

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

Volume 91 Number 9 - September, 2018

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*The 960<sup>th</sup> meeting of the Mineralogical Society of Southern California*

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*With Knowledge Comes Appreciation*

**September, 14<sup>th</sup>, 2018 at 7:30 P.M.**

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

***Program* : What is This Thing Called Science (An Introduction to the Philosophy  
of Science Presented by Dr. Eric Scerri**

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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: What is This Thing Called Science (An Introduction to the Philosophy of Science: Presented by Dr. Eric Scerri

In this, his second lecture to the club, Dr. Scerri will give an introduction to the philosophy of science, while concentrating on the views of the two most influential scholars in the field, namely Karl Popper and Thomas Kuhn. He will also discuss developments that have taken place more recently

including a new approach that he describes in his most recent book, *A Tale of Seven Scientists and A New Philosophy of Science*.

Dr. Eric Scerri is an author and UCLA professor specializing in chemistry as well as history and philosophy of science. He has published a dozen books, including six with Oxford University Press, and the definitive book on the Periodic Table of the Elements. Dr. Scerri has given lectures all around the world. Visit his website at [www.ericscerri.com](http://www.ericscerri.com)



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### From the Editor:

Happy September everyone. This month summer is officially over and fall begins. I hope everyone had a great summer and is looking forward to a cooler fall season.

This has been an interesting year for me. While Fred's health has been stable, he has been in a period of withdrawal and doesn't want to go anywhere. Thus, I have become an absentee editor, for which I often feel guilty. I do what I can to support MSSC which, for right now is as an absentee Bulletin editor. There are months where I find it very difficult to put the Bulletin together and other months, like this one, when I really enjoy the process. Now, I'm asking you, is it appropriate for me to continue as an absentee editor or should I pass this job off to someone who can be more active in the club? What do you think? Linda Elsnau

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### From the President: Interesting Minerals, A to Z. Installment 9, the letter "I": by George Rossman

#### Iridium



**Figure 1.** A 14 mm lump of native iridium from Saltouk, in the Ural Mountains, Russia. \*

Iridium, chemical symbol Ir, is a native element that is found in nature. You can only hope to find a lot of it because it is one of the platinum group elements and it is currently priced at more than either platinum or gold. I went through the Caltech mineral collection and found a lump of native iridium (**Figure 1**). This is an unusually large lump of this element.

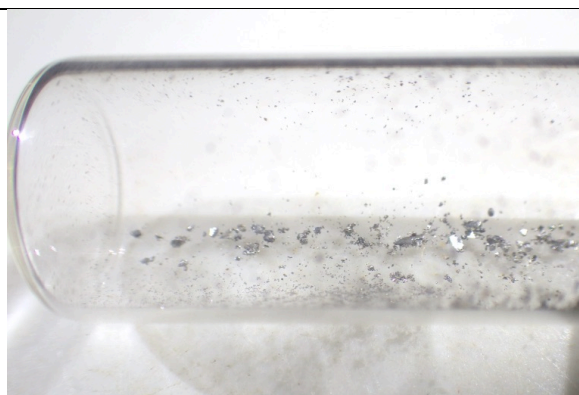
Native iridium has reportedly been found in several counties in the gold belt during placer mining days. Mindat.org lists these counties.

Iridium is never found in nature as a completely pure element. Like other platinum group elements, it comes alloyed with other elements. The element with the highest concentration of atoms is the basis for the mineral's name. The native iridium may have other elements in it, but iridium should account for the greatest number of atoms.

Typically, iridium is alloyed with significant amounts of osmium, ruthenium, and platinum



**Figure 2.** Native iridium crystals. \*



**Figure 3.** Grains of native iridium alloy from an unspecified locality in Japan. \*

**Figure 2** is a photo of some small crystals of native iridium (actually an alloy of iridium and osmium with nearly equal numbers of each atom, but where the iridium is ever so slightly dominant) from the Atrato River, Choco District, Colombia. The individual grains are less than 1 mm across.

Even grains this large are uncommon. More likely, you will find grains like the grains of Iridium-osmium alloy in the vial pictured in **Figure 3**. The grains in the vial are only a fraction of a millimeter wide.

What other native elements do we find in nature? You all have probably heard about native gold, silver, sulfur, carbon (diamond and graphite) and copper. And you have heard about native iron in meteorites. Did you know native iron occurs in some basalts on earth (**Figure 4**)? The basalt from the Bühl quarry is on a contact with lignite coal that might have been the reducing agent to produce the native iron.



**Figure 4.** Native iron (rusty area) in a basalt from near Bühl, Kassel, Hesse, Germany. \*



**Figure 5.** Native Arsenic from Andreasberg, Harz, Germany \*



**Figure 6.** Native tellurium from the Nagyág mine, Săcărâmb, Romania \*

And, how about native arsenic (**Figure 5**)? It is found at a large number of localities including some in California. It has even been reported from the Kramer Borate deposit in Kern County near the city of Boron.

One of my favorite native elements is native tellurium (**Figure 6**). Mindat.org lists a number of localities, world-wide, where native tellurium occurs, including one in San Diego county. Tellurium is naturally radioactive, but you will probably never be able to make a Geiger Counter click with a tellurium mineral. The half-life of tellurium is extremely long; more than a trillion times greater than the known age of the universe.

Other native elements that are known either terrestrially or from meteorites include aluminum, antimony, bismuth, cadmium, chromium, indium, lead, mercury, nickel, palladium, rhodium, selenium, silicon, tin, titanium, tungsten, vanadium and zinc. Again, several of these will be found as alloys where the named element is the dominant component.

So, what really is the composition of my lump of “native iridium”? I put the lump in an instrument known as an X-ray Fluorescence Analyzer. The instrument shines an intense beam of energetic X-rays on the sample and measures the lower-energy X-rays that are emitted which are characteristic of each element in the sample. It took 30 seconds to find out that my iridium consists of, by weight, 34.1% iridium, 31.1% osmium, 24.9% ruthenium, 7.1% platinum, 1.5% iron, 1.1% rhodium, and a little bit of nickel.

But now, we have to account for the fact that different elements weigh different amounts. Osmium and iridium are much denser than the other elements. It doesn't take many atoms of them to make a lot of weight. When I make the correction for the mass of each atom, I find that there are more atoms of ruthenium in the sample than the other elements. The percentages of atoms are: ruthenium 36.5, iridium 28.2, osmium 24.2, platinum 5.4, iron 4.1, and a small amount of nickel. Bottom line: Caltech's sample of native iridium was misidentified. It really is native ruthenium.

It just goes to show; you can't always trust the labels that come with minerals; even ones for which you might pay a lot of money.

*\*All Photographs provided by George Rossman*

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### MINUTES of the Meeting/Annual Picnic, August 12, 2018

On Sunday, August 12, 2018, the 959<sup>th</sup> Membership Meeting of the Mineralogical Society of Southern California was called to order by President Dr. George Rossman. This meeting was held in conjunction with the society's Annual Picnic. The picnic and Silent Auction were held at the Carter residence. Much of the regular business was suspended until the next regular Membership Meeting, September 14<sup>th</sup>. However, this meeting proceeded to go on record.

After the meeting was called to order, Dr. Rossman announced that there are now 5,373 known mineral species recognized by the International Mineralogical Association. He mentioned that Pasadena Lapidary Society (PLS) and Fallbrook had been invited to attend the picnic. He asked if anyone came. None came from the Fallbrook club. However, Eugene and his daughter, Ellen, came from PLS. Eugene met Dr. Rossman to show him Ellen's find of a double twined, 180°, “Star of David” **benitoite** crystal. This is only 1 of 24 reportedly known worldwide! Ellen found her prize in tailings using an ultra violet flashlight. Score! Also, from PLS, Tim Dirk was in attendance.

George announced that our Show and Tell with this year's theme, Favorite Mineral in Your Collection That You Collected, will commence after we eat. George asked if there were any other announcements. Gene Reynolds announced that a brand-new mineral museum is under construction the old county courthouse in Tucson and that things should be ready in time for the 2020 Tucson Gem and Mineral Show. The museum will house more than 450,000 micromount specimen, as well as other collected items. The Silent Auction is open. There are lots of goodies on the tables, so place your bids.

Come and Get It!! Chef Rudy Lopez announced that the food was ready: smoked brisket, smoked pulled pork, rolls, a variety of salads, fruit bowls, desserts and beverages. Surely a feast to be had...Yum!

After eating and in keeping with this year's picnic theme, “Favorite Mineral in Your Collection That You Collected”, Dr. Rossman starts off by producing a beautiful ametrine crystal, a blend of purple amethyst with yellow citrine, he personally collected from the very difficult to get to Anahi Mine in Bolivia. His beautiful **bolivianite** crystal is approx. 3” long and about 1-1/2” in diameter at its base. It happens to be one of the smallest specimens the mine produces. Getting there was worth the effort and time. Thanks, Dr. George!

Dr Bob Housley showed his favorite collected mineral, **natrolite**. It is a hydrous sodium aluminum silicate that he collected in the Santa Monica Mountains in 1985; it took 2 days to dig out his delicate specimen (approx. 6”)! Natrolite has needle like crystals reaching out in ball form. This is quite the prize, Dr. Housley. Nice!

Dale Harwood shared about his favorite **cylindrite**, a lead tin antimony sulfur (mined in Bolivia). He told how he came by his supply, a mere 18 flats of the stuff! The “Cylindrite Kid” has cornered the market on the West



Coast! Dale mused, “Every good mineral collector should have cylindrite, the problem is you probably only want one!”

Dan Krawitz brought several **quartz** specimens he bought from Dave Smith. The large double terminated quartz specimen is from the California Blue Mine (near Yucca Valley). He also brought two large smoky quartz specimens. Great pieces, Dan!

Dr. Bruce Carter brought a self-collected piece, not his favorite, but a great share, nonetheless. It is calcium phosphate, apatite. Bruce collected the piece on a beach in Baja. It is the inner ear structure of a grey whale! Sweet, Dr. Carter. Thanks!

Gene Reynolds talked about a time he was RVing near BLM land in Montana. Right next to the RV park was a river with fish. Let’s see, fishin’ in the morning, collectin’ in the afternoon or the other way around? The **quartz** collecting was nice, scepters with clear, amethyst and smoky combinations on clear stems! Oh, the fishin’ wasn’t too bad, either.

George wanted to know if anyone collected **pegmatite**...maybe Geoff Caplette. Geoff shared his passion of collecting, which started when he was a youngster digging holes in his backyard. He didn’t bring any samples, but he shared his love of collecting: “What better way to spend your day than on a treasure hunt? You cover your costs and enjoy what you’re doing.” “I’ve pulled double terminated pink **tourmaline** from a boot size pocket.” Sheer joy! Many in attendance were nodding in agreement when Geoff spoke – thanks for verbalizing what we know in our bones!

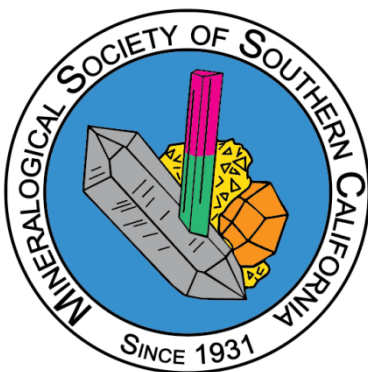
“Hum, little things?” George asked. Marek Chorazewicz tells us that he was digging a hole in his backyard on the search for *diamonds* but found the old foundation to a nearby (now demolished) prison! Marek offered this tidbit about collecting micromounts, which he started collecting recently. He had a favorite until he realized a new favorite took its place, then a look at the next one and you’re saying, WOW, beautiful, my new favorite!

**Mojaveite**. And, so it goes.

Renee Krause told about the only time, so far, she went into a mine! She collected some **barite**, and a few crumbly pieces; she had a great time! Makes you wonder, who was there before, what they found, and did they have as great an experience, too? Thanks, Renee. Renee announced she wanted to take a group photo. And, so it was.



Not pictured: Pat Caplette, Kathy Carter, Eugene, Ellen, Tim (PLS), Pat Stevens and fiancé. (Photo by Renee Kraus)



Dr. Housley’s Natrolite. (Photo by Angie Guzman)



C treasure hunt. (Photo by Angie Guzman)



Dr. George Rossman's Bolivianite. (Photo by Angie Guzman)



Dr. Bruce Carter's grey whale inner ear structure. (Photo by Angie Guzman)

Dr. Rossman reminded everyone about the approaching closing time limit on the Silent Auction. At the deadline, the Silent Auction closed; people paid the cashier, Cheryl Lopez. Marek made an announcement about the website: he was able to post information about past and upcoming field trips. Check it out! Next field trip will be on August 25<sup>th</sup> to Palos Verdes to collect barite.

**“Thank You”:** Bruce and Kathy Carter for allowing the Society to hold the event in your lovely backyard. Thanks to Rudy Lopez for cooking; to Bruce, Rudy and Cheryl Lopez and Angie Guzman for helping to set up. Thanks to all who helped with the clean-up and tear down. Thanks to all who attended the picnic, brought food and those who donated items for the silent auction fund raiser. Till next year...

The next MSSC regular **Membership** Meeting will be held at PCC Geology Building E on Friday, September 14 starting at 7:30pm. Our scheduled speaker is Eric Scerri who will present *What is This Thing Called Science? (An Introduction to the Philosophy of Science)*. Refreshments will be available after the meeting. The next **Board** Meeting will be held on Sunday, September 16<sup>th</sup> at the Carter residence. Everyone is welcome to attend either/both meeting.

My 2¢: If you missed this year's picnic, you missed a great one. The back stories are always a treat and you can't beat the camaraderie. The Silent Auction is always interesting and a great way to help support MSSC. And, the food, well, it was simply yummy.

Submitted by Angie Guzman, Secretary. (Apologies in advance for any errors or omissions)

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

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	October 12, 2018	Aaron Celestian: "Halophiles in Minerals"
	November, 9, 2018	Renee Newman: "21st Century Jade: Why It's Prized, and How It's Tested and Valued?"
	December 14, 2018	Walton Wright: Plate Tectonics 2
	January 12, 2019	Banquet speaker: Denise Nelson - "Treasures of Poland, Amber and Salt":
Board Meeting	September 16, 2018	Board Meeting at Bruce Carter's house
Annual Banquet	January 12, 2019	Annual Banquet

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 Report Sunday August 12<sup>th</sup>: By: Rudy Lopez

The annual MSSC picnic was held on Sunday, August 12<sup>th</sup> at the Carter residence.



First, I would like to thank Bruce & Kathy Carter for use of their beautiful backyard for the picnic.

We had a good turnout of MSSC members along with Fallbrook and Pasadena Lapidary Society. There was plenty of great food to go around as usual. Three tents were set up for the silent auction. There was plenty to bid on. I want to thank everyone that brought items for the silent auction. Bruce Carter brought out enough to fill two tables. Patricia Caplet donated 6 beautifully faceted opal stones to the auction. Again, thank you to all who donated to silent auction. The silent auction made \$271.00.

Dr. George Rossman made sure the food was ready before we started the meeting. The meeting was called to order, introductions were made of all the guests that attended and we started for the food line.

I am not going to show a lot of pictures in this article. I have been very busy with my projects at home and of course getting ready for my fishing trips. I will do a full article and send it to Leslie to post on our web site with more pictures.



All Photos by Rudy Lopez

Everyone enjoyed themselves, had a great meal that consisted of salads, veggies, fruit, cakes, cookies and of course all the pulled pork and brisket they could eat.

I want to thank Angie Guzman, Cheryl Lopez, Leslie Ogg, Laura Davis and Danille Elliot for helping me take down all the tents, tables, rocks and pack up my truck.

Check out our website for more pics. [www.mineralsocal.org](http://www.mineralsocal.org)

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## OTHER (FREE) THINGS TO DO...By Ann Meister

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

The **Von Kármán Lecture** on Thursday/Friday\* **September 6 and 7** is titled, **“NASA@60: The Role of the Robots”** presented by a panel of speakers. Much has changed about the way we explore space in the 60 years since NASA began operations on Oct. 1, 1958. Today’s robotic spacecraft are beginning to experiment with laser communications, artificial intelligence and 3-D printed parts. But did you know some of the first spacecraft the U.S. sent to the Moon included parts made of wood, or that spacecraft used to record data on motorized magnetic tape recorders? Despite all the advances, one thing hasn’t changed: we still rely on robotic spacecraft to extend our senses above and beyond Earth and to blaze a trail as precursors for human explorers. As NASA celebrates its 60th anniversary, this panel discussion will look back over the decades at how far our robotic exploration has come and consider where we might be headed. Part one of the program will focus on major milestones in robotic exploration, what it took to reach those accomplishments, how far we’ve come, and how have spacecraft changed over the years. Part two will focus on new developments we might look for in robotic spacecraft in the next couple of decades. What demands will we be placing on spacecraft, in terms of capabilities and destinations, that are different? \*Thursday is at the Von Kármán Auditorium at JPL and Friday is at Ramo Auditorium at Caltech. Start time is 7 PM.

The **UCLA Meteorite Gallery** lecture is on Sunday, **September 30**. The speaker is UCLA Professor Hilke Schlichting. She will discuss **“Kuiper Belt Objects”**. In 1930 a small “planet”, Pluto, was discovered that had a strange orbit. The mean radius of the orbit was larger than that of Neptune, but during part of the orbit (e.g., 1979-1999) the object is closer to the Sun than Neptune. Thanks to research led by our UCLA colleague Dave Jewitt, additional “planets” with strange orbits occupying the region 30 to 50 AU from the Sun have been found. The objects largely consist of ices of water, methane and ammonia. Schlichting will talk about the formation of Kuiper-Belt objects, dynamical processes that caused their distribution in space, and relationships to comets. 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.

The **Huntington Botanical Garden and Library** is presenting **Huntington-USC Western Environment Series - Slick Policy: “Environmental and Science Policy in the Aftermath of the Santa Barbara Oil Spill”** on Monday, **September 17** at 4:00 pm at Ahmanson Room in the Botanical Center. This fall, the Huntington-USC Institute on California and the West will kick off a suite of programs on the environmental history of the modern American West. In the first lecture, Teresa Sabol Spezio, visiting assistant professor in Environmental Analysis at Pitzer College, will discuss the 1969 oil spill in the Santa Barbara Channel, which galvanized the modern environmental movement in California and beyond. Free after paying for admission to the Huntington.

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## WE HAVE BEEN INVITED By: Rudy Lopez

We have been asked to participate in the “Prehistoric OC event at Clark Regional Park” again this year. It will happen on Saturday October 13, 2018 from 10am-3pm at Clark Regional Park in Buena Park

I’m still looking for MSSC Members willing to volunteer as helpers at the above event. This is a great way to increase awareness of our Society, so **if you can help, contact me at:** [programs@mineralsocal.org](mailto:programs@mineralsocal.org)

Thank you for your willingness to help, Rudy

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*With Knowledge Comes Appreciation !*



## 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	<i>Please see emailed bulletin</i>

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# West Coast Gem & Mineral Show

## November 9 - 11, 2018

80 Select Retail & Wholesale Dealers\*

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Lapidary ♦ Home Decor

and much more!

\*Wholesale for qualified buyers



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Gold on Quartz  
Eagle's Nest Mine, Placer Co., CA  
Jeff Scoville

[MineralShowsLLD@gmail.com](mailto:MineralShowsLLD@gmail.com)

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>			

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## Calendar of Events:

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

### SEPTEMBER

#### September 15 - 16: CHICO, CA

Feather River Lapidary  
& Mineral Society  
Silver Dollar  
Fairgrounds  
2357 Fair Street  
Hours: Sat 9:30 - 5;  
Sun 9:30 - 4  
Website:  
[www.featherriverrock.s.org](http://www.featherriverrock.s.org)  
[SHOW FLIER](#)

**The 79th  
CFMS Convention**  
will be held alongside  
the  
**Feather River  
Lapidary & Mineral  
Society's  
Rock, Gem & Jewelry  
Show**  
**September 15 - 16,  
2018**

[More about the CFMS  
Convention & the  
FRLMS Show  
Advance CFMS Dinner  
& FRLMS Show  
Registration  
Accommodations Cam  
ping Local  
Attractions Map](#)

#### October 13 - 14: TRONA, CA

Searles Lake Gem & Mineral Society  
Gem Show Building  
13337 Main Street  
Hours: Sat 7:30 - 5; Sun 7:30 - 4  
Website: [www1.iwvisp.com/tronagemclub](http://www1.iwvisp.com/tronagemclub)  
[Show Flyer/Details](#)

#### October 20: WEST HILLS, CA

Woodland Hills Rock Chippers  
First United Methodist Church  
22700 Sherman Way  
Hours: 10 - 5  
Website: [www.rockchippers.org](http://www.rockchippers.org) [Show Page](#)

#### October 20 - 21: WHITTIER, CA

Whittier Gem & Mineral Society  
Whittier Community Center  
7630 Washington Avenue  
Hours: 10 - 5 daily  
Website: [www.wgmsca.com](http://www.wgmsca.com)

#### October 27-28: LANCASTER, CA

Palmdale Gem & Mineral Club  
Palmdale Elks Lodge  
2705 E Avenue Q  
Hours: 10 - 5 daily  
Website: [www.palmdalegemandmineral.com](http://www.palmdalegemandmineral.com)

### OCTOBER

#### October 6: BORON, CA

Mojave Mineralogical Society  
Boron Community Center  
26998 John Street  
Hours: 9 - 4 daily  
Web Site: [Facebook page](#)

#### October 6 - 7: VISTA, CA

Vista Gem & Mineral Society  
Antique Gas & Steam Engine Museum  
2040 North Santa Fe Avenue  
Hours: Sat 10 - 5; Sun 10 - 4  
Website: [www.vistarocks.org](http://www.vistarocks.org)

#### October 14: FALLBROOK, CA

Fallbrook Gem & Mineral Society  
Fallbrook Gem & Mineral Building  
123 West Alvarado Street  
Hours: 9 - 4  
Website: [www.fgms.org](http://www.fgms.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](http://www.opalsociety.org) [Show Page](#)

#### 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](#)

## 2018 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>		
2016--2018	Bruce Carter	
2016--2018	Bob Housley	
2016--2018	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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