

Bulletin of the Mineralogical Society of Southern California

Volume 90 Number 1 - January, 2017

The 941st meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

MSSC Annual Banquet

Saturday, January 14th, 2017
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

Program: Minerals with The Unique Ability to Selectively Remove Toxic Metals from Solutions:

Presented by: Aaron Celestian

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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

Our annual MSSC Banquet is just around the corner on Saturday, January 14, 2016

Join us for a great evening with friends, a presentation from Aaron Celestian, silent action and a great dinner.

There is still time to make your reservations as the deadline is Jan 11th.

You can pay at the door.

The cost of the Banquet is \$39.00.per person email Rudy Lopez to make your reservation today!

(programs@mineralsocal.org).

You can mail your check to:

MSSC 1301 Leonard Ave Pasadena Ca 91107

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

If you made a reservation and circumstances change where you or your guests cannot attend, please notify Rudy Lopez before Wednesday, January 11th, 2015. Thereafter you will be responsible for paying \$39.00 for each individual reservation regardless of attendance. It would be a shame to miss this event because you delayed making that reservation.

Don't Forget to Bring Your Silent Auction Contributions!

About the Program: Minerals with the unique ability to selective remove toxic metals from solutions are an increasing area of technological, environmental, and energy-related interests. However, these nanoporous minerals are exceedingly rare and uneconomic to mine for large scale applications. Mineralogists need to better understand how these minerals grow so that we can mimic their environments of formation in the lab for scale-up applications. Deciphering how these minerals crystalize has led to the development of new materials (some of which are now being discovered as minerals) with advanced technological

Aaron Celestian is Associate Curator of Mineral Sciences and Adjunct Associate Professor of Earth Sciences at USC. He began his studies at the University of Arizona, where he focused on minerals called perovskites that have their origin deep within the Earth. After receiving his Bachelor's degree at the U of A, he moved to Stony Brook University in New York for graduate work. During that time, he became interested in minerals common at Earth's surface, called zeolites. His Ph.D. research looked at how zeolites and their synthetic analogues can be used to help remediate radioactive waste generated during nuclear energy production.

Since moving to the Natural History Museum in January of 2016, Aaron has taken advantage of the phenomenal mineral and gem collection to study how these Earth materials work, and how they can work for us. He has continued his previous work in environmental mineralogy, such as the amazing ability of zeolites to select and store elements including radioactive strontium and the rare-earth elements. He is working with the pharmaceutical industry to use minerals to cure diseases and rescue people from acute metal poisoning (much of this work is protected by non-disclosure agreements). And Aaron is currently investigating microscopic properties of gems like diamonds and pearls to learn more about our planet's history.

Remember! Dues are Due!

If you have already paid your dues, Thank you for your promptness.

Even if you hold a Life or Honorary Membership, you should still fill out the 2016 Membership form so we have all of your current information and preferences. Has anything changed, your phone number, address, email address, or roster preferences?...You should use the membership form to let us know.

From the Editor: Linda Elsnau

Hope everyone had a great holiday season and may 2017 be all you want it to be! .

This will be my 5th year as Bulletin Editor. I want to thank everyone that sent me articles or photos for the Bulletin. I just LOVE getting contributions from our members. I try to use everything you've sent me, but some things just don't work out. I can't publish anything that I cannot get specific permission from the author or photograher to use. Sometimes, that just doesn't happen. Please continue to send me things you feel may be of interest to the rest of the members And, if you can also provide the source and contact information, that would save me a lot of time tracking down what you may already know.

I'm looking forward to another funfilled year of the bulletin with you. If you have an idea for an article, but are unsure how to continue, let me know and I'll do my best to help you. Please keep those articles and photos coming in!

MEANDERINGS FROM THE PRESIDENT by Ann Meister

I wish you all a HEALTHY NEW YEAR! and may you accomplish all your New Year's resolutions!

As I think about 2016 and ahead into 2017, I have a lot of people to thank for their help and to hope they will continue in the future. A special thanks to the officers and directors who are continuing in their positions in 2017. (Hmmm, looks like the faces are the same as last year.) Exceptional gratitude to *Bulletin* Editor Linda Elsnau who is publishing an amazing *Bulletin*! Special thanks to all of the following who make the Society run smoothly: Rudy Lopez who has served as Program Chairman as well as organizing the MSSC's participation in the LA Natural History Museum's Urban Fest, bringing homemade goodies to the meetings, giving a program, and many other things. His able assistant is our Membership Chairman, Cheryl Lopez who is a cheerful greeter of guests and new members. Laura Davis is our Hospitality Chairman who brings healthy refreshments to the coffee hour after the meetings. Al Wilkens with Bob Housley provide the leadership for the Pacific Micromount Conference which is coming up soon (January 27-28 at the San Bernardino County Museum). Leslie Ogg who is our webmaster as well as Facebook updater. Bet you didn't know we are on Facebook. And a thank you to everyone who has shared their interest in our hobby by bringing something to share for show and tell at the meetings. That's one way we all learn something new. Thanks also to those of you who have come to the "other things to do." It's good to feed our intellectual curiosity.

This is now my seventh consecutive year as President, in addition I served two years back in the 1980's. My wish for next year would be to see someone step into my shoes. Also, Jim Kusely has been Treasurer for seven years. And others have fulfilled more than the normal term in office It's good to have continuity, but enough is enough. 'Nuf said.

Mineralogy in the news: Have you seen the reports on large diamonds and how they are different from the more common, smaller diamonds? These are the large diamonds such as the Cullinan Diamond found in South Africa in 1905, the Koh-i-Noor found in India in the 13th century, or the Lesidi La Rona found in Botswana in 2015. Seems that researchers at the GIA analyzed the "offcuts" and have found tiny metallic grains trapped inside them. In addition, some contain mineral inclusions that show the diamonds formed at extreme depths, likely within 224-466 miles in the convecting mantle of metallic liquid. This is much deeper than most other gem diamonds, which form in the lower part of continental tectonic plates at depths of 93-124 miles. Hmmm, two more places we can't go collecting...

OTHER THINGS TO DO ...

The **Von Kármán Lecture** on January 12 and 13 is titled "Exoplanets: The quest for strange new worlds." Thursday is at the Von Kármán Auditorium at JPL and Friday is at the Vosloh Forum at PCC. Start time is 7 PM.

The **Watson Lecture** at Caltech's Beckman Auditorium on January 18 at 8 PM is by Victoria Orphan, a 2016 MacArthur Foundation "Genius" award winner. Her title is "Microbial Life Support: The invisible living networks that shape our oceans."

The UCLA Meteorite Gallery next lecture is on Sunday, January 22 at 2:30 PM. The speaker is Emeritus Professor of Paleobiology Bruce Runnegar. His topic is "The Cryogenian, coldest time in Earth History." We are now in (and probably leaving) one of the coldest periods in Earth history. Previous icehouse intervals occurred about 300, 700 and 2000 million years ago. During one of these periods, the Cryogenian, glacial ice extended to sea level in the tropics. We shall discuss this so-called Snowball Earth event in terms of its origin, and its effects on our planet and its life. The Meteorite Gallery (Geology room 3697) is open with a docent present every Sunday from 1 till 4. The lecture is in Slichter Hall 3853 near the Meteorite Gallery.

DON'T FORGET SILENT AUCTION DONATIONS FOR THE BANQUET ON JANUARY 14, 2017

MINUTES of the December 11, 2015 Meeting

The 940th Membership Meeting of the Mineralogical Society of Southern California (MSSC) was held on Friday, December 9, 2016 at Pasadena City College, Geology Department. The meeting was called to order at 7:38 p.m. by President Ann Meister.

Welcome:

President Ann Meister welcomed everyone to the 940th membership meeting of the society and asked any guests to introduce themselves. There were no guests; there were 12 members in attendance.

Regular Business:

Minutes: Ann, after asking for any corrections or additions to the Minutes of last month's meeting as published in the December 2016 *Bulletin*, seeing not, called for a motion from the floor to approve them. The **motion** was made by Dr. George Rossman, seconded by Rudy Lopez. There was no discussion. The motion was voted on by the membership and **passed unanimously**.

Announcements:

- Editor Linda Elsnau's deadline for items to be published in the next *Bulletin* is December 22nd. Reminder: deadline for *Bulletin* items will be each 22nd of the month;
- The Banquet will be January 14, 2017 at Coco's Oak Tree Room. The cost is \$39 each. Please RSVP by January 11, 2017. Silent Auction starts at 5:30pm, bid slips are available; dinner starts at 6:30pm;
- Pacific Micro Mount conference will be January 27 and 28, 2017 at the San Bernardino County Museum;
- The next MSSC Board meeting will be March 5, 2017 at Dr. Bruce Carter's;
- The Suiseki Exhibit will be at the Huntington Library December 26-3. The exhibit is presented by California Aiseki Kai;
- The Von Karman Lecture Series will be Thursday, December 15, 2016 at JPL and Friday, December 16, 2016 at PCC. The topic is "Spinning Black Holes, Exploding Stars, and Hyperluminous Pulsars: Recent Results from the NuSTAR Satellite" by Dr. Daniel K Stern NuSTAR Project Scientist;
- The Watson lecture will be January 18, 2017 at Beckman Auditorium, Cal Tech on "Microbial Life Support: The Invisible Living Networks That Shape Our Oceans" presented by Victoria Orphan;
- UCLA Meteorite talk will be given on January 22, 2017 by Emeritus Professor Bruce Runnegar. The topic will be *The Cryogenian, Coldest Time in Earth History*;
- Jewel Tunnel Imports held its Open House on December 3, 2016. Some members attended. Rudy Lopez mentioned there were more stones for jewelry making this time.

President Meister turned the meeting over to the Program Chair. Rudy Lopez reports (1) there are 18 signed up for the banquet. The RSVP deadline is January 11th, but don't wait for the last minute and, remember the Silent Auction. Bid slips are available; (2) The Natural History Museum is hosting *Diamonds: Rare Brilliance* December 16, through March 19, 2017. Rudy will be giving demonstrations Dec 28, Jan 4 and Jan 7. This project is offered to museum members and not opened to the public, but...; (3) The Urban Fest will be in March; (4) All the materials that were slated for use at the Urban Fest were bought by students at \$1 each at Cheryl Lopez's school. So, if anyone has material/samples to donate for the children coming to the Urban Fest please contact Rudy. All items will be appreciated. We need approximately 900 bags to hand out to the kids at the festival; (5) Finally, please tell Rudy if you can volunteer time to help at the Urban Fest.

Program:

Program Chair Rudy Lopez introduced Larry Hoskinson and Leslie Neff, presenters of *A Tourists Guide to Finding Opal in Cooper Pedy Australia*. Larry and Leslie brought samples of opal and petrified wood for all to see. Q & A was allowed during their presentation.

Larry Hoskinson began the presentation by giving a little overview of where they went to collect the opal. Coober Pedy is in northern South Australia. About 95 million years ago, this "dry lake country" was a sea bed, then the makeup of the area changed into a dry lakebed with the largest aquafer sitting underneath. Then, it became a very hot zone and turned the silica into fluid that permeated the ground causing mineralization. There are a lot of dry lakes here, they're very briny and are pink in color. This area gets about ¼" of rain per year and it usually happens all in one day!

Leslie Neff said that she and Larry have been to Australia about 12 times, so far. When they visit, they fly over and buy a car, usually 4-wheel drive, to use during their visit which can lasts months. They drive up from Sydney through Fort Augusta, Adelaide onward northwesterly to Coober Pedy. As point of reference, Coober Pedy is between Adelaide and Alice Springs. Presentation photos show some interesting characters, beer bottle houses, a lot of road, no trees and less yet of other vegetation.

Approaching the mining areas, you'll see warning signs: DO NOT STEP BACKWARD WITHOUT LOOKING! There are many tunnels and holes hundreds of feet straight down abandoned by miners and that are hazards to the public, especially photographers who want that perfect shot, just one more step back...

Arriving at Coober Pedy, we find the area has been mined for opal since 1915. The mines are a major operation. They supply the world with gem quality opal. The tailing heaps from the mines are a treasure trove and bountiful source for collectors. The opal is there for the taking! At the end of the day, you can't resist not looking at that piece that catches your eye! In Coober Pedy, there are paved roads, a market (stocked once per week), petrol stations, bars, some small business and there is even water is piped in. It used to be water cost more than petrol – but that has changed now.

Everyone in Coober Pedy lives underground in "dugouts", these are actually caves bored into hillsides that have a bedroom(s), bathroom, kitchen and living space. Not all dugouts have indoor plumbing, there are still many that use outhouses. People live in the dugouts because the surface temperature is too hot (about 120°F) and there is low humidity (20%) most of the time. The winter weather can get very cool. The dugouts keep a constant temperature and they are ventilated, as evidenced by the vent shafts and stacks you see. But the caves can easily collapse, so there is that. The dugouts are always dusty. The silica particles can invade lungs and cause respiratory problems leading to silicosis.

The first area opal mine site was at White Cliffs (beer bottle house) established in 1895. And, near Adelaide there is a huge solar array that supplies energy to the residents. In the relative area, there are many other mining operations, some large, such as the copper-gold mine operated by OZ Mining, and others are smaller ore operations, as well as the many opal mines.

Larry went on to tell us about some of the hazards while traveling along the roads: the sheep and the fence that protects them, the flies, the roadkill that stink to high heaven and the triple long "semi" trucks that barrel down those roads.

The Mines Department has important information about claims including which mines are producing opal, what the geology is like in an area and other helpful tidbits. They have a map that shows which properties have claims. If you come upon a claim, you walk across it, drive across it but you cannot remove anything from the site. If there is no claim, the land is "crown land" and you can collect there. By the way, explosives are common in Coober Pedy and there is a regulation that says you must let other people know you have explosives in/on your vehicle by placing a sign on it. There are so many nationalities in Coober Pedy that it's interesting just to look at the signs in Chinese, German, and any of the other 45 or 50 nations represented, but, that's another presentation.

Thanks to Larry and Leslie for a fun and informative presentation. The opal and petrified wood samples were wonderful.

Members: The best way to hear and see these wonderful presentations is to come to the meetings! Come on, join in. The next meeting, the 941st, is our Installation Banquet on January 14, 2017 at Coco's [see Announcements above]. The guest presenter will be Dr. Aaron Celestian, Ph.D., Associate Curator, Mineral Sciences of the Natural History Museum, Los Angeles County.

Drawing: Door prize was won by JoAnna Ritchey. Congrats!

Adjournment: The meeting was adjourned at 9:07 p.m. Refreshments were served after the meeting. Thanks for the hospitality.

Respectfully submitted, Angie Guzman, MSSC Secretary Apologies in advance for any misspellings or omissions in the Minutes/aag

List of Upcoming MSSC Events: Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	February, 2017	Alan Rubin - Solar System
	March, 2017	Denise Nelson - Precious Heirlooms
	April, 2017	Walton Wright - Identifying Petrified Wood
	May, 2017	Renee Kraus - Mohave Desert
Micro	January 27 & 28, 2017	San Bernardino County Museum, Redlands, CA
Conference	January 27 & 28, 2017	San Demardino County Museum, Rediands, CA
Board Meeting	March 5, 2017	Board Meeting at Bruce Carter's house

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

Programs: Rudy Lopez

I want to thank the members that have given me names for future speakers. The current speaker list still has a couple of open dates for 2017. I have contacted some of the past speakers to see if they have new presentations and I am happy to say they want to return with new presentations. But! this doesn't mean I don't need more names I still have open dates in 2017. Please keep the names coming, we can never have to many speakers. I would like to see some of our members step up and give a presentation, if I can do it so can you.

Report of CFMS Convention held September 16, 17 and 18, 2016: by Angie Guzman

The 16th California Federation of Mineralogical Societies, CFMS, Convention and Gem and Mineral Show were held at the El Dorado County Fairgrounds on September 16, 17 and 18, 2016 in Placerville, CA. The event was hosted by the El Dorado Gem and Mineral Society. Coincidentally, the World Gold Panning Championships were also held that same week at the same venue. The 16th was a travel day for me. I arrived in Placerville at 5:30 p.m.

The convention business began on Saturday morning, September 17 at the "Breakfast with the Editors & Webmasters" event starting at 7:30a.m. This event was well attended. Item of discussion included an Editor's exchange. Awards were announced and presented for Bulletins and Website. Bulletin awards included: Small

(1st Slate Lake County Rockhounds), Large (1st Shadow Mountain), Adult Articles (Orcutt), Juniors (Shadow Mountain's "Don't Lick Rocks"), Written Features (Lake County Rockhounds), Adult Poetry (Lake County Rockhounds), Special Publications (Membership Handbook from Ventura Gem and Minerals) and others. The 1st place award for Website went to Santa Rosa.

The next item of business began immediately following breakfast. The Board of Directors Orientation followed by a Call to Order of the Convention. Agenized items were each addressed with reports provided by officers and members responsible for those offices or committees. There was no formal break for lunch since the meeting lasted just a little longer than planned. However, there was enough time after the Adjournment to eat, rest and prepare for the evening banquet.

The dinner Banquet began with a Happy Hour at 6p.m. on Saturday, September 17, 2016. Dinner was served at 7:00 p.m. There was no business discussed at the Banquet.

Included with registration for the convention, was a 3-day pass to the Gem and Mineral Show. I attended the show on Sunday, September 18th and saw a smidge of the Gold Panning Championships.

Thank you for the opportunity to represent the Mineralogical Society of Southern California. I made a few contacts and was introduced to Pasadena Lapidary's Mike and Linda Nelson. I did not see anyone from other local clubs.

Natural History Museum Special Program: Diamonds: A Rear Brilliance Exhibition +

Cabbing Demonstration: by Rudy Lopez

Come and see some of the world's rarest colorful diamonds, located in the Gem & Mineral Hall Gem Vault. Also, visit the new Gem and Mineral Store, located near the Gem & Mineral Hall.

The cabbing demonstrations will be from 10:00am to 3:00pm on the dates listed for this event. I hope to see members of MSSC attend this Special program and temporary exhibition of Diamonds. Please come and say hi to me as I will be working on some stones

The Museum also sponsors Field Trips into the surrounding areas. Throughout the school year the NHM offers day trips focused on specific plants and animals, which culminate in one interdisciplinary



overnight campout. You'll explore a Southern California area of special ecological note, and get first-hand experience with different field techniques, taught by experts. If you are interested, additional information is available on their website: http://www.nhm.org/site/activities-programs/field-trips

LA URBAN FESTIVAL: Saturday & Sunday, March 18 - 19, 2017: By: Rudy Lopez

MSSC is officially registered as an Exhibitor for the 2017 Urban Festival, to be held at the Natural History Museum. We will have our same spot near the main entrance and will display two cases of minerals.

We had a great time at the 2016 LA Urban Festival at the Natural History Museum last year. We had over 1000 attendees stop at our tables and ask a bunch of questions and enjoy our mineral display.

CHILDREN MINERAL BAGS: Again! I will need help and minerals to give to the kids.

We made about 800 children happy by giving them a mineral to start their collections. Robert Housley gave a few boxes of quartz from Thousand Oaks Blvd. in Agua Hills make a big hit. Leslie send boxes of Fluorite pieces that kids learned was in tooth paste.

We need small minerals that we can bag up to give away, if they are identified and where they came from it helps make it more collectable to the children. So! Please look around and see if there is a box of minerals taking up space in your closet, garage, storage shed, under your bed or where ever you hide them that you don't want.

You can bring all donations to a meeting and give them to me or if there are too many I will pick them up. Never too early to start collecting for next year, I this we will need about 1000 pieces. We already have about 400 items already.

Featured Mineral: Chrysoberyl (Var: Alexandrite)

The green (chromium-bearing) gem variety of Chrysoberyl, that shows a color change under different light sources, is called alexandrite.

Formula: BeAl₂O₄

Hardness: 8½

Crystal System: Orthorhombic

Name: Chrysoberyl: From the Greek χρυσός, golden, and βήρυλλος,

beryl, in allusion to the color.

Name: Alexandrite: Named in 1842 by Nils Adolf Erik Nordenskiöld in

honor of Alexander II (1818-81), Czar of Russia, 1855-81.



irocks.com photo

Chrysoberyl (Var: Alexandrite)

BeAl₂O₄

Locality: Sri Lanka 1.1 cm x 0.9 cm x 0.6 cm



irocks.com photo

Chrysoberyl (Var: Alexandrite)

BeAl₂O₄

Locality: Carnaíba mining district, Pindobaçu, Campo Formoso ultramafic complex,

Bahia, Brazil

1.4 cm x 1.3 cm x 1.1 cm; 14.58

carats



irocks.com photo

Chrysoberyl (Var: Alexandrite)

BeAl₂O₄

Locality: Izumrudnye Kopi area, Malyshevo, Ekaterinburg, Sverdlovskaya Oblast', Middle Urals, Urals Region, Russia 3.9 cm x 3 cm x 1.6 cm

Orthorhombic crystal drawing Goldschmidt (1913-1926)



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 information from the bulletin. The Editor

Looking for	Who	Where	Contact at
A ride	Richard Stamberg	North Orange County, near Cal State Fullerton	
A ride	Catherine Govaller	San Bernardino, CA	



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 bulletin@mineralsocal.org and the payment should be sent to the MSSC Treasurer 1855 Idlewood Road, Glendale, CA 91202

Calendar of Events:

Only Southern CA shows are listed here. Other CFMS Club shows can be found at: http://www.cfmsinc.org/

JANUARY, 2017

January 21 - 22: EXETER, CA

Tule Gem & Mineral Society, Visalia Exeter Veterans' Memorial Building 324 N. Kaweah Avenue

Hours: Sat 10 - 5; Sun 10 - 4 Website: www.tulegem.com

FEBRUARY

February 17 - 26: INDIO, CA

San Gorgonio Mineral & Gem Society Riverside County Fair & National Date Festival 82-503 Highway 111

Hours: 10 - 10 daily

MARCH

March 4 - 5: ARCADIA, CA

Monrovia Rockhound L. A. County Arboretum & Botanical Garden 301 North Baldwin Avenue

Hours: 9:00 - 4:30 daily Website: www.Moroks.com



Ma

rch 4 -5:



Lemoore Gem & Mineral Society Lemoore Trinity Hall 470 Champion Street Hours: Sat 10 - 6; Sun 10 - 4

March 4 - 5: VENTURA, CA

Ventura Gem & Mineral Society Ventura County Fairgrounds 10 W. Harbor Boulevard Hours: Sat 10 - 5; Sun 10 - 4 Website: www.vgms.org

March 11 - 12: SAN MARINO, CA

Pasadena Lapidary Society San Marino Masonic Center 3130 Huntington Drive Hours: Sat 10 - 6, Sun 10 - 5

Website:

www.pasadenalapidarysociety.org Show Page







micro sized wulfenites from the

Micro Conference Reminder:

Don't forget to send in your registration for the upcoming **Micro Mount Conference!**

Fred Elsnau is trimming The pocket shown above is about 1/2"

Blue Bell Mine, CA.

The single crystal at right is

about 3/8"

Photos © Linda Elsnau

2017 MSSC Officers:

OFFICERS			
President	Ann Meister	president@mineralsocal.org	
Vice President	George Rossman	vicepresident@mineralsocal.org	
Secretary	Angie Guzman	secretary@mineralsocal.org	
Treasurer	Jim Kusely	treasurer@mineralsocal.org	
CFMS Director	Jo Anna Ritchey		
Past President	Geoffrey Caplette		
DIRECTORS			
20172018	Bruce Carter		
20172018	Bob Housley		
20172018	Leslie Ogg		
2016-2017	Pat Caplette		
2016-2017	Pat Stevens		
COMMITTEE CHAIRS			
Bulletin Editor	Linda Elsnau	bulletin@mineralsocal.org	
Hospitality	Laura Davis		
Membership	Cheryl Lopez	membership@mineralsocal.org	
Micro Mount Conf. Chairman	Al Wilkins		
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

Website: 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 Bulletin Is Herel