



Bulletin of the Mineralogical Society of Southern California

Volume 88 Number 9 – September, 2015

The 925th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

September 11th, 2015 at 7:30 P.M.

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

Program: "Bones of the Thunder Lizard" Presented by Fred & Linda Elsnau

In this Issue:

<i>TITLE</i>	<i>Page</i>
Program: "Bones of the Thunder Lizard" Presented by Fred & Linda Elsnau	2
From the Editor: Linda Elsnau	2
Meanderings from the President: Ann Meister	2
Minutes of the August 9th Picnic & Meeting	3
List of Upcoming MSSC Events	5
Earth's Mineral Total Passes 5,000!	5
More About This Mineralogical Milestone by Ann Meister	6
Do you Remember?	6
September Featured Mineral: Spinel	8
Ride Share Listing	9
Calendar of Events	9
2015 Officers	11
About MSSC	11

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: “Bones of the Thunder Lizard”, Presented by: Fred & Linda Elsnau

When was the last time you looked, really looked, at a cut piece of dinosaur bone? Fred has.

Petrified dinosaur bone is often filled with agate and occasionally, calcite or other minerals. The agate fills the cells with colors and fortification that can rival the finest “Laguna” agate.

Fred has been collecting minerals and cutting stones for 50+ years. Along the way, he began photographing the minerals and cut stones he saw. He has used these pictures to present programs on gem and minerals to many groups in the L.A. area. When he started collecting “Micro Minerals”, he decided the best way to share what he loved about them was with his camera. He has developed his micro-photography to the point that he can fill a 35mm slide with as little as 3mm of a specimen. It is this skill that lets him share the beauty of petrified dinosaur bone. Join us and see what he and his camera found!

From the Editor:

Here we are at September again and so soon! School is starting for the kids, hopefully, the weather will soon be “fall-like” and we can start planning for the end of year events. MSSC has an election coming up soon. Our current group of officers is becoming seriously overworked. Do ask the current officers what their jobs and duties are. You may find it interesting and be tempted to volunteer to take on a role that you may just find rewarding. I know that I had never taken on the task of a club bulletin before, but here I am at the end of my third year as MSSC’s editor and still enjoying it! We also have our annual banquet coming up just around the corner! Have you looked around to see if there is anything that you can donate to the annual auction. Remember, it’s our only fundraiser so your help is always appreciated. MSSC needs the help of all of its’ members via multiple methods to thrive. Linda Elsnau

MEANDERINGS FROM THE PRESIDENT by Ann Meister

The twenty-two of us who gathered for the annual picnic enjoyed ourselves immensely. We’re sorry the rest of you didn’t make it. It was a congenial atmosphere with a pair of new members being coached about minerals and mineral collecting from a variety of long-time members. I want to thank everyone for the delicious food; no one left hungry, that’s for sure. Rudy made pulled pork and brisket that were just heavenly; Leslie brought her shave ice machine, and there were chicken wings, fruit, salad, desserts, soft drinks, beer and more. And a huge THANK YOU to Bruce and Kathy Carter for again hosting the picnic in their backyard (and to Kathy Carter for her to-die-for brownies). The discussion of favorite California minerals was lively, fun and informative. George Rossman told a story from when he was young in Wisconsin about how a Pala tourmaline, included as a free sample with an order from the legendary-and-now-defunct, Geiger’s in Pasadena sparked his interest in color in minerals. From benitoite to hanksite, there was something for everyone.

Tony Kampf says it’s official. Let’s welcome **Dr. Aaron Celestian, the new associate curator of mineral sciences** at the Natural History Museum of Los Angeles County to our Southern California mineral community. Dr. Celestian will be on the job at the museum in January 2016. He is currently an Associate Professor of Geology and Director of the Advanced Materials Institute at Western Kentucky University. His BS in geology and mineralogy is from University of Arizona with MS and PhD from Stony Brook University, NY. His research emphasis is in crystallography and materials characterization. “In deciphering mechanisms at the atomic and molecular levels, I hope to understand, predict, and even manipulate mineral behaviors and properties at the macroscopic scale.”

Oddities in the news: A salamander was found in a hunk of amber from the Dominican Republic by scientists at Oregon State University and UC Berkeley. This is the first ever discovery of a salamander fossil in amber, it is a never-before-seen and now-extinct species, and it was found where there are no salamanders living today. The poor baby salamander had its leg bitten off before it was entombed in the resin deposit.

Don’t forget the Board meeting on September 13 at Bruce Carter’s home.

CALL FOR VOLUNTEERS!

MSSC NEEDS YOU to volunteer for the fall elections. All current officers have been in their jobs for more than two years. That's really not fair. Let's spread the responsibility before burn-out brings on a crisis. Officer positions are one year terms according to our Bylaws. Directors serve two year terms. We have two director's positions for the two year term 2016-2017. Who would like to lead MSSC?

WILL YOU SERVE?

Contact Ann Meister at president@mineralsocal.org

MINUTES of the August 9, 2014 Meeting & Picnic

The 924th Membership Meeting of the Mineralogical Society of Southern California (MSSC), our annual Picnic, was held Sunday, August 9, 2015 at the Carter residence.

The abbreviated Membership meeting was called to order at 2:48p.m. by President Ann Meister. The Picnic meeting was informal and most Regular Business was dispensed with and will be addressed at the next Membership meeting on September 11, 2015. However, Ann did make two announcements: (1) The next JPL Von Karman lecture series will cover water resources and the drought (check JPL website for updates) and (2) Elizabeth Moller's daughter has a collection of rocks available for sale. Contact Ann for more information.

Program: The theme for this year's picnic is a discussion of our *Favorite California Minerals*. Anyone and everyone were encouraged to share their story.

Ann Meister started off the discussion by talking about her favorite, **Hanksite**. A mineral she'd collected while at Searles Lake. Her collection included hexagonal prism, columnar, beveled, big ones, small ones, some with borax, halite and other minerals. The mineral is water soluble and, Fred Elsnau says, it tastes weird. It was a fun thing to collect all the different forms of Hanksite she could find. The crystals are very nice. The color is usually brown, even black and some yellow. Collecting at Searles Lake is fun, you get muddy, it's hot and everyone has a good time. There's a field trip usually in October.

Fred Elsnau shared his favorites, **Benitoite** and **Neptunite**. The most fascinating Benitoite are the twin crystal, which are rare and found at the fringes of the ore body. They form 6 or 8 stars or Israeli stars (Star of David). All twined crystals Fred has seen are filled with crossite and are grey with remarkable form. Neptunite is a close associate to Benitoite and are black appearing crystals but are really deep reddish brown. Neptunite crystals occasionally twin forming an "X" twin

Bruce Carter started by mentioning the Pinnacle Pit in Death Valley. He showed a tip of a **Colemanite** crystal (about 3" high). It's evident, by looking at the cleavage, there was a larger piece and, looking at the inside, the inner face forms an almost perfect mirror. Laser inspection would be interesting. The original crystals look to be different forms/faces, they grew in the same orientation but different forms developed. In one place, the small internal crystal interfaces on the surface and forms very interesting striated interfaces where two different episodes of growing were interfering with each other. Interesting piece and Bruce's favorite.

Next, Gene Reynolds self-collected **Barite** at the Palos Verdes cliffs. It's a fun experience collecting barite before the tide comes in to douse you with sea water. Carrying all your collecting gear down is easy because it's (steep) downhill. Most start collecting as soon as they reach the collecting areas. After collecting, bringing everything back up is a bit more difficult and may require two trips. Everyone forgets how heavy Barite can be. There is a big parking lot right near the Coast Guard Light Station. A little story, one time with Mike Evans, along the collecting area, they found a big boulder that slid down a cliff face up. It never tumbled. The Barite popped off using a sledge on the side and the sheets just came off. Fred Elsnau commented on the old Pacific Ocean Park, POP, and a spot literally in the road where he collected Barite. Now, Leslie Ogg says that part of the road is no longer a collecting site but cemented over.

George Rossman tells about his *Wisconsin Agate!* In grade school, he was collecting agates and wanted to polish them. He ordered polishing compound from a company in Pasadena, California. Since his order was over \$20, they sent him a bonus little piece of watermelon **Tourmaline**, a “rock” he’d never seen in multiple color, clear as a piece of glass. He took it to his teacher, who couldn’t help him. It was then he became interested in the sciences. When he moved to California as a student, his Mecca was Pala and its tourmaline mines. He became friends with Bill Larsen, owner of the Stewart mine, and was invited to go into the Himalaya mine to collect tourmaline crystals. George showed us a crystal of **Elbaite**. Currently, there are 31 species of tourmaline with 3 more yet to be approved. George brought a sodium lithium aluminum beryl silicate tourmaline specimen to share. He has studied the colors of tourmaline, his favorite California mineral.

Leslie Ogg brought **Lepidolite** that has tourmaline needles in it. She collected it 30 years ago in Pala area. At that time, you could collect just walking down the trails and keep whatever you found along the way. Not so these days, sadly.

Cheryl Lopez talked about going out to Wiley Wells, digging around and finding **Geodes!** “We knew about soda ash and we dug and dug and found them!” she said.

Angie Guzman told about the first time she went panning for **Gold**. It was up in the San Gabriel’s with her brother. After finding a spot to park and climbing down with their gear buckets, they started panning at the river’s edge. Her brother reminded her to get the tweezers. Tweezers?! Panning, panning, sifting, more panning with no results. Finally, a speck of gold flake! She got those tweezers and nipped that flake up and put it in her water filled vial. Gold! Angie said she had fun. (She felt like she hit the Mother Lode!)

Don Kurth from Rancho Cucamonga shared his specimen he’d bought from a girl whose grandfather mined it. He passed it around to see if anyone could identify it. The **Molybdenite** is from the Climax Mine in Colorado. Molybdenite is used in radio transistors, semiconductors and has many other uses.

JoAnna Ritchey told the group about her trip out near Halloran Springs and her visit to the Toltec Mine, built in two levels by Native Americans. She found **Turquoise**, chalk quality, on the ground and could just pick it up! It was fascinating to go and see it in the ground. She was looking for turquoise and it was there! She was thrilled. After coming home, she was told she could treat the turquoise to stabilize it then use it.

Marek Chorazewicz talked about collecting **Zeolites**, including **Sphalerite**, in the Santa Monica Mountains. Marek did not bring any samples because, he says, when he sees it, he chucks it! It’s ugly! He did bring other mineral specimens to show.

Geoff Caplette shared that while he did not have a specimen to share, he finally did get his *blasting license*. It was discovered that where Geoff’s mining operation is, there’s a 6 foot drop that is ripe for mining. That’s where they’ll be mining next. Good luck, Geoff! There was some discussion about that mine that’s for sale, still. Apparently, the mine has been up for sale for about 10 years. There’s no water and no electricity on the 30 plus acres!

Ed Kiessling talked about **Beryllium** mineral crystals.

Our newest member, Leda Nazardad, spoke about her interest in rocks, has a little collection now and makes jewelry with gems and crystals including **Labradorite**. She received a lot of information and ideas about minerals today and thanked everyone.

Other Announcements:

Linda Elsnau announced the deadline for the next Bulletin is August 24, 2015. Thanks to Gene and Marek for their contributions to the last Bulletin.

Rudy Lopez announced next month’s program presenters are Fred and Linda Elsnau. Bruce will be presenting at the banquet and George will present in February 2016.

Gene Reynolds announced Southern California Friends of Mineralogy will be the 3rd weekend in October for meeting and collecting at Crestmore Quarry. The quarry was mined for its blue calcite used to make white

cement. White calcite reveals clear crystals. Log on to their website for updates and to register. It should be a fun trip.

The pot luck picnic is always fun and the food is great! The meat, chicken, salads, fruit, goodies and shaved ice were all wonderful. Thanks to everyone who brought something. Thank you to those who helped set up and those who cleaned up. Great job! A big THANK YOU to Bruce and Cathy Carter for graciously hosting the annual picnic again. Thank you all for coming. A good time was had by all!

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:	October 9, 2015	Tony & Sandie Fender: 50 Unusual things in the Mojave Desert or Mount St. Helens
	November 13, 2015	Chuck Houser? Calcite/ Elizabeth R/ Oceanview Mines, Pala/ Minerals/ Mining San Diego County
	December 11, 2015	Forestry Service Monument Program
Field Trip	October 18, 2015	UCLA's Meteorite Museum
Board Meeting	September 13, 2015	Board Meeting at Bruce Carter's house
Annual Banquet	January 9, 2016	At The Oak Tree Room, CoCo's Restaurant, Arcadia

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

Earth's Mineral Total Passes 5,000!

After more than two centuries of investigation by mineralogists worldwide, the total number of discrete, currently accepted mineral species has passed the 5,000 mark. When the German mineralogist Abraham Gottlob Werner (1749-1817) published his "Last Mineral System" in 1817, he listed just 317 different mineral species that were known to exist at that time. Over the following years, some of those were discarded or refined and new ones were added to the list in an ongoing process. By January of 1969, Michael Fleischer of the U. S. Geological Survey (original author of the *Glossary of Mineral Species*, now in its 11th edition) estimated the total at 1,950. As of January 2014, the official count by the International Mineralogical Association was 4,684, as published in the 11th edition of the *Glossary*. Since that time, 136 new species have been published. If another 226 accepted but "questionable" species are included in the list, the total reaches 5,046 (rruff.info/ima). Because the IMA chooses to count them, *Glossary* author Malcolm Back will be including the "questionable" species in the 12th edition, scheduled for 2018.

Are there likely to be very many more discovered? Definitely. Robert Hazen, in a forthcoming article in the *Mineralogical Record*, uses complex statistical analyses to estimate that roughly 1,500 more unknown species exist in nature and are waiting to be discovered. And that number may increase if new and more sophisticated analytical instruments are developed in the future. So at this point in history we are in no danger of running out of new minerals!

Editor's note: This article is from the August, 2015 M.R. News and is shared here with the generous permission of Wendell Wilson. Editor of the Mineralogical Record

More About This Mineralogical Milestone by Ann Meister

A mineralogical milestone: There are now over **5,000** named minerals according to the International Mineralogical Association (IMA)! (ref: <http://nrmima.nrm.se/>) *The New IMA List of Minerals* updated July 2015 lists 5048 currently valid species from abelsonite (an organic nickel compound from oil shale in the Green River Formation, Uintah Co., Utah) to zýkaite (a hydrated iron arsenate with the type locality in the Czech Republic). Some mineral names, such as tourmaline have been become group names with over 25 members

(including rossmanite named for MSSC member Dr. George Rossman). Other names are discredited for various reasons, such as being a duplicate of a previously described mineral when investigated with new methods of analysis. Or some, such as ruby and sapphire, are color variations of corundum and therefore not unique species. In the third century BCE Greece, Theophrastus recognized about 50 “species” of stones. Much later, in 1817, Abraham Gottlob Werner, who wrote the first modern textbook of descriptive mineralogy, listed 317 different mineral species in his *Last Mineral System*. The original *Glossary of Mineral Species* by Michael Fleischer, published in 1971, had 103 pages with about 25 names per page for over 2,000 entries. [I wasn’t going to count every entry on every page.] However, some listings were not specific mineral names, for example, “Desmine [never heard of it] = Stilbite,” “Rubellite = Elbaite” and “Selenite = Gypsum;” then there are varieties such as, “Agate, a variety of Chalcedony,” and “Chalcedony, a cryptocrystalline variety of Quartz.” For tourmaline the entry reads: “Tourmaline, a group of minerals of general formula [...], see Buergerite, Dravite, Elbaite.” And then, “Schorl = black Tourmaline” though in the IMA list schorl is now shown as a valid species and on mindat, schorl (along with oxy-schorl and fluor-schorl) is listed as a member of the tourmaline group. Of course, over the years, naming criteria have changed, so what’s in a name and a number? – thrill. It does sound thrilling to say that there are over 5,000 valid mineral species, even if probably more than half of them are represented by microscopic blebs, many of which may have been destroyed during the analysis process. It’s not like you will ever have all 5000 in your personal collection, even as a micromount collector.

Do You Remember?

This is from the Feb. 2013 MSSC Bulletin and shows nine attendees of the 2013 Pacific Micro-Mount Conference that have contributed to the amazing mineral count we now can enjoy learning about!

Attendees With New Minerals Named After Them



Back row, left to right: Eckhard Stewart (Edkhardite), Tony Kampf (Kampfite), Joe Marty (Martyite), Bob Housley (Housleyite) and Dick Thomssen (Dickthomssenite).

Front Row, left to right: Ted Hadley (Tedhadleyite), Jerry Baird (Bairdite), Tim Rose (Timroseite & Paratimroseite) and Brent Thorne (Thorneite)

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	
<p>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</p>			

With Knowledge comes Appreciation

Mark Your Calendar! Sept. 26th & 27th

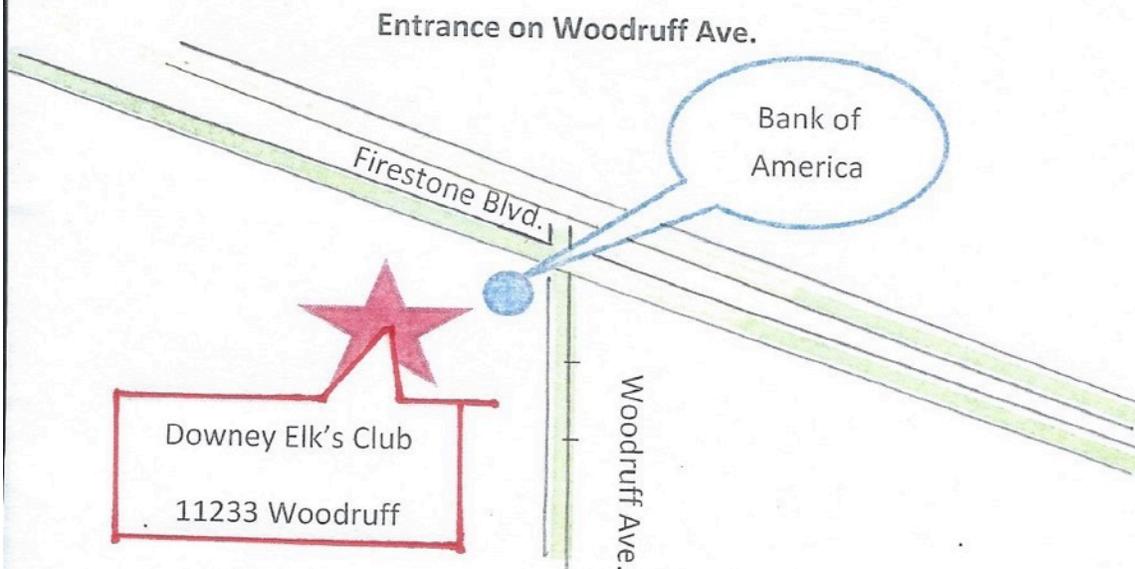


Delver's Gem Show

We Have Moved to a New Location

Location: Downey Elk's Club— 11233 Woodruff Ave., Downey, CA
(Corner of Woodruff Ave. and Firestone Blvd. Behind Bank of America)
(see map below for directions - entrance on Woodruff Ave.)

When: Saturday, September 26th, 2015 Hours: 10:00 AM—6:00 PM
Sunday, September 27th, 2015 Hours: 9:00 AM—4:00 PM



Featured Mineral: **Spinel** **Formula:** $MgAl_2O_4$

Crystal System: Isometric

Color: Black, blue, red, violet, green, brown, pink.

Name: Named in 1779 by Jean Demeste from Latin "spinnella", little thorn, alluding to its sharp octahedral crystals. Confused with carbuncle = ruby in former times.



irocks.com photo

Spinel : $MgAl_2O_4$, **Clinohumite :** $Mg_9(SiO_4)_4F_2$, **Calcite :** $CaCO_3$
Locality: Purple
Crystal is 8mm across



irocks.com photo

Spinel : $MgAl_2O_4$
Locality: Mogok Township,
Pyin-Oo-Lwin District,
Mandalay Division, Burma
1.1 cm x 1 cm x 0.9 cm



irocks.com photo

Spinel : $MgAl_2O_4$
Locality: Aldan Shield, Sakha
Republic, Eastern-Siberian Region,
Russia
5.5 cm x 5.3 cm x 3.9 cm



irocks.com photo

Spinel : $MgAl_2O_4$ on
Diopside : $CaMgSi_2O_6$
Locality: MacDonald Island, Baffin
Island, Nunavut Territory, Canada
4.8 cm x 3.9 cm x 3.3 cm



irocks.com photo

Spinel : $MgAl_2O_4$
Locality: Hunza Valley, Gilgit
District, Gilgit-Baltistan, Pakistan
2.6 cm x 2.2 cm x 1.9 cm



irocks.com photo

Spinel : $MgAl_2O_4$
Locality: Marble occurrence,
Morogoro, Uluguru Mts,
Morogoro Region, Tanzania
2.0 cm x 2.0 cm x 1.6 cm



irocks.com photo

Spinel : $MgAl_2O_4$, **Calcite :** $CaCO_3$
Locality: Crazy Sphinx Mine, Helena,
Helena District, Lewis and Clark Co.,
Montana, USA
1.6 cm x 1.5 cm x 1.1 cm



irocks.com photo

Spinel : $MgAl_2O_4$
Locality: Luc Yen, Yenbai
Province, Vietnam
2.1 cm x 2 cm x 2 cm

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	

Calendar of Events:

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

SEPTEMBER 2015

September 26 - 27: DOWNEY, CA

Delvers Gem & Mineral Society
Elks Lodge
11233 Woodruff Avenue
Hours: Sat 9 - 5; Sun 9 - 4

September 30 - October 4: YUCCA VALLEY, CA

Hi-Desert Rockhounds
Sportsman's Club of Joshua Tree
Hours: 9 - 6 daily
Website: www.jtsportsmansclub.com/gem.html

OCTOBER 2015

October 3 - 4: BORON, CA

Mojave Mineralogical Society
Boron Park
12000 Boron Avenue
Hours: 9 - 4 daily

October 3 - 4: 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

October 10 - 11: TRONA, CA

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

October 11: FALLBROOK, CA

Fallbrook Gem & Mineral Facility
123 West Alvarado Street
Hours: 9 - 4
Website: www.fgms.org

October 17: WEST HILLS, CA

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

October 17 -18: WHITTIER, CA

Whittier Gem & Mineral Society
Whittier Community Center
7630 Washington Avenue
Hours: 10 - 5 daily

NOVEMBER 2015

November 7 - 8: ANAHEIM, CA

American Opal Society
The Phoenix Club
1340 South Sanderson Avenue
Hours: Sat 10 - 6; Sun 10 - 5
Website: www.opalsociety.org/

November 7 - 8: OXNARD, CA

Oxnard Gem & Mineral Society
Oxnard Performing Arts Center
800 Hobson Way
Hours: Sat. 10 - 5; Sun. 10 - 4
Website: www.oxnardgem.com / [Show Page](#)

November 7 - 8: RIDGECREST, CA

Indian Wells Gem & Mineral Society
Desert Empire Fairgrounds
520 South Richmond Road
Hours: 8 - 5 daily

November 21 - 22: APPLE VALLEY, CA

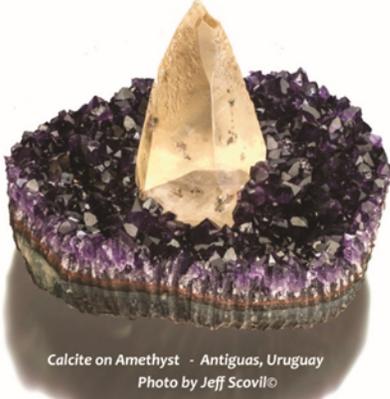
Valley Gem & Mineral Club
Victor Valley Museum
11873 Apple Valley Road (x Bear Valley Rd.)
Hours: Sat 9 - 5; Sun 9 - 3
Website: www.vvgmc.org / [Show Page](#)

WEST COAST GEM & MINERAL SHOW

NOV. 13 - 15, 2015

SANTA ANA, CA
Holiday Inn - Orange County Airport
2726 S. Grand Ave.
(55 Freeway exit 8 for Dyer Rd. to S. Grand Ave.)

80 Great Dealers
Minerals ★ Fossils ★ Gemstones
Jewelry ★ Beads ★ Decorator Pieces
Meteorites ★ Lapidary ★ Metaphysical



Calcite on Amethyst - Antiguas, Uruguay
Photo by Jeff Scovil

**FREE ADMISSION ★ FREE PARKING ★ RETAIL
WHOLESALE FOR QUALIFIED BUYERS**

Show Hours: Fri. & Sat. 10 - 6 ★ Sun. 10 - 5

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www.mzexpos.com  Like us on Facebook ~ facebook.com/mzexpos

Question:

If you collect minerals, do you remember what your first mineral specimen was and where/how you acquired it? Send me a paragraph or two to tell me about it. If I get enough replies, you will see them in a future bulletin. Send me your first specimen story at: msscbulletin@earthlink.net

Thanks,
Your Bulletin Editor, Linda Elsnau

2015 MSSC Officers:

OFFICERS		
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Vice President	George Rossman	vicepresident@mineralsocal.org
Secretary	Angie Guzman	secretary@mineralsocal.org
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Program and Education	Rudy Lopez	programs@mineralsocal.org
Publicity	Linda Elsnau	bulletin@mineralsocal.org
Webmaster	Leslie Ogg	webmaster@mineralsocal.org

About the Mineralogical Society of Southern California

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

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

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

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

Mineralogical Society of Southern California

1855 Idlewood Rd.,

Glendale, CA 91202-1053

E-mail: treasurer@mineralsocal.org

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 Here!**