors are not the

same.

- Detect fake jade using visual, tactile and auditory non-technical clues
- Recognize when to be suspicious that jade has been treated with chemicals
- Appreciate contemporary jade.

Renée will be available before and after her presentation to autograph books. Bring cash or a check if you would like to purchase copies of them. Her *Exotic Gems: Volume 4* book is the fourth in a series that explores the history, lore, evaluation, geographic sources and identifying properties of non-traditional gems. It describes with text and photos how to evaluate jade quality and detect imitations and dyed jade.

Renée Newman developed her interest in gems in the early 1980s while conducting tours to Asia, South America and the South Pacific. Her passengers wanted to know how to judge the quality of the gems they saw so she signed up for a colored stone grading course at the GIA. She liked it so well she decided to get a GIA graduate gemologist diploma and then work at a wholesale firm in downtown Los Angeles evaluating gems and overseeing jewelry quality control. Armed with trade experience and gemological credentials, Renée decided to create books that showed readers how to visually evaluate the quality of gems. Her first book, the *Diamond Ring Buying Guide*, was published in 1989. Since that time, she has written twelve more books on gems and jewelry. They are used as gemology course textbooks, sales training tools, appraisal references and consumer guides. The Fourth Volume in her Exotic Gems Series features all types of jade from around the world. For more information about Renée and her books go to www.reneenewman.com.



From the Editor:

First, I want to thank the MSSC Board for their vote of confidence in accepting me as an "absentee" editor. I also want to thank Rudy and Angie for volunteering to get the guest copies to the meetings each month.

We are rapidly heading into the 2018 holiday season. Here's hoping everyone has a safe and happy Thanksgiving and I urge everyone to be safe and enjoy the upcoming holiday celebrations. Don't forget to send in your membership dues and to make your reservations for the MSSC Annual Banquet in January. It's never too late to start collecting your donations to the Silent Auction! I hope everyone brings all sorts of "good stuff" to donate and plenty of cash to bid with.

Don't forget that November is MSSC's Election of officers and Board Members. If you are thinking of offering your time and talents, now is the time to speak up and nominate yourself for the position you are interested in trying. Linda Elsnau

With Knowledge Comes Appreciation!

FROM THE PRESIDENT Interesting Minerals, A to Z. Installment 11, the letter "K": by George Rossman Katoite

The Commercial Quarry at Crestmore, near Riverside, CA, is renowned for the diversity of different minerals found there (160 species) and as the type locality for 8 species. One of the more recent new species found there is wayneburnhamite described in 2016 by three members of the MSSC.

William Foshag, of the U.S. National Museum, collected minerals at the quarry and described a new species in the 1920 Journal of the Mineralogical Society of America. It consisted of small, colorless dodecahedrons associated with vesuvianite. It came from a part of the quarry that produced wollastonite, diopside, garnet, and riversideite. He named the phase “plazolite” derived from the Greek work ‘plazo’ meaning to perplex. This name came about because of his difficulty in interpreting his compositional data. The crystals were never larger than 2 mm in size. The chemical composition indicated significant amounts of silica, alumina, calcium and water. He concluded that it was related to sodalite but could not fully characterize it.

Adolf Pabst of the University of California, Berkeley, obtained some samples of plazolite and conducted further studies on it. There was some controversy because Winchell had suggested that plazolite was closely related to garnets. Pabst obtained X-ray powder patterns from plazolite and concluded that they closely resembled garnet patterns. In particular, the patterns were similar to grossular garnet. But, there were problems. The density was low for a garnet and the refractive indices were also low. The chemical formula was $\text{Ca}_3\text{Al}_2\text{Si}_2\text{O}_8(\text{OH})_4$ whereas grossular is $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}$. The X-ray data indicated that only 2/3 of the silicon sites are occupied by silicon. And there were all those OH groups that came off as water when the crystals were heated.

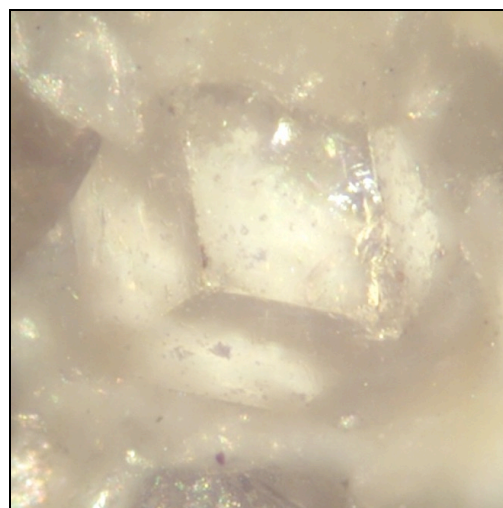


Figure 1. Plazolite from Crestmore, CA
(Unless otherwise noted, all photos provided by G. Rossman)

In time it was recognized that this is a hydrogarnet. In particular, it is a hydrogrossular. By this we mean that some of the SiO_4 groups in the garnet structure are replaced by 4 OH groups; namely $\text{SiO}_4 = \text{H}_4\text{O}_4$.

Over time, hydrogarnets were synthesized in the laboratory and studied by a variety of methods. It was recognized that OH substitution in the garnet structure can be significant.



Figure 2. Katoite from the type locality.

In 1984, Passaglia and Rinaldi published a paper describing a naturally occurring hydrogarnet that had more than $\frac{1}{2}$ of its silicon atoms replaced by OH groups. They named it katoite. It was found in vugs near Montalto di Castro, Viterbo, Italy. The crystals are tiny. It was named in honor of Akira Kato, who for years served as the chairman of the Commission on New Minerals and Mineral Names of the International Mineralogical Association, and who represented Japan. Hydrogrossulars with more than 50% of the silicon replaced by OH groups are now called katoite.

Formerly, the name “hibschite” was given to hydrogarnets with less than 50% of the silicon replaced by OH groups. In today’s nomenclature convention, they should be called grossulars. The name hydrogrossular is often applied to members of the series with

appreciable OH content but with an undetermined $\text{SiO}_4/(\text{OH})_4$ ratio.

We now recognize that many andradite, grossular, spessartine and uvarovite garnets contain a hydrogarnet component that may range from a few hundred parts per million of water to several percent. Examples are shown in figures 3, 4, and 5.



Figure 3. Andradite from near the Gem Mine, San Benito County, CA.



Figure 4. Grossular from Vesper Peak, Washington



Figure 5. Spessartine from the Little 3 Mine, near Ramona, CA

Even pyrope often has some OH in it. In 1984, a group from Caltech (modesty prevents me from naming the professor in charge) recognized that garnets that came up from Earth's upper mantle in the kimberlites contain a bit of water bound as OH groups. The kimberlites are the volcanic rocks that also bring diamonds to the surface. Although the concentration of water is low – only tens to a couple hundred parts per million by weight - this is significant. Not only do the pyrope garnets have a bit of water, so do the olivines, the orthopyroxenes and the clinopyroxenes. The volume of Earth's upper mantle is huge compared to the volume of Earth's crust on which we live. If we integrate those small amounts of water in the garnets and other minerals from the mantle over the volume of the upper mantle, we conclude that there could be more water tied up in those four minerals than the volume of water in all of the oceans on the Earth's surface today.

That's a lot of water.

Passaglia E, Rinaldi R (1984) Katoite, a new member of the $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_3\text{-Ca}_3\text{Al}_2(\text{OH})_{12}$ series and a new nomenclature for the hydrogrossular group of minerals, *Bulletin de Minéralogie*, 107, 605-618.

Sacerdoti M, Passaglia E (1985) The crystal structure of katoite and implications within the hydrogrossular group of minerals, *Bulletin de Minéralogie*

MINUTES of the October 12, 2018 Meeting

The 961st Membership Meeting of the Mineralogical Society of Southern California (MSSC) was called to order by President George Rossman at 7:30 p.m. on Friday, October 12, 2018.

President Dr. Rossman stated there are now 5,389 mineral species recognized by the IMA. One of the latest is selivanovaite, $(\text{Na,Ca})_3(\text{Ti,Fe})_5(\text{Si}_2\text{O}_7)_2\text{O}_4(\text{OH})_3 \cdot 7\text{H}_2\text{O}$. [*Secy. Note: The mineral is named after Dr. Ekaterina Selivanova of the Kola Science Center in Russia.*] Past President Ann Meister says you need a microscope to see it, but another mineral is alfredopetrovite, $\text{Al}_2(\text{Se}^{4+}\text{O}_3)_3 \cdot 6\text{H}_2\text{O}$, is a mineral from El Dragón Mine in Boliva. [*Secy Note: Per Mindat, this mineral is named for Alfredo Petrov, geologist. Alfredo is currently working with Jewel Tunnel Imports.*]

Regular Business

Minutes: Dr. Rossman asked for approval of the Membership meeting minutes as written and published in the October 2018 *Bulletin* for the September 14, 2018 Membership meeting. A **Motion to approve the Membership Meeting Minutes**, as above, was made by Dr. George Rossman and seconded by Dr. Bob Housley. The President asked if there were any additions or corrections to the published Minutes and seeing none, asked for approval of the motion. The voice vote was cast by members and the **motion passed unanimously**.

Announcements:

Ann Meister reports:

- Watson Lecture will be 10/31 at Cal Tech's Beckman Auditorium on Space-Based Solar Power, A New Beginning. Lecture starts at 8 p.m.;
- UCLA Meteorite lecture series will be 10/28 at 2:30 p.m. on Discovery, Recovery and Disposition of the 3-ton Old Woman Meteorite. The lecture will be presented by Prof. John Wasson, Meteorite Gallery curator, in Rm.3697.
- Dr. Rossman reminds us that Gem-O-Rama is this weekend in Trona. If you haven't been there, go and get dirty. He gave a sneak peek about minerals hanksite and halite that are found there.

Field Trips Report:

- Marek sends word of the next field trip to the borate area of Boron on 11/10 or 11/11 visit the Visitor Center/museum, go nearby to collect opal and calcite at Saddleback Mt. and to a quarry with zeolites. Contact Bob Housley or Marek Chorazewicz if you're interested and your preferred date for this trip;
- Another trip out to the Blue Bell Mine is planned for late November, early December;
- In late December a field trip is planned to Lead Mountain, east of Barstow.

Show & Tell: None.

New Members or Visitors: None.

Program

Program Chair, Rudy Lopez

- Kids event is on Saturday, 10/13/18 at Clark Park in Orange County. MSSC will have a table with mineral cut-outs, rock sample handouts plus specimen display;
- MSSC brochures have been reprinted. Previous brochures did not include field trips because we hadn't done them until recently. It states that if you're a member you can participate in the field trips. Discussion followed including : not a requirement of membership to participate in field trips, insurance liability issues and, Rudy says, no one is turned down if they want to participate.
- Rudy mentioned a meteorite that was used as a doorstop. It happened in Michigan. The meteorite is worth \$100,000! This story is on the internet.

Rudy introduced and welcomed back Dr. Aaron Celestian, Ph.D., Mineral Sciences Curator at the Natural History Museum of Los Angeles County (NHMLA). "...Dr. Celestian's research interests are inspired by how minerals function on Earth and other terrestrial bodies..." * He joined the NHM in 2016 as Associate Curator after being Associate Professor of Geology at Western Kentucky University for 8 years. His Bachelor's of Science in Geology (emphasis in Mineralogy) is from University of Arizona and both Master's and Ph.D. are from Stony Brook University. Dr. Celestian is Associate Editor of the American Mineralogist. His main research goals are to probe the secrets of how Earth materials grow and react in their environments then predict and design new materials for environmental and industrial applications.

This evening's presentation, Dr. Celestian tells us, grew out of his collaborative work with a couple of astrobiologists who want to know where life might exist on other planets. But, in order to go from Earth to Mars, you first have to figure out a lot of stuff. How life has persisted in minerals on Earth for millions of years and what that looks like. Thus begins his presentation, *Minerals, Microbes and Mars...Salt and Bugs*.

Salt comes from oceanic water that has evaporated. We see this in ancient dried lakes such as the Great Salt Lake in Utah and others. When water evaporates, what's left gets bombarded by ultra violet radiation from the sun, then that crystallizes. Tiny, small amounts of water are trapped in the crystals and, over time, a lot of time, microorganisms, bacteria, inhabit the trapped water. The bacteria in the crystals produce carotenoids that show pink. The longer the salt crystal is exposed, many years, the lighter the pink.

Dr. Celestian tells us there are different salts. For instance, mirabilite, Na_2SO_4 , is unstable and quickly dehydrates in dry air. Another salt is epsomite (Epsom salt), a hydrous magnesium sulfate, and there is gypsum, a calcium sulfate dihydrate.

But, how do the crystals grow? It starts as a liquid and as evaporation occurs, the liquid begins to crystallize from the outside edges inward, then after a few minutes, flash crystallization. Halite has been known to form "hopper", that is where the outer edges are fully formed crystals, but the interior is not filled in. It appears as a hollow out stepped lattice.

Looking at and identifying minerals (crystals) requires some pretty amazing tools. The Raman Spectroscopy Microscope measures vibration, rotational or electronic energy of a molecule. Using this tool, one can see the bacteria everywhere in salt crystals move around, either under their own power or due to vibration of fluid. One can also get a measure of carotene in the bacteria. This method is performed in the lab. A Digital Holographic Microscope measures light waves from the fluid/bacteria and records high resolution images. These methods produce real time structures.

The classic example of the salt crystal beds is the Great Salt Lake in Utah. There are different evaporation events exhibited by stratified layers. The color (pink) difference is noted due to barriers between the north and the south of the lake. In the UK, ancient deep salts are buried 4,600' below the surface in the Boulby Mine (Permian, 250mya). There are also brines as deep which, Dr. Celestian says, have been looked at in his research.

Cave of the Crystals in Nacia, Mexico is 980' deep but the selenite crystals are huge. Workers there are only able to work in the cave for very short periods of time due to the extreme high heat (136°F) plus the intense humidity (99%) and they're required to wear safety protective suits. Dr. Penelope Boston, a NASA Astrobiologist, found dormant 50,000-year-old bacteria inside these crystals that she was able to revive! *They are genetically distinct from any other bacteria that have ever been found!* So, we know bacteria can live for long periods of time in extreme environments, extreme temperatures, extreme colds.

What will be found on Mars? Will we find these bacteria on Mars? Dr. Boston says "yes"! On the map of Mars, brine seeps, seasonal flows of damp soil in certain areas on Mars, indicate the possibility of finding bacteria. Those locations may be a good place on Mars to go explore. There are other places that may have liquid, as well. Icy moons may have water under the ice, for example, Jupiter's Europa. What would it look like? What minerals are there, trona, mirabilite, halite, etc.?

Q & A followed Dr Celestian's presentation. Questions and discussions included carotenoids; what do bacteria eat beside salt? "Deep Life" (book) discovery of microbes living 10,000' below the surface in rock; Sulfur fluids; Do all evaporate minerals have bacteria living in them? No, the halite crystal from Poland (Dr. Celestian brought it in to show), does not have bacteria in it; Mars' sulfur-rich soil; Amboy has bacteria, Searle's lake has bacteria (250,000ya), Mono Lake is a carbonate lake – no bacteria; table salt contains bacteria DNA. Usually no.; salt domes in Texas; salt mines in Austria; red snow; Frito-Lay salt on chips; alpine glacial hematite's and others.

Wow! Terrific presentation, great graphics interspersed with humor and wonderful specimens. Thank you Dr. Celestian.
[Secy Note: *excerpt used with permission of nhm.org.]

Door Prize: The drawing was won by Cheryl Lopez, who donated to one of the newer members.

Adjourn: The meeting was adjourned at 8:30 p.m.

Refreshments and interesting conversations followed the meeting. Thanks to Laura Davis for bringing and setting up the refreshments and to Rudy Lopez for home baked goodies.

Reminders:

- Submissions for the *Bulletin* are due to Editor Linda Elsna by the 22nd of the month.
- Our next Membership meeting will be Friday, November 9, 2018. Nominations are open for Officers and Directors. Elections will take place at this meeting. You are encouraged to participate at this important meeting.
- Our speaker will be Renee Newman. Ms. Newman will present, "21st Century Jade: Why it's Prized and How It's Tested and Valued."

Respectfully submitted by Angela Guzman, MSSC Secretary (Apologies for any omissions and/or misspellings.)

List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)	
Meeting Dates:	December 14, 2018	Walton Wright: Plate Tectonics 2	
	February 15, 2019	Karin Rice: Geology of Rancho La Brea/ LA Brea Tar Pits	
	March 8, 2019	Steve Mulqueen: The Golden Age of Rockhounding, 1946 – 1972	
Board Meeting	December 2, 2018	Board Meeting at Bruce Carter's house	
Annual Banquet	January 12, 2019	Denise Nelson - "Treasures of Poland, Amber and Salt":	
Micromineral Conferece	February 1,2,&3, 2019	Fallbrook Mineral Museum	
Field Trips	November 10, 2018	Boron CA	Contact Bob Housley or Marek Chorazewicz if you're interested
	Late Nov or Early Dec, 2018	Blue Bell Mine	
	Late December	Lead Mountain, East of Barstow	

Note: Dates. Programs and Field Trips shown above are subject to change. Check your bulletins to confirm final information each month.

MSSC Board Meeting Minutes September 16, 2018

Roll call. The following officers and directors were present at the MSSC Board meeting held September 16, 2018 at the Carter residence: George Rossman (President), Jim Kusely (Treasurer), Angela Guzman (Secretary), Renee Kraus (Vice President), Bruce Carter (Director), Bob Housley (Director), Patrick Caplette (Director), Leslie Ogg (Director and Webmaster). The following Committee Chairs were also present: Rudy Lopez (Programs); Ann Meister (Past President and Historian). Seeing there was quorum, the meeting was called to order at 1:00 pm by President George Rossman

Discussion about Board Meeting Minutes: Last minutes were approved at the last Membership Meeting. Ann Meister commented that Board minutes are to be approved by the Board, the society members who attended that meeting.

- 1) **Comments from the President (Rossman):** None.
- 2) **Treasurer's Report (Kusely):**
 - a) Insurance status – in the process of renewing, D&O insurance \$2 million due 10/16/18 at a cost of \$275.
MOTION by Ann Meister **to approve expenditure to renew the D&O annual insurance**, seconded by Bruce

Carter. After considerable discussion, the vote for the motion was called and it **passed** with 8 yes, 1 no, no abstentions (8-1-0).

- b) Fraud billing attempts? – no.
 - c) Recap of picnic expenses/income: No new expenditures for supplies due to surplus from last year's event.
 - d) Mutual Funds report – Our Global Income yield is 3-4%/yr, now is \$500-\$600 less than same time last year. Jim indicated that it would be better to change from Global Income to another type of investment, say CD, for example. Jim showed our statement from Merrill Lynch. He also said he'd consult with our advisor at ML and see what is best. Jim has extensive experience in mutual funds. *Discussion* included Dr. Rossman wanting to know if we should give Jim authority to, after consulting with ML advisor, to make a decision regarding our investments, Jim's expertise with mutual funds and review of where we are now. A **MOTION** was made by Dr. Housley and seconded by Pat Caplette **to give Jim Kusely authority to invest in (Merrill Lynch) products he deems most beneficial to the society**. The vote for the motion was called and **passed unanimously**.
 - e) Bruce Carter Field Science Foundation annual donation \$500 requires approval and signature on letter by President. **MOTION to approve the \$500 donation to Van Amridge scholarship** was made by Angie Guzman and seconded by Leslie Ogg. Asking for discussion and hearing none, the President called for the vote which **passed unanimously**.
- 3) **Membership Chair report (Rudy Lopez for Cheryl Lopez):** Rudy reports that we have 81 members, 5 increased from last report. One was from our Museum event, 2 from the field trip and 2 additional family members from the field trip. There was some discussion about getting young members now, shows and field trips. Rudy indicated that we will have a PowerPoint about our field trips running at events where we host a table. By way of information, Angie said that all participants who go on the field trips sign a liability waiver at the onset.
- 4) **Pacific Micromount Conference (Housley):** Dr. Housley reports that the next Pacific Micromount Conference will be held the first weekend in February 2019, (2/1-2/3) at the Fallbrook Museum. Speakers will include Michael Cox, Paul Adams and Georges Gabro. The field trip is not yet determined. *Discussions* followed about furniture and equipment at the conference (Rudy has a table, laptop and projector that we will take as backup and he mentioned donations are needed for our Door Prize box) and make up of attendees (from all over, many on way to Tucson shows).
- 5) **Society Field Trips (Housley, Marek C):** The report of the Palos Verdes barite field trip is posted on the website. The next field trip is in the works and Marek will report back to us. However, Lead Mountain and Felix Mine were mentioned as possible sites for field trips.
- 6) **Society Historian's Activities (Meister):** Ann mentioned that she heard about some old *Bulletins*, but they weren't that old and she already had them. Pat Caplette said she has some in a loft space and will let Ann know when she can get them down. Ann is specifically looking for Bulletins from 30's, 40's, 50's and 60's. We pretty much have 70's – current. *Discussion* regarding converting the files to .pdf or other media format. George wanted to know if we could digitize the records; Ann's working on it. Ann reports she has some old mimeograph copies. *Discussion* about historical records, where they may be today and how we can retrieve them.

George made an announcement about "American Mineralogist" collection that Cal Tech is offering to anyone who is interested in having them. Ann suggested Mindat. George also says California Division of Mines also has extensive locations of mines if anyone is interested in the downloadable version.

Bruce showed a piece of tile and he wanted to know what it is. George mentioned that Stone Mart in the San Fernando Valley has a huge, HUGE warehouse of marbles, slabs, agates, transparent slabs and lots of goodies.

==Break== Special thanks to Kathy Carter for the goodies and coffee. Thank You!

- 7) **Federation Director Report (Ritchey):** Director Ritchey was not able to attend this meeting so President Rossman tabled the item until next Board meeting. However, there was extensive Board *discussion* about the Federation including but not limited to:
- a) What does California Federation of Mineralogical Societies (CFMS) do?
 - b) What are their activities? (field trips, education, scholarships, etc.);
 - c) Is their list of society's current, accurate? (website list)
 - d) Are they sending a newsletter?
 - e) Do they have a Bulletin Editor?
 - f) Are we required to be a member of CFMS?
 - g) Still share expenses for MSSC Director and another society Director?

- h) Is the Federation insurance our only tie to CFMS?
- i) Should we continue with or is it necessary for us to belong to CFMS?

Check on CFMS' website for some information, but, we need to check MSSC's By-Laws and Standing Rules, contact our Director Ritchey, check CFMS' rules and regulations and other sources in order to determine MSSC's position going forward. Is there someone from CFMS who could come to speak to us about CFMS and their operations? Ann will get the name and give it to Rudy, who will contact the person to, hopefully, come as a speaker. All of these will be included in the discussion to take place at the next Board meeting for this tabled item.

- 8) **Program Chair Report (Lopez):** Rudy reports that speakers are lined up through September 2019. Banquet speaker will be Denise Nelson. *Discussion:* taking a break during the summer, having classes or workshops instead of a speaker.
- 9) **Webmaster's Report (Ogg):** Leslie handed out a statistical report showing views of website topics such as overall MSSC, field trips, meetings, Pacific Micromount Conference, etc. Over the past 2 years, the high month was April 2017. The Facebook "likes" is 145. The reports are comprehensive and informative. Renee Kraus wanted to know if Instagram is included – not at this time. *Discussion* followed Leslie's report regarding videos, photos and Google docs format.
- 10) **Bulletin Report (Elsnau):** Linda Elsnau, Editor, was absent today. In fact, Linda wanted to know if the society was willing to have an "absentee" (due to personal circumstances) Editor; President Rossman wanted to know if someone could make 5 copies of the Bulletin for the membership meetings. Rudy said he would do it and Angie said she would if he couldn't do it. *Discussion* followed regarding "absentee" Editor with consensus being that no one minded. Linda is doing a great job and our *Bulletin* looks wonderful! Thank you, Linda!
- 11) **Banquet Report (Lopez):** The Banquet will be January 12, 2019 at the Oak Tree Room at Coco's. We will have our Silent Auction and donations are welcome. Rudy will prepare a flyer.

Discussion followed regarding brochures to be placed at the Gem & Mineral Show (Costa Mesa) in November 2018. President Rossman asked if there was anything else to discuss. None.

- 12) **Next Meeting Date:** The next Board meeting will be December 2, 2018 at Bruce Carter's residence.

JTI is coming up...

The meeting was adjourned at 3:18p.m.

Respectfully submitted by Angela Guzman, MSSC Secretary

MSSC ANNUAL BANQUET & SILENT AUCTION

Saturday, January 12, 2019

Social Hour 5:30 pm: Dinner 6:30 pm; Speaker 7:30 pm

**Oak Tree Room (next to Coco's)
1150 West Colorado Boulevard
Arcadia, CA 91007**

The cost of the Banquet is \$40.00.per person

Program: "Treasures of Poland, Amber and Salt"
Presented by: Denise Nelson



Make your reservation with Rudy Lopez (programs@mineralsocal.org).

There is plenty of seating available. If you made a reservation and circumstances change where you or your guests cannot attend, please notify **Rudy Lopez before Wednesday, January 10th, 2018**. Thereafter you will be responsible for paying \$40.00 for each individual reservation regardless of attendance. It would be a shame to miss this event because you delayed making that reservation.

Call or email Rudy Lopez to make your reservation today!

626 993-7989 or programs@mineralsocal.org

Mail Checks to: MSSC
1301 Leonard Ave
Pasadena Ca 91107

If you haven't done so already, plan to pay your dues at the same time.

Dues are officially due 1/1/2019.

The combination of gemology and genealogy is a perfect topic for Denise Nelson, who has taught genealogy and spent many years researching and studying the history of gems and jewelry. Denise is a Graduate Gemologist (GIA), an appraiser, consultant and owner of INNER CIRCLE Fine Jewelry and Appraisal Services. Nelson has revealed many interesting facts to her clients in her 30 years in the jewelry business. She's traveled to 38 countries to research historical jewelry, visited mining areas and bought gemstones, pearls and jewelry for her customers. Nelson also designs jewelry and is a wholesaler to a number of jewelry stores. She is a member of the National Association of Jewelry Appraisers (NAJA) and the Gemmological Association of Great Britain.

Annual Banquet 2019 Silent Auction: Donated Minerals to MSSC By: Rudy Lopez

I am in the process of cleaning minerals from the last donation MSSC received. These minerals were from a collection over 40 years old and are quite nice. The collection contains quartz crystals, slabs and a variety of uncut rock.

I have found quite a few very nice pieces and hope to find more. I hope to fill a couple of tables for the Annual Banquet silent auction. Make sure to attend the Annual Banquet and pick up some of these treasures.

But, please bring other silent auction items to fill the rest of the tables. This is the time to clear space in your house or collection for new mineral treasures you might find at our banquet.

Attention All Field Collectors

This was posted in LA Rocks.com on Oct 26, 2018

[Help open public lands to rockhounding](#)

Fri Oct 26, 2018 3:30 pm (PDT) . Posted by: [ajhoekstra](#)

Help to open public land to rockhounding. We need rockhounds to comment in favor of the BLM's proposed Alternative D (the "preferred alternative") for the Grand Staircase-Escalante National Monument and the land recently removed from the monument, now called the Kanab Escalante Planning Area.

For information see: http://www.sdmg.org/pdf/public-lands/flyer_2018_GSENM-KEPA.pdf
http://www.sdmg.org/pdf/public-lands/flyer_2018_GSENM-KEPA.pdf

The draft comment letter: http://www.sdmg.org/blmdocs/GSENM-KEPA_2018_ltr.pdf
http://www.sdmg.org/blmdocs/GSENM-KEPA_2018_ltr.pdf

Your club's board needs to read this and approve it at their next meeting so that your club can be a co-signer.

Please spread the word. The CFMS and ALAA are doing nothing and the CFMS had not used its email alert list to inform member clubs. Time is of the essence. Conservation organizations are opposing the provisions that would allow rock and fossil collecting, and we need to speak up in favor of the BLM's "preferred alternative" or the BLM will have to back down and prohibit hobby collecting. Not only will this mean that you can collect when you visit Utah, but it also sets a precedent by allowing hobby collecting within a National Monument administered by the BLM, and this is important to Mojave Trails in California and other new and existing national monuments.

Andrew Hoekstra (delvings@yahoo.com),

Delvers Gem & Mineral Society Southern California Paleontological Society
CFMS, Public Lands Advisory Committee, Paleontological Specialist

Membership Dues are Due as of Jan 1, 2019.

Your 2019 Membership Renewal form is attached. Please complete the form and return it to Cheryl Lopez, Member Chair. Please complete and mail, even if you are a Lifetime or Honorary member so that we can confirm your current address, phone and roster options. Thank you.

Ride Share Listing

Can You Provide A Ride?

Would You Like Company On The Drive To Meetings?

We have heard from several of our members that they would like to ride-share with someone to the meetings. We will list the names, general location and either a phone number or an email address of anyone who would like to connect for a ride-share. If you would like to catch a ride or would like company for the trip, let me know at msscbulletin@earthlink.net and I'll put the information in this section of the bulletin. After that, any final arrangements made are up to you. Also, If you make a connection that works for you, let me know so that I can remove your

Looking for	Who	Where	Contact at
A ride	Richard Stamberg	North Orange County, near Cal State Fullerton	<i>Please see emailed bulletin</i>

information from the bulletin. The Editor

West Coast Gem & Mineral Show
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	1/3 page	\$10.00	
	1/2 page	\$20.00	
	Full Page	\$35.00	
In addition, any advertiser who purchases 12 months of space in advance will receive a discount of 12 months for the price of 10 months. The copy for the ads should be mailed to the editor at bulletin@mineralsocal.org and the payment should be sent to the MSSC Treasurer 1855 Idlewood Road, Glendale, CA 91202			

Calendar of Events:

Only local area shows are listed here. Other CFMS Club shows can be found at: <http://www.cfmsinc.org/>

NOVEMBER

November 3 - 4: ANAHEIM, CA

American Opal Society

Business Expo Center

1960 S. Anaheim Way

Hours: Sat 10 - 6; Sun 10 - 5

Website: www.opalsociety.org [Show Page](#)

November 3 - 4: RIDGECREST, CA

Indian Wells Gem & Mineral Society

Desert Empire Fairgrounds

520 South Richmond Road

Hours: 9 - 5 daily

November 18 - 19: LAKESIDE, CA

El Cajon Valley Gem & Mineral Society

Lakeside Rodeo Grounds

12584 Maplevue Street

Hours: Sat 10 - 5; Sun 10 - 4

Website: www.ecvgms.org

November 17 - 18: OXNARD, CA

Oxnard Gem & Mineral Society

Oxnard Performing Arts Center

800 Hobson Way Hours: Sat. 9 - 5; Sun. 10 - 4

Website: <http://oxnardgem.com> [Show Page](#)

DECEMBER

December 1 - 2: BARSTOW, CA

Mojave Desert Gem & Mineral Society

Cora Harper Community Center

841 S. Barstow Road

Hours: 10 - 5 daily

Website: www.mdgms.net

Website: www.pasadenalapidarysociety.org

Next fieldtrip: Boron, Saturday, Nov 10, 2018

The trip will be exploring the borate area near Boron and neighboring volcanics. The date is Saturday, Nov 10th. We will meet at 9:00AM in the Rio Tinto Visitor Center parking lot. We will take look at the giant borax crystal inside and collect a few crystals of ulexite and kernite in the small material piles in the parking lot. We will look at the pit from the viewing point at the Visitor Center, we will not be able to visit the pit itself though. In order to get there turn off Hwy 58 at Borax Rd (not Boron Rd), and head north. In one mile you'll enter the Rio Tinto property and the signs will lead you to the Visitor Center. The address is 14486 Borax Rd, Boron. Here are the coordinates: 35°01'46.0"N 117°41'12.9"W (35.029442, -117.686926). Google Maps <https://goo.gl/maps/wyuhMbhSzL22>

You can also see the location here on their webpage: <https://www.borax.com/borax-operations/borax-visitor-center>

Afterwards we will double back to Hwy 58 and continue towards Boron Rd in order to drive around the huge dumps over to the Saddleback Mtn for opal, magnesite, and calcite vein material. The opal is very strong green fluorescent under shortwave UV light. Under longwave UV light the vein material fluoresces in 3 different colors: white for magnesite, yellow to orange for calcite, and less intense green for opal. The matrix rock is Saddleback Basalt, supposedly the same layer as the base rock in the Boron mine pit. In the vesicles you can potentially find clear labradorite, augite, and quartz pseudomorphs after tridymite, covered with white montmorillonite.

Here are the coordinates for the Saddleback Mountain in case you miss us at the Visitor Center: 35°03'34.2"N 117°37'33.9"W (35.059505, -117.626089)

Google Maps:

<https://www.google.com/maps/place/35%C2%B003'34.2%22N+117%C2%B037'33.9%22W/@35.0423947,-117.6401168,14112m/data=!3m1!1e3!4m5!3m4!1s0x0:0x0!8m2!3d35.0595!4d-117.6260833>

You can get to it by going 3.6 miles north on the County Line Road after turning off Boron Frontage Rd N which runs parallel to Hwy 58. Four-wheel drive is advisable, as the County Line Rd gets sandy. The turnoff towards the mountain gets a little bit rougher last few hundred feet close to the foothills. (Google Earth Photo in the email; Snail Mail Photo on reverse of Membership form.)

The last leg of the trip is focused on microscopic minerals at the "pumice" quarry 1.5 miles northwest of the Saddleback Mountain. You'll be able to potentially find small but interesting zeolites like heulandite, chabazite and likely phillipsite. In some vesicles you can find very interesting aggregates of clear lustrous hexagonal blades of magnesite. The historical

articles also mention micro pseudobrookite and more rare minerals like searlesite and smythite. Hopefully someone can find those too. The quarry is marked as the hard hat area, so please bring your hardhats.

2018 MSSC Officers:

OFFICERS		
President	George Rossman	president@mineralsocal.org
Vice President	Renee Kraus	vicepresident@mineralsocal.org
Secretary	Angie Guzman	secretary@mineralsocal.org
Treasurer	Jim Kusely	treasurer@mineralsocal.org
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2016--2018	Leslie Ogg	
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Hospitality	Laura Davis	
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Program and Education	Rudy Lopez	programs@mineralsocal.org
Publicity	Linda Elsnau	bulletin@mineralsocal.org
Webmaster	Leslie Ogg	webmaster@mineralsocal.org

About the Mineralogical Society of Southern California

Organized in 1931, the Mineralogical Society of Southern California, Inc. is the oldest mineralogical society in the western United States. The MSSC is a member of the California Federation of Mineralogical Societies, and is dedicated to the dissemination of general knowledge of the mineralogical and related earth sciences through the study of mineral specimens. The MSSC is a scientific non-profit organization that actively supports the geology department at Pasadena City College, Pasadena, California. Support is also given to the Los Angeles and San Bernardino County Museums of Natural History. The Bulletin of the Mineralogical Society of Southern California is the official publication of the Mineralogical Society of Southern California, Inc.

The MSSC meetings are usually held the second Friday of each month, January, February and August excepted, at 7:30 p.m. in Building E, Room 220, Pasadena City College, 1570 E Colorado Boulevard, Pasadena, California. The annual Installation Banquet is held in January, and the annual Picnic and Swap Meeting is held in August. Due to PCC holidays, meetings may vary. Check the Society website for details.

The Society also sponsors the annual Pacific Micro mount Symposium held at the San Bernardino County Natural History Museum during the last weekend of January.

Annual Membership dues for the MSSC are \$20.00 for an individual membership, \$30.00 for a family membership. Bulletins are delivered by email, there is an additional annual \$20.00 fee if you prefer paper bulletins mailed to your address. The Society's contact information:

Mineralogical Society of Southern California

1855 Idlewood Rd.,

Glendale, CA 91202-1053

E-mail: treasurer@mineralsocal.org

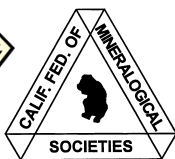
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DISCLAIMER: The Mineralogical Society of Southern California, Inc. is not responsible, cannot be held responsible or liable for any person's injuries, damages or loss of property at or traveling to or from any general meeting, board meeting, open house, field trip, annual show or any other MSSC event.

MSSC Bulletin Editor
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Glendale, CA 91214-2415

To:



**With Knowledge
Comes Appreciation!**

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