



# **Bulletin of the Mineralogical Society of Southern California**

Volume 92 Number 7 - July, 2019

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*The 970<sup>th</sup> meeting of the Mineralogical Society of Southern California*

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*With Knowledge Comes Appreciation*

**July 12<sup>th</sup>, 2019 at 7:30 P.M.**

**Pasadena City College  
Geology Department, E-Building, Room 220  
1570 E Colorado Blvd., Pasadena**

***Program : Opal Identification Presented by Peter Goetz***

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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: Opal Identification Presented by Peter Goetz

### Topics covered: Opal Identification:

Characteristics of Opal from the main source locations i.e.: Queensland, South Australia, and New South Wales. Geologic reasons on why they are different. What to look for when buying Opal rough and finished stones, as well as Opal jewelry.

I will bring some examples of Opal from different areas.

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### From the Editor:

Wow, 2019 is officially half over! My how time flies..

Now we are looking forward to our annual Picnic in August and two upcoming Field Trips, one to Nevada in September and one right here Pasadena in July. Before we know it, we'll be having our Officer Election in November and our January Banquet along with the February, 2020 Micromineral Conference! It also looks like our Program Chair has a great selection of programs scheduled for our enjoyment for the rest of the year as well. Always something to look forward to at MSSC!

Linda Elsnau

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## FROM THE PRESIDENT: Interesting Minerals, A to Z. The letter "R": by George R. Rossman

### Rossmannite --- (MSSC's president can't resist!)

Rossmannite is a species of tourmaline. Tourmaline, in turn, is a group name for currently thirty-two different mineral species that share a common structure, but which have different chemical compositions. Some of these species are common like elbaite and schorl. Elbaite is a sodium-lithium-aluminum tourmaline whereas schorl is a sodium-iron tourmaline. Rossmannite is a lithium-aluminum tourmaline without sodium. Their chemical formulas are:

Elbaite:	$\text{Na}(\text{Li}_{1.5}\text{Al}_{1.5})\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3(\text{OH})$
Schorl:	$\text{Na}(\text{Fe}^{2+}_3)\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3(\text{OH})$
Rossmannite:	$\square(\text{LiAl}_2)\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3(\text{OH})$ where the $\square$ represents a vacant site

Rossmannite was originally discovered in the late 1990's while a student at the University of Winnipeg,



**Figure 1.** The type specimen of rossmanite crystals in lepidolite mica housed in the Moravian Museum, Bruno Czech Republic. (photo: Jan Cempířek, Masaryk University, Bruno)

Manitoba, was conducting a broad study of the composition and structure of many tourmalines from around the world. One of the samples was obtained from the Moravian Museum in the city of Bruno where it (**Figure 1**) was on display in a mineralogy exhibit. When she used an electron microprobe to analyze a small chip of the crystal that was originally obtained from a small pegmatite near Rožná, Czech Republic, she found that it did not have enough sodium to be elbaite, and did not correspond to any known species of tourmaline. The Canadian group performed not only chemical analyses, but also obtained a complete X-ray structure analysis and a variety of other physical properties such as density, etc. They then submitted the information to the International Mineralogical Association for consideration as a new mineral. And, they got to name it, as well.

The Rožná locality is of additional interest because it is the type locality for lepidolite mica. The pink color of both the lepidolite and the rossmanite come from a small amount of manganese that substitutes for the aluminum in each mineral.

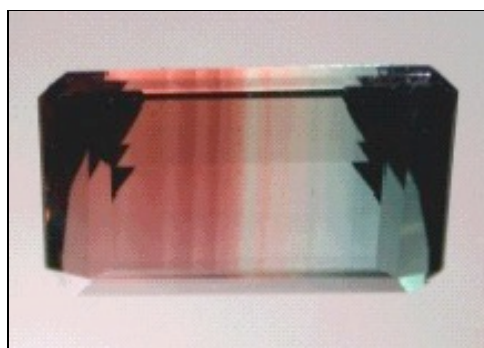
Rossmannite has also been found in the pegmatites of Elba, Italy (**Figure 2**). It is from these pegmatites that the tourmaline species, elbaite, got its name. Elbaite is the tourmaline species commonly used for gemstones, and which has been obtained in significant quantity for over a century from the pegmatites of Pala and Mesa Grande, California. In these localities we have the historically famous mines such as the Stewart Mine, the Tourmaline Queen Mine, and the Himalaya Mine. The black-capped crystals of tourmaline in figure 2 are actually comprised of three different species of tourmaline. The black cap is the species foitite, ideally  $(\square)(\text{Fe}^{2+}_2\text{Al})\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3\text{OH}$ . The cracked bottom half of the crystal is elbaite, and the beautifully clear region is rossmanite. How ironic. Some of the elbaite crystals from the type locality at Elba are actually half rossmanite.

Rossmannite occurs in many other localities around the world, including some localities where gem-quality material occurs. Crystals from Ibadan, Nigeria, are among the best (**Figure 3**). But here, the crystals vary in composition with zones of elbaite, rossmanite and the calcium tourmaline, liddicoatite. A very nice, gem-quality crystal of orangish-rose colored rossmanite and a faceted gem from the Orieshnaja pegmatite, Transbaikalia, Russia, were featured on the Lithographie 2014 Rough and Cut calendar. You can see them at:

<https://www.facebook.com/lithographie/photos/the-past-week-have-been-so-much-about-cut-stones-and-jewelry-that-we-hesitate-to/10152040367436595/>



**Figure 2.** Tourmaline from Elba, Italy. The clear, colorless portion is the species rossmanite.  
Photo: Fredrico Pezzotta, Natural History Museum of Milan, Italy



**Figure 3.** Gem tourmaline of mixed species including rossmanite from Ibadan, Nigeria.  
Photo: GRR



**Figure 4.** Rossmanite from the Tanco Mine, Canada.  
Photo: GRR



**Figure 5.** Tourmaline from Mount Mica, Maine that contains foitite, rossmanite and elbaite, all in one crystal. Photo: GRR

What about North America? Tourmaline crystals up to 18 cm long occur at the Tanco Mine, Bernic Lake, Manitoba, Canada. (**Figure 4**) Portions of these pink crystals from the central part of the pegmatite are rossmanite. This was the first report of rossmanite from a petalite-subtype pegmatite. Previously it had been reported from lepidolite-subtype pegmatites.

Is there rossmanite in the United States? The answer is yes. It has been reported from multiple localities in the Maine pegmatite district. Crystals from the Mount Mica Mine (**Figure 5**) are similar to those from Elba, Italy. The black cap is foitite, the lower portion is elbaite, but the area under the black cap is where the rossmanite is found in many, but not all the crystals. In Maine, it is also found at the Berry-Havey Pegmatite in Androscoggin County and at the Black Mountain Pegmatite in Oxford County. Ten years ago, it was reported from marbles near Newcomb, Essex County, New York, where it occurs in the rims of tourmaline crystals.

What about in the California pegmatites? The answer is yes, but I can't tell you where because the information is part of a still-unpublished thesis study of a very famous southern California pegmatite in San Diego County

just north of the city of Pala. But I will tell you that they are small and not very pretty. OK, change that to tiny and ugly.

Let's go back to the chemical formula for schorl:  $\text{Na}(\text{Fe}^{2+}_3)\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3(\text{OH})$ .

If the last hydroxide in the schorl formula were replaced by fluoride, the chemical formula would become  $\text{Na}(\text{Fe}^{2+}_3)\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3(\text{F})$ . This would be the mineral species fluor-schorl. Does fluor-schorl exist? Yes, in 2016 the European Journal of Mineralogy published an article describing the new mineral, fluor-schorl, from the several localities in the Erzgebirge/Krušné Hory Mountains including near Zschorlau, Germany, the original locality for schorl.

Other fluor-tourmalines exist such as fluor-elbaite from the Cruzeiro Mine in Brazil. Does fluor-rossmanite exist? The answer is both yes and no. Tourmalines with the composition of fluor-rossmanite have been described from Muva, Mozambique, and from Omapyo, Namibia. The chemical analyses are good and sufficient to demonstrate that this composition occurs in nature. But the persons who described them never submitted a complete study of these tourmalines to the International Mineralogical Association, so they were never considered for naming as a new "official" species. So, yes, they exist, but no; no such species as fluor-rossmanite is officially recognized. The same situation exists for oxy-rossmanite where  $\text{O}^{2-}$  replaces F. It was analyzed and published in 2005, but never submitted for consideration as a new mineral. No submission: no new mineral name. It's that simple.

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## MINUTES of the June 21, 2019 Meeting

### Call to Order:

On Friday, June 21, 2019, the **969<sup>th</sup> Membership Meeting** of the Mineralogical Society of Southern California (MSSC) was called to order at 7:32 p.m. by President Dr. George Rossman, Ph.D. There were 28 in attendance.

### President's Opening Remarks:

In his opening remarks, Dr. Rossman informs us that, thus far, the International Mineralogical Association (IMA) has approved 5,477 mineral species compared to last month's report of 5,468. An interesting name, Siwaqaite,  $\text{Ca}_6\text{Al}_2(\text{CrO}_4)_3(\text{OH})_{12}\cdot 26\text{H}_2\text{O}$ , was the 150<sup>th</sup> mineral approved in 2018. Nixonite, an interesting mineral is named for Peter H. Nixon, Professor (retired Leeds University, UK) and author on Mantle Petrology and the mineral comes out of Canada. Its chemical formula is  $\text{Na}_2\text{Ti}_6\text{O}_{13}$ . Nixonite was approved this year. However, around 10 years ago, about 6 minerals per year were proposed, now there are 150 minerals per year announced as new minerals. That number increased, much in part, because of analysis and identifications by collectors and scientists, such as MSSC members Bob Housley and Marek Chorzewicz.

President Rossman asked for an update and report regarding the Picnic/Silent Auction.

Rudy Lopez reports that the picnic will begin at Noon on August 11<sup>th</sup> at the Carter residence. Fallbrook Gem and Mineral Society, Pasadena Lapidary Society and Natural History Museum of Los Angeles County have been invited to participate. Rudy reminds us there will be a Silent Auction, great food (smoked/bbq brisket or tri-tip) and, of course, fabulous company and great stories. Suggestions for things to bring to the potluck include fruit tray (fresh daily at Stater Bros.) and other standard sides. Set up will begin about 10a.m., volunteers are always welcome. Don't forget your donations for the Silent Auction, tables will be set up in the usual place and there will be bid sheets for items. There is a flyer up front with all the information including an RSVP. Rudy says he needs to know how many to expect and how much meat to prepare. Please watch the website and *Bulletin* for more information. *[Secy Note: Theme is Stories of Disappointment. (Share your tale of woe while collecting...you know, the perfect crystal you accidentally cracked with your rock hammer, or hey, remember that time...)]*

### Business – Approval of Minutes

Dr. Rossman asked for a **motion to approve the Membership Meeting Minutes of May 10, 2019 as published in the June 2019 Bulletin**. The motion was made by A. Meister and seconded by R. Lopez. Rossman called for a voice vote and the motion **passed unanimously** (no Nay and no Abstentions).

### Field Trip Report



Marek Chorazewicz reported his shoulder nerve injury has healed and tells us the next field trip will be in the 2<sup>nd</sup> half of September to Nevada's Goodsprings District. We'll go to the Blue Jay Mine (NW of Jean) for copper phosphate, malachite and other cobalt minerals. Marek also mentioned Smith Valley, 30 miles from the California/Nevada border where one may find blue fluorite. Watch the *Bulletin* and check the website for more information. Also, Marek brought "show and tell" for viewing after the meeting.

Rudy Lopez reports there is a member's field trip coming up sooner, July 13 and 14, at his house, starting at 9 a.m. There are 42 crates of items from the recent donation MSSC received. This society fundraiser will deposit all proceeds to MSSC. The items will be sold for \$0.25/lb. There are several crates of material (rocks and minerals) going on sale. Bring your own box or bags to carry home your treasures. Flyers are up front for the taking tonight. Please check the website and *Bulletin* for more information regarding this event.

### Announcements

Ann Meister announced the Rock Currier Collection information is on handouts. She has them with her. The auction will be held August 26, 2019 in Dallas, TX by Heritage Auctions. Visit [www.rockcurrier.com](http://www.rockcurrier.com) for more information. Or, check the MSSC Bulletin for latest information.

### Guests

Dr. Rossman asked if there were any guests who would like to introduce themselves. Danielle E. (MSSC member), Mike B. (guest and volunteer), Mary W. (Fallbrook Gem & Mineral Society), Jace M. (Chino Hills saw us on Facebook), Tony L. (assistant to Dr. Carter on Santa Cruz Island), Sara D. (former student of Dr. Carter), Photographer of Rock Currier Collection (name not given-from Milwaukee, WI), Jeff D. (Friends of Mineralogy) and Michael F. was at Caltech now Bay Area Mineralogists. Welcome one and all! [*Secy Note: Last names withheld for privacy.*]

### Program

Program Chair Rudy Lopez introduced Dr. Bruce Carter, Ph.D. who will speak on Santa Cruz Island. Dr. Carter's special interests include the western San Gabriel Mountains, faults and earthquakes in the Mojave Desert and the origin of magmas and volcanic rocks in the Klamath Mountains. Dr. Carter received his B.S., M.S. and Ph.D. from Caltech. He was mineralogy professor, then Dean at Pasadena City College for many years and is a Life Member of MSSC and a Director on its board.

The program this evening is **Tectonic Geomorphology and the Generation of Mega-floods on Santa Cruz Island, California: An Example of How Detailed Mineralogy Can Shed Light on Major Geologic Events**, presented by Dr. Bruce Carter, Ph.D. Dr. Carter prefaces his presentation by saying he will take us back many, many years in the history of the island and will emphasize the significance of the mineralogy of the island. Bruce acknowledges Dr. Janet Gordon, former professor at Pasadena City College, who, for many years, was first to take classes of students to Santa Cruz Island by way of Prisoner's Harbor. Carter and others in tonight's audience also went with those classes on the field studies with her. A few years ago, Tony LeBeau went with Bruce to help out with mapping and geology of the island. Santa Cruz Island is not easy to get to. It is one of the least visited National Parks in the lower 48 states. Most people visit the eastern point of the island, but research and study bring us to the western side.

Carter directs us to a map on his PowerPoint showing Santa Cruz Island's Prisoner's Harbor. Prisoner's Harbor is located in the northern portion of the island. It is also the "way in" to the interior of the island, a main road that is 4 miles in to the Central Valley. There is a Field Station maintained by University of California Santa Barbara (UCSB) on the island. The Field Station is where students bunk, eat and live while conducting their field studies. The mode of transport is via old 4-wheel vehicles, walking and hiking on foot. Dr. Carter feels that showing people *in the field* is the best way to teach. The trip in his presentation had about as many students as instructors/professors. The eastern segment of the island is under the National Park Service (24%). The Nature Conservancy (76%) controls the western portion of the island and it is where our focus will be tonight.

[Chumash] Indians were there before Spaniards arrived and the land changed hands many times through the years so that by 1889 there was some ranching on the island: sheep and cattle had their pens and wild pigs roamed around freely. Alas, all the sheep have been gone 75 years now, the cattle were gone about 25 years ago and the pigs are now gone, too. The island has plenty of eucalyptus trees, high fennel, brush, and lots of dirt. The fennel, very invasive, was controlled by cattle feeding off it, but since the cattle are gone, it grows thick and wild. Now, it's used as leverage to help students get their vehicles out of the mud and muck.

From Prisoner's Harbor, traveling southwest almost parallel with the road is the island's fault zone. Continuing on the narrow and steep canyon, up to the eucalyptus trees, is the Central Valley area, where the UCSB Field Station is located.

There are faults that created uplift in the north and not in the south, caused the geology to be different in each of those areas! Northern volcanics are found nowhere south of the fault zone! On the south side of the fault is a different volcanic rock, Blanca Formation, found in the middle of the Central Valley and, a schist, metamorphic rock, the oldest rock on the island, found only along the Central Valley.

Maps of Santa Cruz Island and of the Central Valley, extracted from B. Carter's presentation:

In the old days, perhaps hundreds of thousands of years ago, the western end of the island was uplifted more than the eastern (lower side). Downward erosion formed the canyon that you drive in on. The east is about 300m above sea level, to the left (west), it's about 700-750m above sea level. Erosion through the canyon led to exposure of the fault on the side of the canyon.

There is an older trace of the canyon up in the northwest, 30m above the level of the current canyon and 120m west of it. So what happened? An earthquake uplifted it a few meters, a thousand years later, another uplifting event, and then another. The canyon broke down to the south, then a few hundred years ago a major flood came down the canyon, the stream flow was disturbed, the water tumbled down over 100 feet. You can tell that from a few big earthquakes' ratio of 120-meter lateral offset versus the 30-meter vertical uplift is significant. The major island fault runs along the western northern edge of Central Valley.

From the Cascada area, the water flow is easy and slick because the rock there is hard; there has not been much erosion of the volcanic rock. There are no feldspars, or quartz on the north side which equates to lots of mud. The stream had been deterred and the flow changed its course. Mega-flooding caused the Slump Block to loosen and a giant landside moved the ridge down into the valley, it moved approximately a 2,000 kilometer long segment. Around the same time, the Rock Avalanche caused the Central Valley to flow down toward Prisoner's Harbor, about 2,000 meters away. The 2,000-meter slide, 42 feet deep, is all clay, no boulders!

The destruction forces were mega-floods that occurred in 440 a.d. and 1418 a.d. These floods partially washed out the Blanca Spur. But, the BIG flood of 1605 a.d. wiped out the original Central Valley and all but 25 meters of Blanca Spur.

Dr. Carter told about high density turbulent flow, oceanic deposits in the Santa Barbara coastal area (including Southern California coastal sediment), certain minerals found in the area and other eye openers about Santa Cruz Island.

Thank you, Dr. Carter. Santa Cruz Island is truly a fascinating place! Brief Q & A followed his presentation.

There is no way to bring you all of the details Dr. Carter talked about in his presentation. You must experience it for yourself. So, come to the next MSSC meeting to hear a great talk about opals.

**Door Prize** was won by Jace M. (Chino Hills). Congratulations!

**Adjourn:** The meeting was adjourned at 8:55p.m. Thanks to Rudy and Cheryl Lopez for goodies and refreshments.

Respectfully submitted by Angela Guzman, MSSC Secretary

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## **MSSC BOARD MEETING MINUTES June 9, 2019**

### **A. Call To Order and Roll Call**

The meeting was called to order at 1:03 p.m. by President Dr. George Rossman. The following Officers, Directors and Committee Chairs were present: George Rossman, Angela Guzman, Bruce Carter, Jo Anna Ritchey, Ann Meister, Pat Caplette, Leslie Ogg, Rudy Lopez and Bob Housley. The following were excused: Renee, Kraus, Jim Kusely, Linda Elsnau, Cheryl Lopez, Patrick Stevens and Al Wilkins.

**B. Business:** Approval of March 3, 2019 board meeting minutes as published in the April 2019 *Bulletin*: Motion made by Leslie Ogg, seconded by Ann Meister; voice vote called by Rossman and the motion passed unanimously in favor to approve the previous board meeting minutes.

### **C. Reports**

#### **1. *Comments from President* [Dr. George Rossman]**

- a) 5,477 approved minerals;
- b) Tony Kampf's X-Ray machine is down and undergoing needed repairs, meanwhile, he's using equipment at UCLA;
- c) Bob Housley mentioned Otto Mountain (1-mile N of Baker) where new minerals have been found and

d) Dr Rossman is still trying to get students interested in attending meetings, though a few have been on MSSC field trips.

2. *Treasurer's Report* [Jim Kusely]

Dr. Rossman reports for Jim Kusely that our bank statements reflect that all speaker fees have been paid and our current balance is in good shape at \$15,962.

3. *Membership Chair Report* [Cheryl Lopez]

a) Rudy Lopez reports for Membership Chair (Cheryl Lopez) that there are 37 Single, 14 Family, 6 Lifetime and 5 Honorable memberships for a total of 76 members and

b) Cheryl has attempted to contact old members, many of whom still cannot be located. Discussion: Point of reference, PLS has ± 200 members, at their last meeting there were approx. 50 members and guests, plus they have a workshop, offer field trips and their main interest is jewelry making.

4. *Field Trip Report* [Dr. Bob Housley]

Dr. Housley indicates that Marek Chorazewicz will probably set up a field trip in the fall as its too hot now to go out to the desert.

5. *Federation Director Report* [JoAnna Ritchey]

a) Director JoAnna Ritchey attended the last CFMS director's meeting and reported that the upcoming fall meeting and show will be combined in Lodi. Their show will be hosted by the CFMS officers and

b) JoAnna announced that she will not run again for the CFMS Director seat in the next MSSC election.

6. *Program Chair Report* [Rudy Lopez]

a) MSSC annual picnic will be Sunday, August 11, 2019 at the Carter residence:

- Set up will begin at 10 a.m., volunteers are welcome to come out and help;
- Suggestions for food to bring include prepared fruit trays, salads, etc. (Stater Brothers has good selections);
- Rudy has take-home containers;
- It was agreed that the standing budget for picnic food (meats) is \$300;
- Ann Meister has plastic ware, napkins, etc.;
- Silent Auction – Rudy has some items, Pat Caplette will bring some, too;
- Rudy has bid Sheets if anyone needs them, please contact him;
- Discussion about invitations: PLS, Tony Kampf, Aaron Celestain (Natural History Museum of Los Angeles County), Fallbrook club, Culver City, Glendora;
- Rudy will prepare a flyer;
- Discussion regarding a theme for the picnic: "Stories of Disappointment" (for example: George's mud ball with the glass clear crystal, Bruce's pegmatite garnet and quartz, Bob's searching through the Blue Bell mine's debris dumps and other story "gems").

b) Speakers are lined up through June 2020!

c) The "hold harmless" paperwork will be completed and sent to Dr. Martha House, our liaison with PCC.

7. *Web Master Report* [Leslie Ogg]

B. Monetary Motions:

a) After Leslie reports 2 domains need renewal at \$32/ea and we have a \$50 credit. A motion was made to approve payment for the domain renewals. After discussion, the vote was called and passed unanimously to approve the payment. Leslie will submit the bills directly to Treasurer Kusely;

b) Leslie recommends expanded access to WordPress at \$19 this year (1/2 future price). A motion was made to approve payment for the WordPress expanded access. After discussion, the vote was called and passed unanimously to approve Word Press expanded access. She will submit to Treasurer Kusely;

8. *Bulletin Report* [Linda Elsnau]

a) Linda is doing well and puts out a great *Bulletin*. The *Bulletin* deadline to submit articles, etc., is the 22<sup>nd</sup> of each month.

b) There was a short discussion regarding mailed *Bulletins*.

## 9. PCC Meeting Room Issues Report

Status for next meeting: MSSC will meet in room 202 for Dr Bruce Carter's presentation, Mineralogical Santa Cruz Island. Several PCC retirees have been invited to attend and enjoy Dr. Carter's presentation.

## 10. Pacific Micromineral Conference Report (formerly Pacific Micromount Conference) [Al Wilkins]

Dr. Rossman announces that the 2020 Pacific Micromineral Conference will be held at Fallbrook January 31<sup>st</sup> and February 1<sup>st</sup> and 2<sup>nd</sup> (field trip 2/2 TBA). Dr. Housley says the speakers have not been finalized. But he spoke about the vast variety of specimens, including Housleyite, at PMC, for sale on the Dollar Table for \$1! He said he's seen a Housleyite specimen for sale at \$250 and one on eBay for \$700!

### D. Other Items

- a) Rocks at Rudy's: Rudy has rocks, set up date/time to go get them at his place. They are in milk crates. Discussion regarding date/time resulted with July 13<sup>th</sup>/14<sup>th</sup> at Rudy's. Come and get 'em! Check *Bulletin* for details.
- b) Rudy has 2,049 donated micromount boxes he'll use at the Home School events at the NHM of LA County;
- c) Cheryl has rocks and minerals from her recently finished/completed school projects;
- d) Ann announced the Rock Currier auction will be in Dallas, Texas at the Heritage Auction. The catalog may be found soon at [www.rockcurriercollection.com](http://www.rockcurriercollection.com);
- e) Discussion regarding JTI, Tucson store and their warehouse here, locally;
- f) Pat Caplette mentioned having someone speak on how a mineral gets approved.

E Next Board Meeting will be Sunday, September 15, 2019 at Bruce Carter's home.

Thanks to Bruce and Kathy Carter for hospitality and refreshments.

Adjourn at 2:20 p.m.

Submitted by Angie Guzman, MSSC Secretary

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## List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
<b>Meeting Dates:</b>	September 13, 2019	Eric Scerri: A Tale of Seven Elements
	October 11, 2019	Karin Rice: Geology of Rancho La Brea/ LA Brea Tar Pits
	November 8, 2019	Renee Newman: "The Allure of Diamonds"
	December 13, 2019	Steve Hardinger: 'Minerals Containing Carbon'
	January 10, 2020	Paul Adams: <i>To Be Announced</i>
<b>MSSC Picnic</b>	August 11, 2019	Bruce & Kathy Carter's Home
<b>Board Meeting</b>	September 15, 2019	Board Meeting at Bruce Carter's house
<b>Field Trip</b>	July 13 & 14, 2019	Rudy & Cheryl Lopez Home See <b>Announcement on page 10</b>
<b>Field Trip</b>	2 <sup>nd</sup> half of September, 2019	(Exact date to be announced) Nevada's Goodsprings District

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

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## MSSC ANNUAL PICNIC /SILENT AUCTION **Sunday, August 11, 2019**

### **YOU ARE INVITED / PLS/Fallbrook/NHM**

Sunday, August 11th, from 12 noon to 4:30pm is MSSC's annual picnic. We are going to invite two clubs to our picnic this year, PLS (Pasadena Lapidary Society) and Fallbrook.

### **THE LOCATION:**

The home of Bruce and Kathy Carter, 146 Highland Place, Monrovia, CA

Bruce and Kathy's home is just north of Foothill Blvd and west of Mayflower Ave. in Monrovia. Street parking is available. They have a beautiful back yard with shade structures and an outdoor kitchen. If it is too hot, then we can easily move into the air-conditioned house.



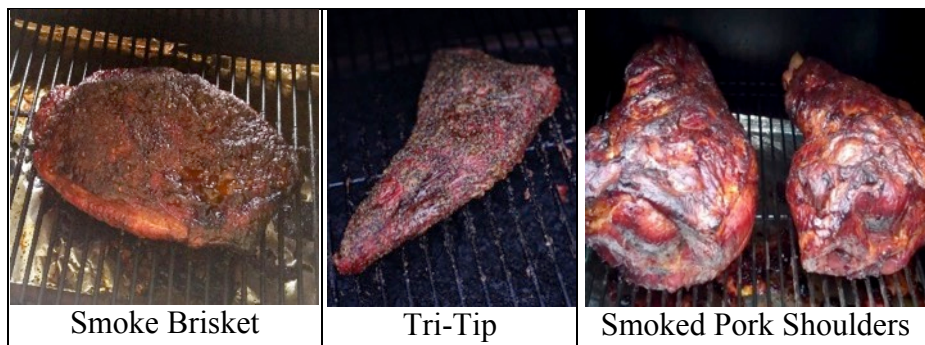


Driving Directions from the 210 Freeway: Exit the 210 at Huntington Drive and go east to Mayflower Ave. Turn North to Foothill Blvd. Then go west one block to Highland Place. North to # 146. If you get lost, Bruce's phone number is 626-357-4532 or Rudy Lopez 626 993-7989.

**We need a good head count so Rudy can make sure we have enough meat for everyone.**

## FOOD

Rudy will cook the Pull Pork and Brisket or Tri Tip. He slow smokes the Pork Shoulder and Brisket or Tri Tip up to 14 hours so they are really tender. We are going to need more items to make a great meal. We will need rolls for sandwiches for the Pull Pork and Brisket. Please bring your own special potluck offering to share: a salad (homemade or from the deli),



chili, coleslaw for sandwiches, chips and dip, salsa or guacamole, a veggie tray, grapes, fruit tray (Stater Brothers in Pasadena) , a jar of pickles or a can of olives; cookies, pie or other dessert item, or anything edible. Let's see what delicacies turn up this year! Leslie's Hawaiian Ice will make another appearance we hope. So let's all pitch in and make sure we have enough for everyone to enjoy. MSSC will supply plates, cups, napkins, knives, forks and spoons and will also supply water and ice. It is suggested you bring any serving utensils your contribution requires. Be sure to mark them and your serving dish with your name or initials so you're sure to get them back. All food items you bring should feed at least 8 people or more. Please let Rudy know what items you intend to bring so we can coordinate with other members and guests, so we don't have too much of one item.

Please RSVP by Tuesday, August 6, 2019. It's really important that anyone from the other clubs that will attend bring food items and RSVP. Please send your RSVP and what you will bring to: [programs@mineralsocal.org](mailto:programs@mineralsocal.org). Or call Rudy Lopez 626-351-6283.

If you call, there is an answering machine so please **Clearly Identify Yourself And How Many Are In Your Party & What Food Items You Are Bringing.**

## SILENT AUCTION

**MSSC MEMBERS, Don't forget to bring items for silent auction**

We are going to have a silent auction and I am encouraging everyone to bring items. Let's all pitch in and bring items for the silent auction. Please understand anything that does not sell the day of the picnic will go back home with the original owner. There will be tables for your auction items and bid sheets. Items will be priced to sell, but not given away.

Those of you who are so inclined may bring items for the silent auction. Please bring items that are related to our hobby –minerals, fossils, lapidary, gems/jewelry, geo-science books, and mining memorabilia.

**HELP NEEDED:** Need volunteers to help set up and take down tables, chairs and canopies. Please contact Rudy Lopez: [programs@mineralsocal.org](mailto:programs@mineralsocal.org)

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What's your favorite mineral? Why? What attracted you to it? Write a paragraph or two to tell the Membership all about your favorite mineral and send it you your editor for the bulletin..

Your Editor [bulletin@mineralsocal.org](mailto:bulletin@mineralsocal.org)

## MSSC FIELD TRIP-MSSC Members Only

Saturday, July 13<sup>TH</sup> & Sunday, July 14<sup>TH</sup>

Location: Rudy & Cheryl Lopez Home  
1301 Leonard Ave. Pasadena

Time: 9am – 12noon

42 crates of rough lapidary or yard rock, for sale.

All rock will sell for 25 cents a pound.

Please bring your own bags or containers to take your purchase home. All proceeds go to MSSC general fund.

If you are interested, please send e-mail to:  
programs@mineralsocal.org.



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### 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](mailto: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 information from the bulletin. The Editor

Looking for	Who	Where	Contact at
A ride	Richard Stamberg	North Orange County, near Cal State Fullerton	See emailed bulletin

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### OTHER FREE THINGS TO DO...by Ann Meister

The **Von Kármán Lecture** on \*Thursday/Friday\* **July 11 and 12** at 7 PM. The host is Preston Dyches and the speakers are Blaine Baggett, Arden Albee and John Casani. The title of the presentation is **“Moon Struck! Celebrating Apollo’s 50th Anniversary.”** As part of the intense, decade-long effort that led to human footprints on the lunar surface, NASA’s Jet Propulsion Laboratory launched a series of robotic precursors to the Moon. It proved a formidable challenge – the first six missions failed, putting at risk the laboratory’s ambitions to explore the solar system.

Meanwhile, Caltech – which operates JPL for NASA – established a laboratory in the mid-1960s to help develop the new techniques that would be needed for analyzing lunar samples. And once the Apollo 11 Moon rocks were on the ground, the Caltech researchers raced to contribute to the first stunning scientific results NASA shared with the world.

This event will focus on understanding the supporting roles these institutions played in one of humanity's greatest achievements, and consider what might lie ahead in exploring the Moon. Take a journey back in time to learn how JPL found its way to success in the early days of the space race and how both Caltech and JPL have contributed to exploring and understanding our nearest celestial neighbor. \*\* Thursday is at the Von Kármán Auditorium at JPL and Friday is at Ramo Auditorium at Caltech.

The **Watson Lecture Series at Caltech is on hiatus until the Fall semester.** Stay tuned until October!

The **UCLA Meteorite Gallery** lecture is on Sunday, **July 21**. The speaker is Dr. Ming-Chang Liu. Ming-Chang obtained his Ph.D. at UCLA about 10 years ago; he is the manager of the NSF National Ion Probe Facility located at UCLA. His title is "**The Hayabusa Spacecraft Missions; Returning Samples of Asteroids to Earth.**" Despite many problems, Hayabusa 1 was the first spacecraft to sample an asteroid and bring samples back to Earth. Now the Hayabusa2 space mission will attempt to recover surface materials from asteroid 162173 Ryugu. It was launched December 2014, and is currently in the process of surveying the asteroid. The first touchdown to collect surface samples was conducted on February 22, 2019. In this talk, he will discuss the goals of this mission, show some images taken by on-board cameras and discuss what we hope to learn when the samples are brought back to our terrestrial laboratories. The Meteorite Gallery in Geology room 3697 is open with a docent present every Sunday from 1 till 4. The lecture, which is always on a Sunday afternoon at 2:30 pm, is in room 3656 near the Meteorite Gallery.

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## ROCK CURRIER COLLECTION FREE AUCTION CATALOG OPPORTUNITY

Some of Rock's "favorite children" will be sold at **Heritage Auctions** on Monday, **August 26, 2019**. This live auction will be held at 1518 Slocum Street in Dallas, Texas, and there will also be live streaming. Bids can be placed in person, online, by phone, and by snail mail. The printed catalog will be available approximately one month before the auction takes place. Online bidding will commence in the beginning of August. All specimens can be seen in person at the auction previews: August 22 to 26. If you are going to the Dallas Mineral Symposium (<https://www.dallassymposium.org>), it is on that same weekend time frame, so you could attend two great mineral events at the same time!

You can view the Rock H. Currier Collection online by using this link: **ROCK CURRIER AUCTION**  
<https://fineart.ha.com/c/search-results.zx?N=50+792+4294944044+4294967083&type=friend-consignorpreview-notice>

Heritage Auctions is just beginning to put up the auction specimens and the entire catalog won't be totally online until sometime in July.

If you want a **free** printed catalog:

- Use this link: **HERITAGE CATALOG** <https://www.ha.com/c/catalog-orders.zx?type=surl-catalog>
- Type in "**ROCK2019**" in the field for **Promotional Code**
- A window for Individual Auctions will show up which highlights Upcoming Auctions
- Select "**Nature & Science**" and then "**2019 August 26 Rock H. Currier Collection ... #5445**"
- Complete the Personal Information and then select "**Confirm Order**"

For any specific auction questions, please contact Craig Kissick, Director of Nature & Science:  
 CraigK@HA.com, 1-877-HERITAGE (437-4824) x1995.

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*With Knowledge Comes Appreciation*

MSSC Advertisement Policy:			
Mineral-related ads are allowable in the MSSC bulletin. Below is the price per month			
	Business Card	\$5.00	
	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 <a href="mailto:bulletin@mineralsocal.org">bulletin@mineralsocal.org</a> and the payment should be sent to the <b>MSSC Treasurer 1855 Idlewood Road, Glendale, CA 91202</b>			



# West Coast Gem & Mineral Show

November 22, 23, 24, 2019

75 Select Wholesale  
and Retail Dealers

Minerals\*Fossils  
Gems\*Jewelry

\*Lapidary\*

\*Decorator Pieces\*  
and much more!



Martin Zinn  
Specimen

Benitoite  
San Benito County, CA  
Jeff Scovil

Hours: 10-6 FRI & SAT  
10-5 SUN

\*Free admission  
\*\$10/day parking

New Location!!

3050 Bristol St. Costa Mesa, CA 92626

\*See our website for map and driving directions  
[www.mineralshowsllc.com](http://www.mineralshowsllc.com)

## Calendar of Events:

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

### JULY

There are no scheduled programs for July

### AUGUST

#### August 2, 3 & 4: NIPOMO, CA

Orcutt Mineral Society

Nipomo High School

525 Thompson Avenue

Hours: Fri-Sat 10 - 5, Sun 10 -4

Website: [omsinc.org](http://omsinc.org)

### SEPTEMBER

#### September 21: LONG BEACH, CA

Long Beach Mineral & Gem Society

Expo Arts Center

4321 Atlantic Avenue

Hours: 10:00 - 5:00

Email: [lbmineralgemsociety@gmail.com](mailto:lbmineralgemsociety@gmail.com)

### OCTOBER

#### October 12 - 13: TRONA, CA

Searles Lake Gem & Mineral Society

Trona Gem Building

13337 Main Street

Hours: Sat 7:30 - 5:00; Sun 7:30 - 3:00

Website: [iwvisp.com/tronagemclub](http://iwvisp.com/tronagemclub)

#### October 19: WEST HILLS, CA

Woodland Hills Rock Chippers

First United Methodist Church

22700 Sherman Way

Hours: 10 - 5

Website: [rockchippers.org](http://rockchippers.org) [Show Page](#)

### NOVEMBER

#### November 2 - 3: ANAHEIM, CA

American Opal Society

Business Expo Center

1960 S. Anaheim Way

Hours: Sat 10 - 6; Sun 10 - 5

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



## 2019 MSSC Officers:

<b>OFFICERS</b>		
President	George Rossman	<a href="mailto:president@mineralsocal.org">president@mineralsocal.org</a>
Vice President	Renee Kraus	<a href="mailto:vicepresident@mineralsocal.org">vicepresident@mineralsocal.org</a>
Secretary	Angie Guzman	<a href="mailto:secretary@mineralsocal.org">secretary@mineralsocal.org</a>
Treasurer	Jim Kusely	<a href="mailto:treasurer@mineralsocal.org">treasurer@mineralsocal.org</a>
CFMS Director	Jo Anna Ritchey	
Past President	Ann Meister	
<b>DIRECTORS</b>		
2019--2020	Bruce Carter	
2019--2020	Bob Housley	
2019--2020	Leslie Ogg	
2018-2019	Pat Caplette	
2018-2019	Pat Stevens	
<b>COMMITTEE CHAIRS</b>		
Bulletin Editor	Linda Elsnau	<a href="mailto:bulletin@mineralsocal.org">bulletin@mineralsocal.org</a>
Hospitality	Laura Davis	
Membership	Cheryl Lopez	<a href="mailto:membership@mineralsocal.org">membership@mineralsocal.org</a>
Micro Mount Conf. Chairman	Al Wilkins	
Program and Education	Rudy Lopez	<a href="mailto:programs@mineralsocal.org">programs@mineralsocal.org</a>
Publicity	Linda Elsnau	<a href="mailto:bulletin@mineralsocal.org">bulletin@mineralsocal.org</a>
Webmaster	Leslie Ogg	<a href="mailto:webmaster@mineralsocal.org">webmaster@mineralsocal.org</a>

### 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](mailto:treasurer@mineralsocal.org)

**Website:** [www.mineralsocal.org](http://www.mineralsocal.org) **The Mineralogical Society of California, Inc.**

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MSSC Bulletin Editor  
3630 Encinal Ave.  
Glendale, CA 91214-2415

*To:*



**With Knowledge Comes  
Appreciation**

***Your MSSC  
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