Bulletin of the Mineralogical Society of Southern California

Volume 96 Number 10 –October, 2023

The 1,018th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

A ZOOM Meeting

October 13, 2023 at 7:30 P.M.

Program: **"New Mexico Fluorite"**
Presented by Virgil W. Lueth

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: "New Mexico Fluorite - Over 1 Billion Years of Mineralization That Continues Today": Presented by Virgil W. Lueth

The presentation explores the many fluorite occurrences in New Mexico (the fourth largest fluorspar producer in the USA). Many beautiful specimens are shown along with a discussion on how they formed along the Rio Grande Rift.

Virgil W. Lueth: is mineralogist *emeritus*, at the New Mexico Bureau of Geology and Mineral Resources a research and public service division of New Mexico Tech. Prior to his retirement in 2021, he held the position of Sr. Mineralogist/Economic Geologist and Director of the Mineral Museum at the Bureau where he has worked since 1994. He received his B.S. in geology at the University of Wisconsin - Eau Claire and graduate degrees (M.S. and Ph.D.) from the University of Texas at El Paso. Prior to arriving at the Bureau, he was professor of geology at Tarleton State University (Texas A&M System). He has served on the Board of Directors of the Society of Mineral Museum Professionals, New Mexico Geological Society, New Mexico Geological Society Foundation, and the Friends of Mineralogy. He is also adjunct curator at the New Mexico Museum of Natural History and Science and adjunct professor of geology at New Mexico Tech. He was the recipient of the Honorary Award from the Rocky Mountain Federation of Mineral Societies in 1996 for his service to the mineralogical community. He was also named an honorary member of the New Mexico Geological Society in 2005. Dr. Lueth has published over 80 articles in scientific journals, textbooks, and popular magazines, mainly in the fields of mineralogy, geochemistry, and economic geology. He has also overseen three iterations of the NMBGMR-NM Tech Mineral Museum and hosted the New Mexico Mineral Symposium annually in November. The hydrated molybdenum oxide mineral, virgilluethite, was recently named in his honor.

How to Join our ZOOM Meetings by Rudy Lopez

MSSC members are automatically included in the invite list each month.

For non MSSC Members who want to join this meeting. You must respond to our Programs chair, Rudy Lopez at programs@mineralsocal.org no later than the Thursday prior to the next scheduled meeting. Please include "*current month* ZOOM Meeting" in the subject line of your response. This response date will allow time for us to send you the information needed to participate in the ZOOM meeting and also will allow time to get everything organized.

****

From the Editor: Linda Elsnau.

Wow, it's almost Trick or Treat time again..My, how time flies. This also means we are back to MSSC Election time too. Please seriously conssider what position in MSSC's list of officers you think you might enjoy. This group can't survive without active member participation

****

From Our President, Angie Guzman

Great Picnic!

We've enjoyed our summer social, the annual Potluck and Picnic. It was a success: the Silent Auction brought in a good amount, there was even a little bidding war going on, all in good fun. The food was plentiful and tasty. A few youngsters attended and were kind enough to tell us about their interests in minerals. Grab bags were handed out to the young people and to some guests. It was great to see everyone in person! Thanks again to the Ad Hoc Committee for a wonderful event!

October

Opal and tourmaline are the birthstones for October. Each have endless color combinations and coloring characteristics. Opal has been the traditional gem as a birthstone for October. It has a reading of 6 on the Mohs

scale. Opals have shifting colors of rainbow hues known as "play of color;" intense "play of color" makes opal valuable. The most productive opal fields are found in Australia, however, they are also found in Ethiopia, Mexico, Brazil, Central Europe, Peru and the United States, as well as other countries. In Australia, black opal is found at a location known as Lightning Ridge. The heat is so intense there, the miners live underground. The sun bakes the ground and almost makes it impossible to work. Other Australian opal come from White Cliffs in New South Wales (white opal) and in South Australia in places like Andamooka and Coober Pedy. Boulder opal comes only from Queensland.

Tourmaline is one of the few crystals containing multiple colors. It is also the "newer" birthstone for October. It shows 7 to 7-1/2 on the Mohs scale. The colors in tourmaline are dazzling and the stone is said to inspire artistic expression. Whether or not that's true, the colors *are* magnificent. The most popular colors are pink and red "rubellites," green (chrome) tourmaline and, the neon green, blue to violet "Paraiba" tourmaline. Tourmaline is often mistaken for other gemstones. In fact, the crown jewels of Russia actually contain the "Caesar's Ruby" pendant, thought to be a ruby but is actually a red rubellite tourmaline. There was another mistaken gemstone in Brazil in the 1500's when tourmaline crystals were found among emeralds. But in the 1800's that changed when tourmaline was recognized as a mineral species. Tourmaline is found in Brazil, Afghanistan, Pakistan and many African nations.

In the United States' pegmatite districts of Southern California, large quantities of tourmaline were produced. From the Himalaya Mine in Mesa Grande district alone, over 120 ton of gem rubellite was sent to Empress Dowager Cixi of China between 1902 and 1910 to feed her obsession of the vibrant color. Cixi died in 1908 and shipments ceased finally in 1910. In the 1820's, Maine's Mount Mica in Paris produced a large quantity of tourmaline, but today, the Dunton Mine in Maine is the most prolific producer of the gem.

In Brazil 'recently' (1980's) from Minas Gerais, electric green, blue and violet tourmaline entered the gem market. Scientists found that these colors were caused by trace amounts of copper. Then, in the early 2000's, Paraiba tourmalines were discovered in Mozambique and Nigeria. Paraiba tourmalines have a very high value due to the vivid color, saturation and rarity as compared to the other tourmaline types.

Also in October: (12th) Columbus Day, (14th) The Annular Solar Eclipse. It may be possible to see the partial solar eclipse in California, but, if you're in New Mexico you can catch the International Balloon Fiesta at the same time in Albuquerque. At the end of the month (31st) goblins and ghosts will be out on All Hallow's Eve, commonly known as Halloween…"Trick or Treat."

Nominations and Election:

And, on October 13th… MSSC Officer and Director **nominations** will be opened, and noted. *All members are welcome to self-nominate or nominate another member for an office*. The nominee will be asked if they accept or decline their nomination. After all nominations are submitted, the session will be closed for October's meeting. This process will repeat during the November Membership Meeting. Once all nominations are in in November, MSSC will conduct the **election** of officers, including CFMS Director, and director chairs #1 and #2.

Don't be shy. You, too, can participate in the administration of our society. Don't have experience? Not to worry – you don't have to have experience. The only thing you need is the desire to serve a 1-year term as an Officer or a 2-year term as a director (#1 and (#2). So, when nominations are opened, **will you** volunteer to help keep our society functioning?

Remember, there is nothing like giving back to the organization that gives so much to each member! As a member, you can participate in field trips, enjoy mineral related presentations each and every month and are associated with people who have similar mineralogical interests. Here is a challenge: I would love to hear your voice during Nominations at our October 13, 2023 Membership Meeting. Will you do it? Thank you for supporting MSSC!

Field Trips – What are your suggestions?

I think it is Field Trip time now that the weather is cooling a bit. Contact Marek with your ideas. Our last "field trip" was a little different, we didn't break rocks or pick up crystals off the ground, but our outing to Walt's bookstore was absolutely fascinating and some of us did come home with treasures discovered there. Thanks Walt and thanks Marek! Check out this and prior field trips to on MSSC's website: www.mineralsocal.org

"Rarest Crystal on Earth": Taaffeite

I recently came across several articles about "The Rarest Crystal on Earth" and thought I'd share the information with you. This rare crystal was discovered by Richard Taaffe in October 1945. It seems that Taaffe was examining a collection of several unassuming crystals at a shop, a watch makers shop that just also happened to have pieces of jewelry (possibly there for repairs) and several minerals that the shopkeeper had on display. The stone Taaffe, 47, saw, and found as a faceted gem, the first of its kind, was mauve color and a bit small. That gem, known now as *taaffeite*, had apparently gone unnoticed for a very long time. In fact, the crystal had been mistaken as spinel. Notice, however, that the difference between the two is that taaffeite is double refractive whereas spinel is single refractive.

Richard Taaffe (1898-1967) was a gemologist from Dublin, Ireland. He sent the stone to B.W. Anderson at the Laboratory of London Chamber of Commerce for help with its identification. Anderson classified the gem as an intermediate mineral between spinel and chrysoberyl. The chemical formula for taaffeite is $BeMgAl_4O_8$. Nine years after it was discovered by Taaffe, in 1951 through chemical and X-ray analysis, there was official confirmation of the principal constituents of taaffeite: beryllium, magnesium and aluminum. Taaffeite is the first mineral to contain both beryllium and magnesium as *essential components*.

Taaffeite occurs in carbonate rocks alongside fluorite, mica, spinel and tourmaline and it is found in alluvial deposits in Sri Lanka and Tanzania. Lower grade taaffeite has been found in limestone sediments in China. The gem comes in a variety of colors: mauve, pink, lavender and peach (per BlueStreak Crystals), has 8-8.5 Mohs hardness and has a translucent quality allowing light to pass through it – embellishing the stone's beauty. It has a white streak, is vitreous and fractures conchoidal. In 2002, the International Mineralogical Association's (IMA) approved name for the gem is actually *magnesiotaaffeite-2N'2S*.

Price ranges for the rare taaffeite are from $800 per carat to as high as $20,000 per carat – depending on quality, color saturation and cut. Today, according to many sources[1], it is still one of the rarest gemstone minerals in the world. **There are only approximately 50 known samples worldwide.** Do you have one? If not, on-line seller Etsy has a beautifully cut 3.9 carat taaffeite listed at $17,000, most certainly a bargain!

[1]This article is a composite of consensus facts that were collected from the following on-line sources: AZ Animal, Wikipedia, Mindat and blog by E. Scassellati. Each source quoted the exact same facts regarding taaffeite. *END*

****

MINUTES of the September 8, 2023 ZOOM Meeting

Welcome: President Angela Guzman called the meeting to order at 7:33 p.m. and welcomed all to the 1,017th Meeting of the Mineralogical Society of Southern California. It was our 40th ZOOM meeting. There were 28 people present, including the speaker.

Guest: There were no guests present who wanted to identify themselves.

List of Minerals: As of July 2023, the IMA-CNMNC Master List of Minerals lists 5,955 approved minerals*. There is no update of approved minerals published from the beginning of last month to now. Per Tony Kampf, there are now 5957 minerals. [* Source: Pasero, et al. "The New IMA List of Minerals – A Work in Progress" (July 2023)]

President's Message:

Nominations for Officers and Directors will open during the October 2023 Membership meeting. Nominations will again be open at the November 2023 meeting. When all nominations are accepted/declined, the

nominations will be closed. Immediately following the closure of nominations, MSSC will conduct elections based on the nominations accepted.

President Guzman invited members to participate in the administration of the society by self-nominating for an Officer or Director position. The following seats will be open for nomination: President, Vice President, Treasurer, Secretary and CFMS Director. These seats are a 1-year term (2024). Also, the Director #1 and Director #2 seats will be open for nominations; these positions are a 2-year term (2024-2025). All these positions commence January 1, 2024.

She referred members to the By-Laws and Operating Rules and Regulations for a full description of duties. If you have any questions, please ask an officer or director for further information or help. (Refer to the Bulletin for e-mail addresses.)

Business:

Minutes to approve**:** August 11, 2023, membership meeting minutes as published in the September 2023 Bulletin. President Guzman asked for a motion to approve the minutes. The motion was made by Carolyn S. and seconded by David L. Corrections: Under Announcements, item 4 spelling should read Tony Kampf and directly following, the portion where Miko spoke of *impactite* glasses and breccia, (*impacted* should read *impactite).* other corrections, Marek C. was present at the Field trip to Nevada Books and Minerals, he was not at the meeting that night. No discussion. Hearing none, she called for the vote. The result was that the minutes, as corrected, were approved by a show of hands.

Announcements:

1. Field Trips (Marek): Marek was not present; David L. announced a Southern California Friends of Mineralogy Meeting at the Jurupa Mountain Discovery Center on October 21-22. Members will camp there with the "dinosaurs" on Saturday. There will be a field trip to Cascade Canyon on Sunday the 22nd for corundum, etc. Contact SCFM for information, you must be a member of SCFM to participate.
2. Picnic (Cheryl and Carolyn): Rudy gave a summary: Approximately 30 people attended, there was lots of tasty food. The silent auction and raffle were very popular: 36 different minerals were raffled. We had a few children and teens present. Caltech was happy with our clean up. Carolyn gave a brief financial report, she will have the complete break down and total profit by the October 1 board meeting.
3. Hats (Rudy): MSSC ball caps are on sale for $25 plus $7 for shipping. If you pay by PayPal, you need to add $2 to cover PayPal's fee. Contact Rudy if you want to buy a hat or shirt, programs@mineralsocal.org.
4. Other Announcements or Reports: (a) MSSC Board meeting will be at 1 p.m. on Sunday, October 1, 2023, via ZOOM. All are welcome. Please contact Rudy Lopez to get put on the invite list, (b) Program Chair, Rudy Lopez will step down at the end the year; Rudy's seat will be filled by Carolyn Seitz as of 1/1/24 and (c) Mojave Trails National Monument updated at Picnic by Gregor Losson, bottom line is that the following language is in effect: *"…We "Strongly Agree" that rock collecting be allowed in the Monument, and allowed under current collecting rules and regulations…"* This recommendation was made by the Desert Advisory Committee (DAC) to the Bureau of Land Management's MTNM Management Team. Please check MSSC's website for periodic updates and notices regarding MTNM. (d.) CFMS is collecting cancelled stamps, please send them to Angie. (e.) Rudy announced that we have been invited to participate in the Prehistoric OC program, he is looking for volunteers to help. It is on Saturday, October 14, 10 a.m. to 2 p.m. If you want to volunteer, contact Rudy ASAP so he can get you a parking permit. More details to follow in the bulletin.

Program: Rudy Lopez introduced tonight's speaker, Nathalie "Nat" Brandes talking about the famous silver mines of Kongsberg Norway.

She began by covering the basic geology of Norway, which is a long, thin mountainous country. The mountains were formed by the same events that built the Appalachians in the eastern US. We are talking about very old rocks (host rocks 1.6 BYA) with igneous intrusions. Then some metamorphism to produce gneiss and

amphibole. This is followed by more igneous intrusions forming granites, and then more metamorphism. These actions are what formed the ore bodies.

The ore deposits formed on the edges of gneiss. They are called five element deposits, due to them containing Co, Ni, As, Ag, and Bi. The host rock is Precambrian, and the ore is younger (265 MYA). It was formed by elevated heat flow in the Oslo rift.

The Kongsberg ore deposits are formed in black shale, when hot water (200-300ºC) flowed through the shale at 3-4 km deep, dissolving trace silver that was present. The shale has a region the miners call "Fahlbands" which are areas of sulfide minerals. The chemistry of these bands is what caused the silver to precipitate and create the famous Kongsberg silver wire. Other minerals in the ore veins were: acanthite, calcite, garnet, anthophyllite (type locality is nearby). Electrum (silver and gold together) was found in Kongsberg, the specimen she showed was collected around 1700. Also found were fluorite, native gold, pyrite, graphite, rapidcreekite, stellerite, and stephenite. She showed some beautiful specimens of native silver.

The Kongsberg silver was discovered by children tending sheep and goats in 1623. One of the children's fathers melted down the silver and tried to buy something, he was accused of stealing, until the children showed where the deposit was located. The town of Kongsberg was founded in 1624, on the River Lagen, near a waterfall, which they would need to run a stamp mill. The Norwegian king imported miners from Germany to run the mine. That's why many of the mines and roads in the area have German names.

Next, she reviewed the mining methods used in Kongsberg: the oldest is called firesetting. This method, used since the bronze age, involves setting a raging fire next to rocks to heat and weaken them. Then to further crack the hot rocks, cold water is poured upon them. By 1659 they were experimenting with black powder. In 1872, they used dynamite. In spite of the more modern methods, firesetting was used in Kongsberg until 1890. Trees were plentiful, so it was a very cost-effective way to mine the silver.

The mines would also fill with water, which was initially removed by hand pumps, and then replaced by pumps powered by waterwheels. Finally in the 1880s, steam and electrical power were used to drive the water pumps.

Kongsberg was the largest and richest mining operation in Norway. The Norwegian Mining Academy was established in 1757 to train Norwegians to be miners and mining engineers so that they did not have to import workers. By 1770, 4000 workers were employed in 78 silver mines. The workers had good conditions for miners in the 1700s! They were paid for travel to and from the mines, their children were schooled, medical care was free, and they had a workman's comp type of benefit for employees killed or injured on the job. But by 1805 many mines had closed, and the mining academy closed in 1814.

Some people continued to explore and dig deeper. In 1816 new ore zones were discovered, many mines reopened, and some new mines opened as well. Silver production peaked in 1915-1916 when 13 tons of silver was produced. Mining continued into the 1950s with the last silver ingot produced in 1958. Total estimated production from the 1600s to the 1950s was 1350 tons.

There is a Norwegian mining museum (Norsk Bergverksmuseum) that you can visit. Exhibits of specimens from Kongsberg, Norway and the rest of Scandinavia and historical artifacts are on display. Nat said the best part of the museum is the "vault," which contains cases full of silver specimens. There is a piece weighing about 100 lbs., there are lovely silver wire specimens, some 2 ft. long! There are also large silver crystals, silver growing with purple fluorite, and calcite on silver. You can go underground in the King's Mine (Kongens Gruve). You tour the mine on a train that travels underground, the car is a little box with 8 people per car, travelling at 50 mph! There are displays of mining equipment underground in the mine, as well as a large underground room with displays on mining history, this room was used to hide the treasures of Norway from the Nazis when they invaded Norway.

A short Q&A followed the presentation.

Last Words:

(a) MSSC Board Meeting on October 1, 2023, 1pm. All are welcome to join via ZOOM.

(b) The next Membership meeting is Friday, October 13, 2023. Guests are asked to contact Rudy Lopez to be put on the ZOOM invite list,

Adjournment: The president adjourned the meeting at 8:34 p.m.

Submitted by Leslie Ogg, MSSC Secretary

****

List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	**ZOOM** November 10, 2023	Scott Braley: "Herkimer Diamonds and Collecting Radioactive Minerals"
	ZOOM December 8, 2023	Evan Jones: Wulfenite
	ZOOM January 12, 2024	Denise Nelson: TBA
	ZOOM February 9, 2024	TBA
Board Meeting	**ZOOM** October 1, 2023	ZOOM at 1:00 PM
Field Trip	**TBA**	

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

The Ride Share Listing is being temporarily discontinued until such time as MSSC starts holding in-person meetings again.

****

MSSC HAS BEEN INVITED

Prehistoric Orange County
Saturday, October 14 10 a.m. to 2 p.m.
Ralph B. Clark Regional Park
8800 Rosecrans Ave.
Buena Park, CA 90621

OC Parks is excited to announce that our annual Prehistoric OC event will return to Ralph B. Clark Regional Park on October 14, 2023! The Prehistoric OC festival presents Orange County's rich heritage of natural history, prehistoric animals and plants, and Native American culture to the community.

The event features several activities including archaeological and paleontological demonstrations and exhibits, educational crafts, and firsthand activities.

Join OC Parks for Prehistoric OC, a free event inviting families to explore the natural and cultural history of Orange County. Enjoy fun and educational activities presented by OC Parks archaeologists and paleontologists along with exhibitors from local cultural, paleontological, and geological organizations. Prehistoric OC coincides with Indigenous Peoples'

Join The MSSC Booth

As usual, we are looking for MSSC volunteers to help out at the MSSC Booth. If you are available and would like to join us, please contact Rudy Lopez at rclopez002@verizon.net

****

OTHER FREE THINGS TO DO...by Ann Meister

The **Watson Lecture** is on Wednesday, **October 18** at 7:30 PM at Caltech's Beckman Auditorium. (I am not sure if there will be a livestream at Caltech Watson Lecture Series - YouTube.) The speaker is Hosea Nelson, Professor of Chemistry, Caltech. The title is **"**The Chemistry of Everything: Uncovering New Treatments in the Natural World **."** Where do medical drugs come from? That is a great question—one that often conjures visions of both scientists in the lab and executives in the boardrooms of multibillion-dollar corporations. While both of these images may be accurate, we often overlook the most interesting place where disease treatments arise in nature. In fact, more than half of on-market drugs are derived from living organisms. In this talk, Hosea Nelson

(PhD '13), professor of chemistry, will discuss his research group's effort to develop new platforms for molecular discovery using advanced methods in electron microscopy. *Find more past Watson Lectures on* Caltech's YouTube channel.

The **UCLA Meteorite Gallery** is open. Check the website for hours. The monthly lecture will be presented via Zoom on Sunday, **October 15** at 2:30 PM. The speaker is Professor Adrian Brearley of the University of New Mexico. The title is not yet available. To join via Zoom, click here. If clicking the link does not work, please open your zoom app and enter the meeting ID: 983 0252 9304. Then click "join meeting in progress" (there is no password). If you need further instructions on how to join our meeting via Zoom, click here or contact Kevin McKeegan at mckeegan@epss.ucla.edu. This meeting is only accessible through the desktop and mobile client. Visit the website and check on events and videos and other neat things about meteorites, go to https://meteorites.ucla.edu

The **Von Kármán Lecture** is on Thursday, **October ??** at 7:00 PM. Available live on YouTube at NASA Jet Propulsion Laboratory - YouTube. Date, speaker, and topic were not available at time of publication. Check website for information and past lectures Lecture Series (nasa.gov).

****

Calendar of Events:

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

October 7-8, 2023 – Signal Hill, CA
Long Beach Mineral & Gem Society
Signal Hill Library, 1800 E. Hill Street,
Signal Hill, CA 90755
Hours: Sat10 AM – 5 PM, Sun 10 AM = 4 PM
Website: http://www.facebook.com/LBMGS

October 8, 2023 – Fallbrook, CA
Fallbrook Gem and Mineral Society
123 W. Alvarado St. (show on street & in parking lot),
Fallbrook CA 92028
Hours: 9 AM – 4 PM
Website: http://www.fgms.org

October 21, 2023 – West Hills, CA
Woodland Hills Rock Chippers
First United Methodist Church, 22700 Sherman Way, West Hills, CA 91307
Twenty Fourth Annual Gem Show
Hours: 10 AM – 5 PM
Website: www.rockchppers.org\

October 28-29, 2023 – San Diego, CA
San Diego Mineral & Gem Society
Liberty Station Conference Center/
Point Loma Nazarene University,
2660 Lanir, San Diego, CA 92106
Hours: Sat 10 AM – 5 PM, Sun 10 AM – 4 PM
Website: http://SDMG.org

With Knowledge Comes Appreciation !

October 28-29, 2023 – Orange, CA
American Opal Society
Velvet Rose Event Center, 300 S. Flower St.,
Orange, CA 92868
Hours: Sat 10 AM – 6 PM, Sun 10 AM- 5 PM
Website: http://opalsociety.org

November 4, 2023 – Lake Elsinore, CA
Lake Elsinore Gem & Mineral Society
32097 Corydon Rd., Lake Elsinore, CA 92530
Hours: 10 AM – 4 PM
Rock and Craft Show

November 4-5, 2023, Ridgecrest. CA
Indian Wells Gem & Mineral Society
Desert Empire Fairgrounds, 520 S. Richmond Rd.,
Ridgecrest, CA 93555
Indian Wells Gem & Mineral 67th Gem & Mineral Show. Located in Ridgecrest, CA.. Field trip on Sunday, November 5th at 9:30 AM (depending on road conditions). Free Admission and Free Parking.

November 18-19, 2023 – Lakeside, CA
El Cajon Valley Rock Round Up!
El Cajon Valley Gem and Mineral Society
12584 Mapleview St., Lakeside, CA 92040
Hours: Sat 9 AM – 5 PM, Sun 9 AM – 4 PM
Website: http://ecvgms.org

December 2-3, 2023 – Barstow, CA
Mojave Desert Gem and Mineral Society
Cora Harper Community/Fitness Center
841 Barstow Road, Barstow, CA 92311
Hours: Saturday and Sunday 10 am – 5 pm
Website: http://www.mdgms.net

MSSC Advertisement Policy: Mineral-related ads are allowable in the MSSC bulletin. Below is the price per month			
	Business Card	$5.00	
	1/3 page	$10.00	
	1/2 page	$20.00	
	Full Page	$35.00	
In addition, any advertiser who purchases 12 months of space in advance will receive a discount of 12 months for the price of 10 months. The copy for the ads should be mailed to the editor at bulletin@mineralsocal.org and the payment should be sent to the **MSSC Treasurer 13781 Alderwood Lane, #22-J, Seal Beach, CA 90740**			

****

Mineralogical Vocabulary

Descriptions are as defined in Manual of Mineralogy, 15th edition, by: Dana & Hurlbut; published in 1941.

irocks.com photo

Reticulated
Latticelike groups of slender crystals

Cerussite :
$PbCO_3$
Locality: Nakhlak Mine (Nekhlak Mine), Madan-e Nakhlak (Ma'dan-e-Nahlak), Anarak District, Nain County (Nayin County), Esfahan Province (Isfahan Province; Aspadana Province), Iran
2.7 x 2.3 x 1.7 cm

irocks.com photo

Divergent or Radiated
Radiating crystals groups, where the crystals all seem to terminate at a central point.

Stibnite :
Sb_2S_3
Locality: Wuning Mine (Wuling Mine; Qingjiang Mine), Qingjiang, Wuning Co., Jiujiang Prefecture, Jiangxi Province, China
15.2 x 5.5 x 3.5 cm

2023 MSSC Officers:

OFFICERS		
President	Angie Guzman	*president@mineralsocal.org*
Vice President	Cheryl Lopez	*vicepresident@mineralsocal.org*
Secretary	Leslie Ogg	*secretary@mineralsocal.org*
Treasurer	Carolyn Seitz	*treasurer@mineralsocal.org*
CFMS Director	Angie Guzman	
Past President	George Rossman	
DIRECTORS		
2022-2023	Pat Caplette	
2022-2023	Ahni Dodge	
2023--2024	Simona Cianciulli	
2023--2024	David Lesperance	
2023--2024	Pat Stevens	
COMMITTEE CHAIRS		
Bulletin Editor	Linda Elsnau	*bulletin@mineralsocal.org*
Field Trip	Marek Chorazewicz	
Historian	Ann Meister	
Hospitality	Laura Davis	
Membership	Cheryl Lopez	*membership@mineralsocal.org*
Micro Mount Conf. Chair	Al Wilkins	
Program and Education	Rudy Lopez	*programs@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. We are a scientific non-profit organization that actively supports those endeavors through public outreach, field study and related programs. 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. However, due to current health considerations, MSSC meetings are held via ZOOM conferencing until further notice**.** 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 Fallbrook Mineral Museum during the last weekend of January.

Annual Membership dues for the MSSC are $30.00 for an individual membership, $40.00 for a family membership. Bulletins are delivered by email, there is an additional annual fee if you prefer paper bulletins mailed to your address. The Society's contact information:

Mineralogical Society of Southern California
13781 Alderwood Lane, #22-J, Seal Beach, CA 90740
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!