

Bulletin of the Mineralogical Society of Southern California

Volume 87 Number 11 - November, 2014

The 915th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

November 14th, 2014 at 7:30 pm

A Very Special Meeting

Pasadena City College

**Note the special location: Volsloh Fourum
1570 E Colorado Blvd., Pasadena**

Program : Mars Science Laboratory: The Curiosity Rover Years 1&2

In this Issue:

TITLE	Page
Program: Mars Science Laboratory: The Curiosity Rover Years 1&2 presented by: Dr. Sarah Milkovich (JPL)	2
List of Upcoming MSSC Events	3
From the Editor: Linda Elsnau	3
Meanderings from the President: Ann Meister	3
ELECTION FOR 2015 POSTPONED TO DECEMBER	4
Minutes of the October 10th, 2014 Meeting	4
Minutes of the MSSC Board Meeting Sunday, 9/14/14	6
Early Notice: Dues are Due	8
Jewel Tunnel Invitation	8
Ride Share Listing	10
Calendar of Events	10
2014 Officers	11
About MSSC	11
Your 2015 Membership Form	13

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: **Mars Science Laboratory: The Curiosity Rover Years 1&2**

By **Dr. Sarah Milkovich (JPL)**



Friday November 14, 2014

7:30pm in the Volsloh Forum at Pasadena City College:

The Curiosity rover landed at Gale Crater, Mars, in August 2012, kicking off two years of exploration of the crater floor and a mountain of layered rocks and sediment inside the crater. Curiosity was designed to assess if Mars was ever habitable: did it ever have an environment able to support small life forms such as microbes? The record of the planet's climate is written in the rocks and soil - in their formation, structure, and chemical composition. Scientists are using the rover's onboard laboratory to study rocks, soils, and the local geologic setting to assess what the Martian environment was like in the past and to look for the chemical building blocks of life. Science highlights from the first two years of the mission will be presented.

Dr. Sarah Milkovich is a planetary geologist and a systems engineer at NASA's Jet Propulsion Laboratory. Sarah's work at JPL focuses on the interactions between scientists, instrument operators, and spacecraft engineers during spacecraft science operations. She is currently currently working on the Mars 2020 rover project, and has previously worked on Mars Science Laboratory (the Curiosity rover), the Mars Phoenix Lander, the Cassini-Huygens spacecraft at Saturn, and Mars Reconnaissance Orbiter, where she was the investigation scientist for the HiRISE (High Resolution Imaging Science Experiment) camera. She has won JPL and NASA team awards for her efforts to return the best possible science within spacecraft engineering constraints. She received her B.S. in planetary science from Caltech, and her M. S. and Ph.D. from Brown University in planetary geology with studies of mountain glaciers and polar deposits on Mars, and volcanism on Mercury.

Sarah joined JPL in 2005 as a postdoctoral research fellow, studying Martian ice deposits using images, radar, and topography. In 2008, Sarah became a science planning systems engineer. She was a member of the surface operations team for Mars Phoenix during the summer of 2008, and the science planning team for the Cassini-Huygens Mission at Saturn from 2008-2012. Sarah's scientific research continues to focus on the geological history of the polar deposits of Mars.

Directions: *Ample free parking is available:*

**Pasadena City College, (see maps)
Volsloh Forum
1570 E. Colorado Boulevard
Pasadena, California.**

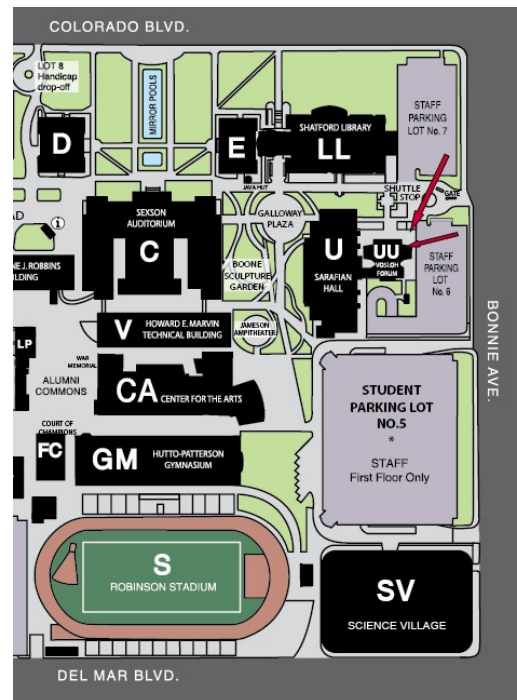
Children accompanied by parents are Welcome

PCC northeast corner Building UU

From the corner of Colorado Blvd. and Bonnie Avenue (the northeast corner of the PCC campus), go south on Bonnie Avenue about 100 yards and turn right into campus at the driveway with information booth and shuttle stop. Immediately turn right (north) into the parking lot and park. From the shuttle stop, follow the walkway to the Volsloh Forum

Handicapped access

Bring your Friends!



List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	December 12, 2014	George Rossman - What makes gem of the year the color it is / Why Peridot is green
	February 20, 2015	Bethany L. Ehlmann - Mineralogy of the Martian Surface
	March 13 2015	Keith Krzywiec: Fossils
Annual Banquet	January 10, 2015	Denise Nelson - Giant Amethyst
Micro Conference	January 30-31 2015	Mark your calendar and watch for more info
Board Meeting	November 16 th 2014	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.

**DON'T FORGET SILENT AUCTION DONATIONS
FOR THE BANQUET ON JANUARY 10th, 2015**

From the Editor: Linda Elsnau

Wow, we have so much "business" this month that I had to leave out any article or mineral of the month segments! They will show up again next month. We have a wonderful "special" meeting this month, our annual banquet and the Micro-Mounting Conference coming up. We also have our annual visit to Jewel Tunnel Imports to help with our holiday shopping. Thank you Rock for the opportunity to visit JTI again this year.

I also want to extend my thanks to the MSSC Board for permission to expand the bulletin when necessary for special articles or, in this case to include your membership form. It was decided that since most of our bulletins are now distributed via email, a page limit seems kind of "old school". The Board has agreed that we can absorb any additional costs for the few bulletins that are still sent out by snail mail. To avoid mailing white paper, I will try to do any increases in two page increments (one piece of paper). As usual, I am always looking for articles from you, our members.

MEANDERINGS FROM THE PRESIDENT by Ann Meister

We're trying something different this month. The meeting is at the Volsloh Forum on the PCC campus and we're inviting "EVERYBODY" to join us – other clubs and hobby groups, students of all levels, friends and neighbors. The Curiosity rover is doing geology and mineralogy on Mars and even though we can't take that field trip – yet – we can enjoy it from here on Earth. This will be an interesting presentation for all ages. I'm fascinated by what Curiosity has accomplished on Mars. And remember, that's our tax dollars at work. Please invite your friends, neighbors and school kids to join us. The Volsloh Forum seats 300. Let's fill it up!

As we will not be having a full business meeting in November due to the (hopefully large) public attendance to hear about Curiosity, the Board voted to move the election to December. Therefore, nominations will still be open at the December meeting before we vote. The proposed slate of officers in elsewhere in the Bulletin.

As always, we are invited by Rock Currier to an **Open House at JTI** – Jewel Tunnel Imports. This year the date is DECEMBER 6 from 10 AM to 4 PM. Mark your calendar. This is a great place to find Christmas presents for all your family and friends. There's more information and maps elsewhere in the Bulletin. Please RSVP by Dec 1 to me at president@mineralsocal.org.

Do you have friends that you haven't seen in a long time and keep telling yourself, "I've got to go see ____?" Well, do it! Otherwise you may regret it if they pass away unexpectedly. Be a friend; invite a "loner" to your Thanksgiving Day dinner or visit a shut-in who can't go out to dinner. Enjoy the holiday season with friends and family. Love is always in season.

ELECTION OF OFFICERS AND DIRECTORS FOR 2015 POSTPONED TO DECEMBER

Here are your nominees for 2015. The nominations are still open. If you would like to submit an additional candidate for any office. Make sure you have that person's permission before making the nomination.

President	Ann Meister
Vice-President	George Rossman
Secretary	Angie Guzman
Treasurer	Jim Kusely
CFMS Director	Jo Anna Ritchey
Directors 2015-2016	
#1	Bruce Carter
#2	Bob Housley
#3	Leslie Ogg

MINUTES of the October 10, 2014 Meeting

The 914th meeting of the Mineralogical Society of Southern California was held on Friday, October 10, 2014, at Pasadena City College, Geology Building. President Ann Meister brought the meeting to order at 7:35pm. Ann welcomed all in attendance and asked the guests to introduce themselves: Gary Webber, long time friend of Treasurer Jim Kusely; Michael, a student at CalTech; Nathan Renfro, the evening's presenter and his wife, Holly,

Regular Business:

- President Ann Meister asked for a motion to approve the Minutes of the last Membership meeting as listed in the October 2014 Bulletin. MSSC minutes of September 12, 2014 Membership meeting were approved by motion (M) from Angie Guzman, seconded (S) by Rudy Lopez and seeing no discussion, the vote carried (C) to approve by the membership;
- Articles for the next Bulletin are due to Editor Linda Elsnau by October 25, 2014;
- The next Board meeting will be held November 16, 2014 at the Carter residence;
- October is when we announce nominations for upcoming Board elections, we are all running again:
 - President Ann Meister
 - Vice President George Rossman
 - Secretary Angie Guzman
 - Treasurer Jim Kusely
 - CFMS Director Jo Anna Ritchey
 - Directors 2015-16 #1 Bruce Carter
 - #2 Bob Housley
 - #3 Leslie Ogg

Usually, nominations are open until the November meeting, but because of our special presentation at that meeting, no membership business will be conducted. However, if anyone would like to oppose the nominations or volunteer for a position, they may do so at the December 2014 meeting at which time the vote will be conducted;

- **Notice: November meeting location change:** The MSSC November 2014 meeting will be held at PCC's Volsloh Forum due to our special public presentation on the *Curiosity Rover Years 1 & 2* presented by Dr. Sarah Milkovich from JPL. The auditorium will hold approx. 250 people and the event begins at 7:30 pm. Feel free to invite public, any groups, everyone to this free presentation;
- Thank You note from PCC for the gift of \$500 that MSSC sent for Dr. Carter's Field Science Award;
- Dues are due January 1, 2015 and will be late January 31, 2015. You may add your dues to your banquet (\$38 ea.) remittance;
- Membership Forms will be included in the next Bulletin;
- Kay Robertson's donated mineral specimens: some will go to the Silent Auction at the Banquet in January and the rest will be used as door prizes. Thank you Kay;
- Trona show is this weekend (Oct 11 &12);

- Next week (Oct 15) at Cal Tech: Quantum States of Matter in Crystals at Beckman Auditorium;
- JPL (Nov 6) 7pm: Asteroid Redirect Mission (Nov 7 at PCC's Volsloh at 7pm);
- Opal Society Show (November 8 & 9);
- Pacific Micromount Conference will be Jan 30, 31 and Feb 1, 2015, location to be determined. In the past, the conference was held at the San Bernardino County Museum. Stay tuned for updates;
- Jewel Tunnel Open House: particulars to be announced and e-mailed;
- NEW San Gabriel Mountains National Monument was announced today (Oct. 10, 2014). There was some discussion by members regarding this development;

There were no other announcements at this time.

Program:

The meeting was turned over to Programs Chair, Rudy Lopez. Rudy advised us of the upcoming presentations: January 2015 Denise Nelson will present at the Micromount Conference and she will speak on the *Mines of Brazil* and, at the March Membership meeting, she will speak on *Giant Amethysts*. In November we will have the special presentation by Dr. Sarah Milkovich of JPL, *Curiosity 1 & 2*. Then in February 2015 we will have the follow up presentation, *Mineralogy of the (Martian) Surface*.

Tonight, **Nathan Renfro**, who was the speaker at our 2014 Banquet, has authored and co-authored articles on various gemology topics. Mr. Renfro, a native of North Carolina, was a Diamond Grader and is now the Analytical Manager in the Gem Identification Department at the Gemological Institute of America, GIA. He is joined this evening by his lovely wife, Holly.

Nathan began his presentation on gemological instrumentation, standard optical instruments and advanced instrumentation by describing methods that GIA uses to identify gemstones. Nathan explained that GIA does non-destructive testing, that is, all gems are returned to their owner intact.

Basic

Several of the "basic" instruments are: microscopes (view things that are too small), spectroscopes (measures properties of light), polariscopes (measure if gem is isotropic or anisotropic), dichroscopes (tests transparent gems), and refractometers (used to identify the gem materials by measuring their refractive index).

Nathan continued by introducing us to the more sophisticated, advanced instrumentation and showed wonderful, clear photographic samples in his presentation. Here are some of the instruments he explained:

Advanced

UV-VIS Spectrometry determines cause of color of gem materials and country of origin.

EDXRF used for quantitative chemical composition and can be used to detect color enhancing and other treatments.

LA-ICP-MS: Laser Ablation – Inductively Coupled Plasma - Mass Spectrometer is used to check for treatment of gem and determine country of origin.

Raman Microscope a laser-based microscope used to measure Raman (discovered scattering of liquid properties) spectrum of a point on a sample.

DTC, Diamond View a helpful tool in observing variations in fluorescence patterns that correlate to growth history of the diamond.

Exploratory Tools

Photomicroscope (with camera) records observations.

Gemological Microscope magnifies up to 1000x (i.e., Nikon Eclipse LV100). The comparison of this microscope to a conventional one is miles apart.

Differential Interference Contrast microscope uses a beam shearing system that yields a shadow-cast image to display gradient optical paths used to determine specific contrast in specimens. This device may be combined with fluorescence microscopy.

Country of origin is an important service GIA offers to its customers. For various reasons, people want to know where their stones came from, as well as about the color and (any) gem lore associated with them. Regarding gem stones, which we see as “clear”, gemologist John Koivula says, “Mother Nature cooks in a very dirty kitchen.” Microscopic observation of inclusion(s) show there are impurities, dirt. Corundum without impurities would be clear, but it’s the dirt and chemicals in gems that cause the color and tell where the gem originated. For example, sapphire with snowflake inclusion from Kashmir may be worth \$100,000 /carat whereas one from Sri Lanka would be worth \$10,000/carat. Value is an important consideration with gems as well as their country of origin.

Nathan provided more examples: peridot from Arizona vs. Pakistan, quartz amethyst inclusions; rare inclusions on blue lazurite in ruby from Namibia, carbonate inclusion in ruby from Burma, blue sapphire from Cambodia with (red) pyrochlore, and others. All photographs were astonishing.

He continued by describing treatment detection, determining natural vs. synthetic stone coloration and chemistry, the “flash effect” (lead glass injections to ruby, which is not stable or permanent), lack of disclosures to dupe buyers.

There was a Q & A period following Nathan’s presentation. We wish to thank Nathan Renfro for his informative, in-depth program and we welcome him back at anytime. Thanks Nathan. I think we will all look at gemstones a little differently now.

Door Prize: Jim Kusely

Reminder: Don’t forget about the flyers for next month’s presentation!

Adjournment: 9:20 pm

Respectfully submitted by: Angie Guzman, MSSC Secretary.

Refreshments were served and friendly discussions ensued in the office following the meeting and wonderful presentation.

MSSC BOARD MEETING Sunday, 9/14/14 1:00 pm at the home of Bruce Carter.

1. Call Meeting to order at 1:03 pm by President Ann Meister

2. **Attendees:** Ann Meister, George Rossman, Jim Kusely, Angela Guzman, Bruce Carter.. Jo Anna Ritchey, Geoffrey Caplette, Pat Caplette, Bob Housley, Leslie Ogg, Pat Stevens, Committees: Linda Elsnau, Rudy Lopez, Cheryl Lopez

3. OLD BUSINESS & COMMITTEE REPORTS

3-1. President’s Report and associated questions (Ann)

- Ann has reviewed the Bylaws & Operating Rules and no amendment is needed, the fiscal dates are correct.
- Question if there is a different meeting room we can use at PCC, if the screen is not going to be able to be used in the current room where meetings are held. Bruce will follow-up.
- Thank you to everyone for a successful Annual Picnic. It was appreciated how everyone helped to set up and take down.
- Possibly for future events obtain mailing list for Gem Council of names to invite. Follow-up for Banquet.

3-2. Treasurer’s Report and associated questions (Jim)

- Jim reported the trailer was sold for \$1,100 and \$359 for 19 cases and supplies. The use of the trailer is still available to MSSC in the future. All legal papers have been completed and filed for the sale. The books indicate in the past 26 cases have been sold and 56 cases are being stored by MSSC members.
- Current balance in bank account is \$23,200
- DO Insurance is due Oct. 1st.

- What is the MSSC role in working with PCC on scholarships? Discussion on the different scholarships and awards currently at PCC. In the past, \$50.00 was donated to Van Amringe Fund when a member passed away. Also \$400 was given to Van Amringe .
- **Motion made by Joanna Ritchey and Seconded by George Rossman- At this point in time until further notice to PCC, MSSC will donate \$500.00 per year to the already established geology scholarships.** Vote was unanimous to approve. Jim and Bruce will write a letter to find out to whom and where the donation should be sent. Ann will sign the letter and mail the check.

3-3. Federation report (Jo Anna)

- Next meeting will be in Nov. 2014
- Received a notice about political action involving Rt. 66
- Recent email will be forwarded to members about pending action.

3-4. Membership Chair report (Cheryl)

- Discussion of having membership cards printed with blanks for names, date, and signature to be filled in. Also suggested membership cards to be mailed out with the Annual Roster in Feb. 2015. This should reduce the cost of mailings. It will be posted in the bulletin and on the membership application to pay dues by Dec. 31st. Any dues paid after Jan. 31st information may not be printed in Annual Roster.

3-5. Bulletin Editor report (Linda)

- Linda reported there are 10 bulletins being mailed. There was a discussion on adding additional pages to the bulletin and the club absorbing the additional printing & postage for those 10 that result. **Motion made by Bob Housley and Seconded by Bruce Carter- to expand the limit of Bulletin pages and absorb any additional costs that results mailed bulletins.** Vote was unanimous to approve.

3-6. Webpage Status (Leslie)

- Statistics on website usage-Leslie reported there were 1,685 visits to the Website.

3-7. PMC Chair report (Bob Housley for Al Wilkins)

- Bob Housley reported last year's Conference was the most successful in recent history. There were 61 registered for conference, and 20 people attended the field trip. There has been a cut back in the budget at the Museum, only able to hire a security guard for the day time. PMC meets until 9:00 pm and the Museum has to pay overtime to security guard. The check from last year apparently the check got lost and they never got it. They will not confirm the dates of the conference until they receive the check. A new check has been sent by Certified Mail with signature required. Jim will follow up to make sure the check arrived.
- Need to find new venue for 2016 - we have out grown the facility. Need a kitchen that works, pay for only rent, not a percentage of our profits. Requirements are: Need a room on Friday from noon-until 9:00 pm, Sat- all day, easy freeway access, limited congestions, ample parking, refrigerator to use, ample electricity for plugging in microscopes, drop down screen, podium, table and chairs, flat tables, big room with adequate lightning,. Some possibilities to check: Redlands area, San Bernardino Community College, Cooper Mountain College. Venues that will not work: Fallbrook- room too small, Riverside Museum- too small. Discussion Tabled until next meeting.

3-8. Program Chair report (Rudy)

- Guest speakers are lined up for the next 8 months.
- Discussion about the Nov. and Feb meeting location or using the usual room or the Volsloh Forum. Speaker will be from JPL. Invite other clubs to attend, advertize on the marquee and post it in LA Rocks. If at the Forum, since Nov. is the month we vote on a new slate of officers, can we re-schedule the vote for Dec?

Motion made by George Rossman and Seconded Joanna Ritchey- to move the vote of New Officers to the Dec. Meeting, if using Volsloh Forum. Vote was unanimous to approve. Bruce will check to see if Forum can be used. Ann, Rudy and Linda need info from Bruce. Date of meeting is Nov. 14th.

- Banquet: the cost for the 2015 Annual Banquet will be \$38.00 per person. Must pre-pay by Dec. 31st

Put notice in bulletin and send out notices to Gem & Mineral Council. Ann will contact Gem & Mineral.

- Silent Auction-donations collected can be used for the silent auction. Need to sort through the last donation to see what will be used for give away or silent auction. Need to print out sheets to use with silent auction. Ann will print out sheets.

4. NEW BUSINESS

4-1. Nominations for 2015

Office	Current	Continue or Nominee
President	Ann Meister	Continue
Vice-President	George Rossman	Continue
Secretary	Angie Guzman	Absent- need to contact
Treasurer	Jim Kusely	Continue
CFMS Director	Jo Anna Ritchey	Continue
2015-2016 #1	Bruce Carter	Continue
2015-2016 #2	Bob Housley	Continue
2015-2016 #3	Leslie Ogg	Continue

- Linda will continue the bulletin for 1 more year.

Activity proposals: follow up with Steve Mulqueen about field trip to Seep areas.

NEXT BOARD MEETING:

Date & Location: Nov 16th at 1:00 pm at the home of Bruce Carter.

ADJOURN: Meeting adjourned at 3:30 pm

!!! EARLY NOTICE !!!
DUES ARE DUE by January 1, 2015 and are late after January 31, 2015.

Your 2015 Membership form is attached at the end of this bulletin. Please fill out and send with your dues to the address on the bottom of the form. If you plan on attending the Banquet, you may include your reservation and payment with your dues. The Banquet tickets are \$38.00 per person.

**An invitation for the members and friends of the
 Mineralogical Society of Southern California to
 attend an Open House at**

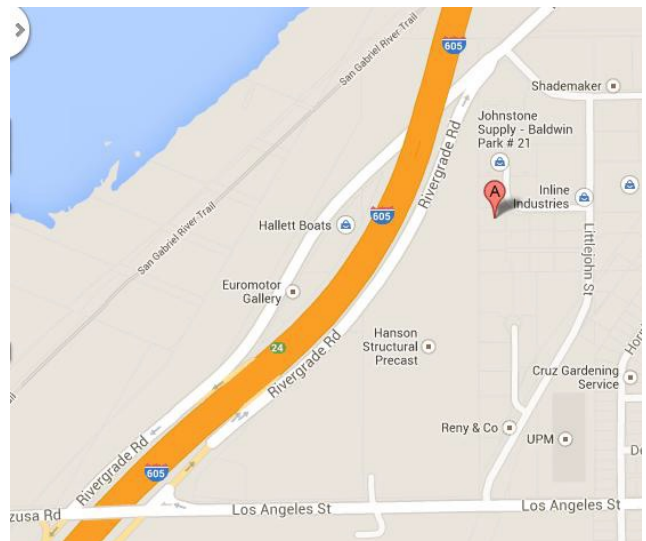
Jewel Tunnel Imports

Saturday December 6, 2014 - 10 AM to 4PM

**RSVP to president@mineralsocal.org by
 December 1st, 2014 if you plan to attend**

13100 Spring St., Baldwin Park, CA 91706, 626-814-2257

Starving students and other will be fed.
 Unattended children will be sold as slaves.
 Map also available at www.jeweltunnel.com




Jewel Tunnel Imports is a leading wholesale distributor of mineral specimens, crystals, fossils, tumbled stones and many different kinds of lapidary items like balls, eggs, jewelry etc. made from different minerals. We have a warehouse in excess of 10,000 sq. feet full of mineral related natural history items, perhaps the largest of its kind in the United States. Check out our website jeweltunnel.com.

Historically Jewel Tunnel Imports has had limited open house parties for mineralogically and geologically oriented groups such as the students and faculty of various university geology departments and members of certain gem and mineral societies. These open houses, by invitation only, on a few weekends just proceeding Christmas, offer a chance for individuals belonging to these groups to buy minerals and crystals at wholesale prices and to learn something about the wholesale gem and mineral business.

Jewel Tunnel Imports is a wholesale only warehouse and this invitation is only for the date of the open house. If you wish to return during the year to purchase items you will need to obtain your own resale permit from the California State Board of Equalization. The 9% sales tax will be charged. All sales are final.

Directions to Jewel Tunnel Import's warehouse.

Exit the **605 Freeway at Los Angeles Street**. Go **East** to **Littlejohn St**. Turn **North** on Littlejohn to **Spring St**. Turn **Left (West) on Spring**. The parking lot is straight ahead with the door to JTI in the NW corner of the parking lot.

<p style="text-align: center;">WEST COAST GEM & MINERAL SHOW</p> <p style="text-align: center;">NOV. 7 - 9, 2014</p> <p style="text-align: center;">SANTA ANA, CA</p> <p style="text-align: center;">Holiday Inn - Orange County Airport 2726 S. Grand Ave. (take 55 Fwy exit for Dyer Rd. to S. Grand Ave.)</p> <p style="text-align: center;">75 Top Quality Dealers</p> <p style="text-align: center;">Minerals ★ Fossils ★ Gemstones ★ Jewelry Beads ★ Decorator Pieces ★ Meteorites Lapidary ★ Metaphysical</p> <p style="text-align: center;">FREE ADMISSION ★ FREE PARKING ★ WHOLESALE ★ RETAIL</p> <p style="text-align: center;">Show Hours: Fri. & Sat. 10 - 6 ★ Sun. 10 - 5</p> <p style="text-align: center;"><small>LLD Productions, Inc. in cooperation with Martin Zinn Expositions, L.L.C., P.O. Box 665, Bernalillo, NM 87004 Fax: (303) 223-3478, mzexpos@gmail.com, www.mzexpos.com</small></p>	 <p style="font-size: small; text-align: center;"><i>Fluorite - Anglaize Quarry, OH Photo by Joe Budd©</i></p>
--	---

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 mssbulletin@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	

Calendar of Events:

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

NOVEMBER 2014

November 1 - 2: OXNARD, CA

Oxnard Gem & Mineral Society
 Oxnard Performing Arts Center
 800 Hobson Way
 Hours: Sat. 9 - 5; Sun. 10 - 4
 Website: www.oxnardgem.com

November 15 - 16: APPLE VALLEY, CA

Valley Gem & Mineral Club
 Victor Valley Museum
 11873 Apple Valley Road
 Hours: Sat 9 - 5; Sun 9 - 4
 Website: www.vvgmc.org

November 1 - 2: RIDGECREST, CA

Indian Wells Gem & Mineral Society
 Desert Empire Fairgrounds
 520 S. Richmond Road
 Hours: 9 - 5 daily
 Website: www.indianwells.weebly.com

DECEMBER 2014

December 12 - 14: RIALTO, CA

Orange Belt Mineralogical Society
 Across Street from Rialto City Hall
 105 South Palm Avenue
 Hours: Sat 10 - 5; Sun 10 - 3
 Website: OBMSrocks.yolasite.com

November 8 - 9: ANAHEIM, CA

American Opal Society, Garden Grove
 The Phoenix Club - Festhalle
 1340 S. Sanderson Ave.
 Hours: Sat 9 - 6; Sun 9 - 5
 Website: www.opalsociety.org

*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	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
	1/3 page	\$10.00	
	1/2 page	\$20.00	
	Full Page	\$35.00	

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		
2013--2014	Bruce Carter	
2013--2014	Bob Housley	
2013--2014	Leslie Ogg	
2014-2015	Pat Caplette	
2014-2015	Pat Stevens	
COMMITTEE CHAIRS		
Bulletin Editor	Linda Elsnaу	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 Elsnaу	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

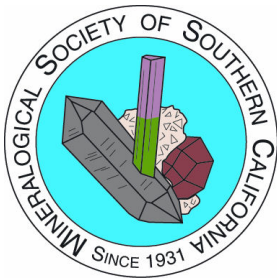
Website: www.mineralsocal.org **The Mineralogical Society of California, Inc.**

Permission to reproduce and distribute original material published herein, in whole or in part, for non-commercial purposes, is hereby granted provided the sense or meaning of the material is not changed, the editor is notified, and the author's notice of copyright is retained. **All other articles used in our bulletins are with the specific permission of the author. Permission to use these documents must be obtained from the author for each use**

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

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

To:



With Knowledge Comes Appreciation

**Your MSSC
Bulletin Is Here!**



2015 MSSC Membership Dues

PLEASE PRINT CLEARLY!

All information **will** appear in the Roster unless you check **NO**

Name: _____

NO Address: _____
Street Apt

City State Zip+4

NO Phone: _____
Home Cell

NO Email: _____

NOTE: THE BULLETIN IS NOW DISTRIBUTED VIA EMAIL

If you wish to receive the Bulletin in a printed, black-and-white format via the US post office, there is an additional annual charge of \$20 to cover the printing and postage. **Yes, I will pay the extra \$20**

Additional name(s) and relationship if this is a family membership:

Our annual printed Roster will include only the information you approve above; The Roster is ONLY for personal use of our members.

Membership Dues for One Year:

Donations

_____ \$20 Individual
_____ \$30 Family
_____ \$20 USPS- delivered paper Bulletin

_____ \$100 Platinum
_____ other donation

If you wish to make your banquet reservations now:

of _____ MSSC Banquet Reservations at \$38.00 each: = \$ _____

Reservations for: (Names): _____

Total enclosed: \$ _____

Make checks payable to MSSC and mail this form to:

**Mineralogical Society of Southern California
1301 Leonard Ave.
Pasadena CA 91107**

Questions?

Contact Cheryl Lopez (MSSC Membership) at rclopex002@verizon.net or (626) 351-6283