Bulletin of the Mineralogical Society of Southern California

Volume 91 Number 2 - February, 2018

The 953rd meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

February 16th, 2018 at 7:30 P.M.

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

Program : **"Larry & Leslie - Opals Part 2": Yowah, Queensland, Australia**

In this Issue:

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: "Larry & Leslie - Opals Part 2": Yowah ,Queensland, Australia

This presentation will focus on the town and mining fields of Yowah. We will have samples, information, and opal for sale.

This town and it's adjacent mining areas are less than 1 square mile yet they provide one of the most sought after and rare forms of "boulder opal" the famous Yowah nut. With a permanent population of 70 people and the nearest town 100 miles away this is truly the classic Australian outback.

First registered in 1884 most workings were hand dug, with shafts bottoming out no deeper than 35 feet. The nut band is an ironstone layer that averages 6" to 24" in thickness and produce opal in 'flash', 'pinfire', and black varieties. We will talk about our time spent there.

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From the Editor:

It's that time of year again. Our Membership Roster will be mailed in the next week or two and it's time to clear our list of non-renewing members. Don't be left out… If you haven't already done so, contact our Membership Chair, Cheryl today to renew your membership!

Did you know that if you haven't renewed your MSSC Membership by the end of February, THIS WILL BE THE LAST BULLETIN YOU WILL RECEIVE!! If you aren't sure if you have renewed, contact our membership Chairperson, Cheryl Lopez at *membership@mineralsocal.org* Also, If you haven't renewed by the end of January, your information will not be in the annual membership roster! Linda Elsnau

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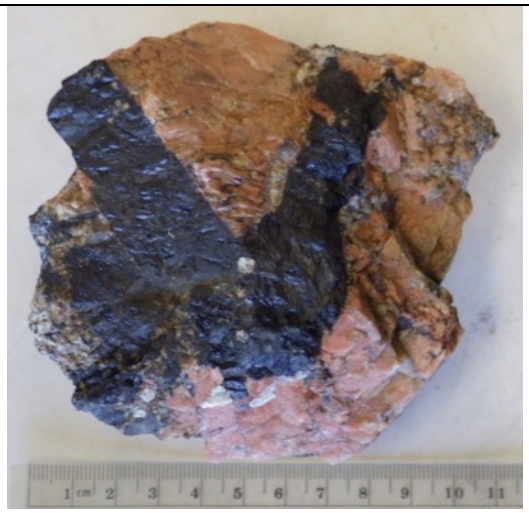
FROM THE PRESIDENT: Interesting Minerals, A to Z. Installment 1, the letter A
by George Rossman

Allanite

Photoe by G. Rossman
Allanite from Pacoima Canyon



Photoe by G. Rossman
Black allanite in pink potassium feldspar from the Pacoima Canyon pegmatite.
A 1.5 cm long zircon runs parallel to the left side of the allanite crystal on the right.

Allanite was named after Thomas Allan, a Scottish mineralogist (and banker) who first recognized that it was a different mineral. The name goes back to 1810. The mineral was published in 1811 in "A Journal of Natural Philosophy, Chemistry and the Arts, volume 29, p47, by Thomas Thomson, a Fellow of the imperial Chirurgo-Medical Academy of Petersburgh.

It was brought to the city of Leith aboard a Danish vessel as part of a collection of minerals likely collected in Greenland. Originally thought to be gadolinite, Allan gave some to Thomson and asked him to examine it in more detail. Based on Thomson's extensive number of chemical experiments, it was recognized to be a different species. This was taking place in a time when there was a lot of interest in rare-earth minerals.

Today we know that allanite is a rare-earth containing calcium hydroxyl silicate related to epidote and clinozoisite. Their chemical formulas are:

Allanite-(Ce): $CaCe(Al_2Fe^{2+})[Si_2O_7][SiO_4]O(OH)$
Epidote: $Ca_2(Al_2Fe^{3+})[Si_2O_7][SiO_4]O(OH)$
Clinozoisite: $Ca_2Al_3[Si_2O_7][SiO_4]O(OH)$

Other members of the allanite group have either lanthanum, neodymium, or yttrium at higher concentrations than cerium and have –(La), -(Nd) or –(Y), respectively rather than –(Ce) as part of their species names. Other chemical variations exist with elements such as manganese or magnesium. There are now 20 recognized members of the epidote group and 11 recognized members of the allanite group.

Locally, it is found in the San Gabriel Mountains at the Pacoima Canyon allanite pegmatite. There occurs black crystals, up to several inches in length, but usually broken into segments. It is mildly radioactive due to its thorium and uranium content, elements that often accompany the rare-earths. The host rock is mostly feldspar with some biotite, large zircons, and several less common species.

Allanite is also found locally in several other localities including Bautista Canyon, Riverside County, Machado Feldspar Deposit, Riverside County, and the Commercial Quarry, Crestmore, CA.

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MINUTES of the January 13, 2018 Banquet/Meeting

The 952nd meeting of the Mineralogical Society of Southern California was held on Saturday, January 13, 2018 at Coco Restaurant, Oak Tree Room. The Installation of Officers Banquet and Silent Auction is one of MSSC's annual events and primary fundraiser. The meeting was called to order by outgoing President, Ann Meister.

The evening began with Social Hour at 5:30 p.m., dinner at 6:30 p.m. and guest speaker Bill Besse at 7:30 p.m. The society's fundraiser, the Silent Auction, took place starting at 5:30 pm and during the evening until final bids were made and the auction was called closed at the end of the speaker's presentation.

The **Oath of Office** was administered to the new officers (*) by outgoing President, the new Past President and Historian, Ann Meister.

2018 Officers

Dr. George Rossman (*)	President
Renee Krause (*)	Vice President
Jim Kusely	Treasurer
Angela Guzman	Secretary
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Ann Meister	Past President

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Directors: 2016-2018	Directors: 2018-2019
Dr. Bruce Carter	Pat Caplette
Dr. Bob Housley	Pat Stevens
Leslie Ogg	

Committee Chairs

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Laura Davis	Hospitality
Cheryl Lopez	Membership
Al Wilkins	Pacific Micromount Conference

Rudy Lopez	Programs and Education
Linda Elsnau	Publicity
Leslie Ogg	Webmaster

Congratulations to all the officers! Ann Meister acknowledged everyone who gave her support through her terms of office. She welcomed new officers, Vice President Rene Krause and President Dr. George Rossman, Ph.D. Ann, sans gavel (we don't use one), turned the meeting over to new President, Dr. Rossman. A hardy round of applause was given to Ann in appreciation of her service.

George Rossman announced that as of now, there are 5,312 mineral species officially declared. George pointed out that attendee, Tony Kampf, Ph.D., Curator Emeritus, Natural History Museum, County of Los Angeles, has been very busy and may soon add to that number! Then, he went on to say that minerals bring us together, have many different aspects, that we mine them and appreciate them. From there, Dr. George graciously segued to tonight's presentation by introducing former MSSC President, Bill Besse.

Program

William W "Bill" Besse has been a mineral collector since the 1970's. He is a former President (twice) of MSSC and worked with owner Rock Currier as manager of Jewel Tunnel Imports. Bill likes to make maps of mineral localities and for collecting, in fact, he worked for Open Adit West in Tucson, Arizona. His educational background includes a BA in geography, and a MS in Geology from CalState L A. Aside from his "classroom" education and working at Jewel Tunnel, Bill has extensive field collecting experience. Tonight, he brings us a travel gem of a trip to China and Myanmar, albeit somewhat soggy (rainy).

Bill starts his presentation, *"A Not so Quick Trip through China ♦ and ♦ the 4th International Mindat Conference – Myanmar" [Remember: Mud is your friend]*, by telling us that he and a few friends including Joe and Mary Walker and Joseph intended to go to the 4th International Mindat Conference in Myanmar by way of Thailand, Those plans, however, were thwarted by a bomb in Thailand and then the death of the Thai king then everything was shut down. So instead, they opted to go to China a couple of weeks before going to the Mindat Conference.

Heading into another country is usually an interesting experience with a lot of airport hurry up and wait. Add that the monsoon season was over but the rains didn't know it, makes for a tiring, wet and muddy trip. But, onward to make the most of it!

After a 13-hour flight, they landed in Shanghai, China. They went to the Shanghai Natural History Museum. It has 5 floors, 4 of which are underground. The mineral museum in Shanghai has specimens but they all have prices on them! So, off they go to the next town, of course it is raining. There is a lot of idle construction everywhere; lots of tall buildings with cranes on top but no workers. Just about every hotel had gas masks – the air quality is poor. In fact, Bill's CPAP filter was dirty brown by the end of the trip.

Starting at the mineral mart, there were some dealers around. Many of the crystals were huge. The group was offered Azurite, turns out it was from Laos. Next, took a bullet train. Incidentally, the train travels up to 315k/hr, very fast. The trains slow to 200k/hr going through the station and the train cars are very comfortable!

In Chenzhou, through the alleys (hutongs), the minerals they saw next were also large; quartz crystals were 1 foot across, others 3 feet high and there were Calcites (8'across) and fluorites. These were specimens housed and viewed in a garage, on the floor. A scheelite crystal, about 3 inches, was selling for a price too high for purchase.

Guilin in Guangxi Province shows many of their smaller mines are closed and probably will not reopen. The area is preserving the land for agricultural purposes with few low buildings. The longest bridge in China was not open at the time but could have saved half a day's travel. It opened 3 days later! The mountainside revealed several mines on varying levels. The mines yield tungsten, lead zinc and other minerals. There was a monument dedicated to miners, and there, staring them in the face, was a photo of Eldon Smith (of *Rocksmith's*), a dedication to an American miner. The Li River in Guilin is close to a hill resembling a crown. The karst cave beneath it is called the Crown Cave. There were also giant wood carvings to behold.

Moving on, more hurry and wait at an airport; more villages and towns. Finally, we arrive at the Beijing Double Happiness Courtyard Hotel. This hotel is old but well preserved. It is close to Tiananmen Square, the Summer Palace (they hiked 6 miles that afternoon!), the Great Wall (saw this on the second day) and the China Stone Museum.

Off they went to Kunming, Myanmar, from Beijing and lost a day going into a different time zone but made it to the conference. Bill told some interesting stories about the customs, waiting and bathroom windows.

The conference actually started the day before and they took a night coach to Mandalay, visited the jade mart, gold mart where they wrap the gold in bamboo paper and pound the little wrapped bricks until they get gold foil. There is a Buddha temple and, of course, no shoes inside, nor are females allowed in the temple. The gold foil is used to wrap the Buddha and other parts of the temples. And, there was the world's largest book!

200 kilometers north of Mandalay is Mogok, (the Valley of Rubies) home to Rubyland. The ruby mines (Bill's presentation photo shows hillsides with bald areas that are actually mines!). The entrance is 3 levels of escalators up. There's a Buddha temple up there, too. And, it was raining.

The mines in Mogok yield spinel, graphite, goethite, corundum, corundum var. ruby, corundum var. sapphire, alexandrite, amethyst, danburite and other wonderful gems. Conference attendees visited Shwe Pyi Aye mine in Mogok. All of the minerals listed are mined at Shwe Pyi Aye. The peridot mine uses rubber buckets made from old tires to haul up material from the mine. The pulley system uses ropes that hold the buckets and sends them down 45ft. Workers below mine materials and load the buckets and send them back up. Above ground workers empty the buckets then send them back down for more. During the rains, it gets very muddy. The Chinese bought the mine about a year or so ago and they built a temple there. Back at the conference, the group listened to interesting speakers and shared adventures and experiences.

Going back, the group retraced to the gem mart near the ornate Kaba Aye Pagoda in Yangon (Rangoon), Myanmar. Back still to Shanghai for some sightseeing and meals. Finally flying back home to the USA to end the trip. All in all, the trip was jam packed with temples, museums, mines, minerals, gems and rain.

That was quite a trip Bill! Thank you for sharing your experiences with us, rain and all!

Thanks to Lisa and the crew at Coco's for another delicious meal and wonderful banquet experience. The Silent Auction was successful and the evening can't be beat for the great company and fun stories. The banquet ended at 9:00pm.

Respectfully submitted, Angie Guzman, Secretary

[Secretary's Note: Congratulations to the 2018 Officers, Directors, Chairs and members! I offer a special note of acknowledgement and thanks to Ann Meister for her years of service and loyalty to MSSC. Thanks, Annie!] Apologies in advance for any omissions or misspellings.

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List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	March 9, 2018	Walton Wright: Continental Drift/ Plate Tectonics
	April 13, 2018	Pete Goetz: American Opal Society
	May 11, 2018	To Be Announced
	June 8, 2018	The Webers
Board Meeting	March 25, 2018	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.

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Relation of The Crystal Structure of Some Carbon Compounds to Those of Graphite And Diamond. [1]

By Sir William H. Bragg, K.B.F., D.Sc., F.R.S. Quain Professor of Physics in University Collage, University of London (Abstract of lecture delivered March 21, 1922)

It must be our aim to correlate the external appearance of a crystal, and its physical properties also, with the arrangement of the atoms inside and the forces that join the atoms together. We might hope to gain so much knowledge on these points that, given a certain set of atoms, it would become possible to anticipate the design of their arrangement and to describe all the characteristics of the crystalline substance as consequences. The analysis of crystals by means of X-rays has given us a little help along this road, and we begin to see certain principles in broad outline.

© *irocks.com photo*

Diamond : C
Locality: Mirny Mine, Mirny, Sakha Republic, Eastern-Siberian Region, Russia 0.5 cm x 0.5 cm x 0.3 cm

In the first place, we now divide the force~ between atom and atom into three distinct classes. In the second place, we find that the distance between the centre of an atom to the centre of a neighbor is a definite quantity persisting from crystal to crystal. It may, however, have more than one value depending on the nature of the bonding between the atoms. To illustrate these statements we take a few examples. The diamond is an example of *cr3"stallization* in which the only bonding is the most powerful of the three kinds mentioned above. According to modern ideas the strength of the forces which bind the atoms together in this particular way is connected with a sharing of electrons. The carbon atom lacks four electrons to complete the second ' electron shell ', and it achieves its full complement by holding a pair of electrons in common with each of its four neighbors. Binding of this kind takes place in general between atoms which require only a small number of electrons to complete a shell. Whether or not electron-sharing correctly describes the process is not of immediate consequence. The kind of bonding which the name describes certainly exists, and the explanation given by the modern theory so far fits the facts very well. The whole of the diamond, no matter what its size, is really one molecule. Combination of this kind occurs in other crystals such as carborundum or silicon; and, in addition, is often tile basis of the formation of groups of atoms which enter into crystal formation as separate entities : for example , as in the case of the CO_3 of calcite, or the S_2 of pyrites, or the C_2 of calcium carbide.

© *irocks.com photo*

Graphite : C
Locality: Pargas, Southwestern Finland Region, Finland
3.9 cm x 1.5 cm x 0.9 cm

The second type of force is brought into existence when an atom which requires one or two electrons to complete its shell derives them from atoms of electro-positive character in which tile one or two electrons which form the commencement of a new shell are easily removed. Crystals of polar compounds are bound together in this way. The molecules are completely dissociated, each into positive and negative portions, and the rule of formation is that each ion is surrounded by ions of the other kind as neighbors. In rock-salt and isomorphous crystals each positive is surrounded by six neighbors and vice versa. In calcium fluoride the positive metal is surrounded by eight fluorine and each fluorine by four metal atoms. Another two to one arrangement is shown in ordinary ice, where each oxygen is surrounded by four hydrogens, and each hydrogen has two oxygens as neighbors. In the ruby, the aluminum has six oxygen, neighbors and the oxygen has four aluminum neighbors. It is true that in the ruby the two aluminum atoms appear to be in contact, but it would seem to be against their will : they are driven together by the mutual repulsion of oxygen atoms. In the crystal of senarmontite the arrangement is different. The antimony atoms of senarmontite are arranged in a face-centered lattice and

© *irocks.com photo*

Senarmontite : Sb_2O_3
Locality: Djebel Hammimat Mine, Ain Babouche, Ain Beida, Constantine Province, Algeria
0.8 cm x 0.6 cm x 0.6 cm

completely separated from each other. Of the eight small cubes into which the cubic lattice can be divided, six are occupied by oxygens. In the spinel crystals the divalent metal is surrounded by four oxygen neighbors and the trivalent by six. In all these polar cases the solid is completely dissociated.

We also find crystals in which two types of bonding exist at the same time. For example, in calcite the (30 s is tied together by means of electron-sharing, but as a whole it is an ion, and having borrowed two electrons from the calcium draws round it six calcium neighbors, just as the chlorine in rock-salt gathers six neighbors of sodium. In bismuth and antimony, whose structure was examined independently by James and Tunstall and by Ogg, the bismuth atoms are not equally distant, from all their neighbors. There is a puckered sheet of atoms parallel to the plane of cleavage in which the atoms are tied together, in all probability, by electron-sharing, and the distance between centre and centre is nearly 2.9 ~Å.U. But the distance from an atom in one layer to its nearest neighbor in the next layer is 3.3 and the binding forces are much weaker, as is shown by the position of the cleavage-plane. Perhaps this is a close parallel to the case of graphite in which layers of carbon atoms are joined, layer to layer, by comparatively weak forces, while in each layer the atoms are tied as tightly as in the diamond. The parallelism is strengthened by the fact that the expansion with heat along the axis is greater than in the perpendicular direction. The difference is very great in the case of graphite. Mr. Baekhurst has found a total expansion of 3 per cent. for a rise of 900 ° C.

© irocks.com photo

Bismuth : Bi, Molybdenite : MoS_2
Locality: Wolfram Camp, Dimbulah, Mareeba Shire, Queensland, Australia
6.2 cm x 5.4 cm x 3.6 cm

The third type of bonding is most clearly shown in crystals of organic substances. It has been found that in all probability the benzene single ring and naphthalene double rings persist in organic substances as definite structures having invariable size and form. This may be expected since the hexagonal ring is found to have survived the change from diamond to graphite and should, therefore, survive the further break-up of the graphite sheets into molecules founded of one or more rings. The dimensions of a ring can be given in ~Ångström units. The unit cell of an organic crystal can be determined by X-ray methods, and it becomes possible to fit together into the assigned space a molecular structure of which the rings are the basis. The structures are always very light in character and it is obvious that this must be so. The separate atom of carbon or even of hydrogen, assuming the usual values for size and weight, must have, so to speak, specific gravities very much greater than unity. If a structure such as that of naphthalene is to weigh little more than water, the atoms must be joined together in some very open design. But, while the atoms in the molecule are so tightly joined together that the molecule retains its shape, the forces that join one molecule to the next are weak. There is no electron-sharing, neither is there any electrical separation into ions. The forces may perhaps be classed as weak external fields due to uneven distribution of positive and negative electricities. They are exerted at rather large distances and are very local in character. One molecule attaches itself to the next at different points in a manner limited by the strictest geometrical considerations. It is due to all these facts taken together that there exists such a multiplicity of precise forms, although the ultimate constituents are atoms of carbon, oxygen, hydrogen, and very little besides. The weakness of the forces is shown by the softness of the materials and by the low temperatures at which they pass from solid to liquid and liquid to gas.

[1] Fuller details with diagrams are given in a Presidential Address to the Physical Society : Sir W. It. Bragg, ' The structure of organic crystals.' Prec. Phys. See., 192~ vo]. 84~ pp. 33-50.

Editor's Note: This article is available to us via the "Open Access Content in Mineralogical Magazine" from the ***The Mineralogical Society of Great Britain and Ireland*** *www.minersoc.org*

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Ride Share Listing

Can You Provide A Ride?
Would You Like Company On The Drive To Meetings?

We have heard from several of our members that they would like to ride-share with someone to the meetings. We will list the names, general location and either a phone number or an email address of anyone who would like to connect for a ride-share. If you would like to catch a ride or would like company for the trip, let me know at msscbulletin@earthlink.net and I'll put the information in this section of the bulletin. After that, any final arrangements made are up to you. Also, If you make a connection that works for you, let me know so that I can remove your information from the bulletin. The Editor

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

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February Featured Mineral: Fresnoite

Formula: $Ba_2Ti(Si_2O_7)O$
Crystal System: Tetragonal

Name: Named by John T. Alfors, Melvin C. Stinson, Robert A. Matthews and Adolf Pabst in 1965 for Fresno County that includes the type locality.

© irocks.com photo

Fresnoite : $Ba_2TiO(Si_2O_7)$, Analcime : $Na(AlSi_2O_6)\cdot H_2O$
Locality: Junnila Mine, New Idria District, Diablo Range, San Benito Co., California, USA
1.4 cm x 1.1 cm x 0.8 cm

© irocks.com photo

Fresnoite : $Ba_2TiO(Si_2O_7)$, Quartz : SiO_2
Locality: Junnila Mine, New Idria District, Diablo Range, San Benito Co., California, USA
1.9 cm x 1.7 cm x 0.4 cm

© irocks.com photo

Fresnoite : $Ba_2TiO(Si_2O_7)$, Analcime : $Na(AlSi_2O_6)\cdot H_2O$
Locality: Junnila Mine, New Idria District, Diablo Range, San Benito Co., California, USA
1.4 cm x 1.1 cm x 0.8 cm

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OTHER (FREE) THINGS TO DO...by Ann Meister

The **UCLA Meteorite Gallery** lecture is on Sunday, **February 11**. The speaker is UCLA Researcher Paul Warren. The title of his talk is: “Meteorites from the Moon”. Paul will discuss how impacts eject fragments from the Moon and the variety of paths they can follow before accreting to the Earth. He will talk about the different terrains on the Moon including mare basalts and anorthositic breccias from the highlands. He will compare the different kinds of knowledge gained from lunar meteorites and the samples returned by the Apollo astronauts. The Meteorite Gallery in Geology room 3697 is open with a docent present every Sunday from 1 till 4. The lecture, which is always on a Sunday afternoon at 2:30 pm, is in room 3656 near the Meteorite Gallery.

The **Watson Lecture** at Caltech’s Beckman Auditorium is on Wednesday, **February 14** at 8 PM. Michael H. Dickinson presents "Using the Brain of a Modern Fly to Reconstruct the Behaviors of an Ancient World."

The **Von Kármán Lecture** on Thursday/Friday* **February 22 and 23** is titled, “Looking Deep: The InSight Mission to Mars.” The InSight mission, scheduled to launch in May, 2018, will be the first NASA mission to observe the deep interior of Mars. Mars, Earth, Venus, and Mercury are as similar as they are different, and the view granted by our human and robotic eyes only scratches the surface. By sending instruments that can teach us about the interior of Mars, we learn about the history and evolution of all these familiar planets. The instruments InSight will bring to Elysium Planitia are conceptually simple, yet also sensitive, delicate, and complex. The spacecraft itself uses proven hardware from previous missions to Mars’ surface, but also features new activities crucial to the success of InSight science. Come dig deep into the workings of Earth’s next trip to the Red Planet. InSight (Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport) is a mission in NASA’s Discovery Program. *Thursday is at the Von Kármán Auditorium at JPL and Friday is at the Vosloh Forum at PCC. Start time is 7 PM.

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With Knowledge Comes Appreciation !

Calendar of Events:

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

FEBRUARY, 2018

February 16 - 25: INDIO, CA
San Gorgonio Mineral & Gem Society
Riverside County Fair & National Date Festival
82-503 Highway 111
Hours: 10 - 10 daily

MARCH

March 2 - 11, IMPERIAL, CA
Imperial Valley Gem & Mineral Society
California Mid-Winter Fair & Fiesta
200 East Second Street
Hours: Weekends noon - 10 pm;
Weekdays 4 pm - 10 pm
Website: www.ivgms.org Show Page

March 3 - 4: ARCADIA, CA
Monrovia Rockhounds
L. A. County Arboretum & Botanical Garden
301 North Baldwin Avenue
Hours: 9:00 - 4:30 daily
Website: www.moroks.com

March 3 - 4: TORRANCE, CA
South Bay Lapidary & Mineral Society
Ken Miller Recreation Center
3341 Torrance Blvd (entrance on Madrona)
Hours: Sat. 10 - 5; Sun. 10 - 4
Website: southbaylapidaryandmineralsociety.com
Show Page

March 3 - 4: VENTURA, CA
Ventura Gem & Mineral Society
Ventura County Fairgrounds
10 West Harbor Blvd.
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.vgms.org Show Page

March 9 - 11: VICTORVILLE, CA
Victorville Valley Gem & Mineral Society
Hwy 15 / Stoddard Wells Road
Hours: 9 - 5 daily
Website: www.vvgmc.org Show Page

March 10 - 11: 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

APRIL

April 21 - 22: PASO ROBLES, CA
Santa Lucia Rock Hounds
Paso Robles Event Center
2198 Riverside Ave.
Hours: Sat 10 - 5; Sun 10 - 4
Website: slrockhounds.org Show Page

April 21 - 22: THOUSAND OAKS, CA
Conejo Gem & Mineral Club
Borchard Park Community Center
190 Reino Road at Borchard Road
Hours: 10 - 5 Saturday; 10 - 4 Sunday
Website: www.cgamc.org

April 28 - 29: LANCASTER, CA
Antelope Valley Gem & Mineral Society
Lancaster High School
44701 - 32nd Street West
Hours: 10 - 5 daily
Website: www.avgem.weebly.com

2017 MSSC Officers:

OFFICERS		
President	George Rossman	*president@mineralsocal.org*
Vice President	Renee Kraus	*vicepresident@mineralsocal.org*
Secretary	Angie Guzman	*secretary@mineralsocal.org*
Treasurer	Jim Kusely	*treasurer@mineralsocal.org*
CFMS Director	Jo Anna Ritchey	
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2016--2018	Bob Housley	
2016--2018	Leslie Ogg	
2018-2019	Pat Caplette	
2018-2019	Pat Stevens	
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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.**

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

To:

With Knowledge Comes Appreciation

Your MSSC Bulletin Is Here!