



Bulletin of the Mineralogical Society of Southern California

Volume 96 Number 2 –February, 2023

The 1,010th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

A ZOOM Meeting

February 17th, 2023 at 7:30 P.M.

Note the special 3rd week meeting date!

Program: Exploring Crustal Deformation with Mineral Magnetism”

Presented by: Leyla Namazie

In this Issue:

<i>TITLE</i>	<i>Page</i>
Program: Exploring Crustal Deformation with Mineral Magnetism” Presented by: Leyla Namazie	2
From the Editor: Linda Elsnau	2
From Our President; Angela Guzman	2
Important Reminder	3
Minutes of the January 13, 2023 Meeting	3
List of Upcoming MSSC Events	9
Minutes of the January 15, 2023 Board Meeting	9
Other Free Things To Do...by Ann Meister	11
Calendar of Events	12
2023 Officers	13
About MSSC	13

Remember: If you change your email or street address, you must let the MSSC Editor and Membership Chair know or we cannot guarantee receipt of future Bulletins

About the Program: “Exploring Crustal Deformation With Mineral Magnetism”

Presented by: Leyla Namazie

Magnetism is a fundamental physical property of all minerals, but ferromagnetism, in particular, is displayed by only a select few. This form of magnetism is expressed as a competition of energies within the crystal lattice and has been explored extensively for its application to structural geology and geodynamics, a practice known as Paleomagnetism. In this presentation we will explore the various types of ferromagnetic minerals and their role in solving major problems in earth science. There will be special focus on the Eastern Klamath terrane, one of over a dozen accreted bodies that make up the North American Cordillera. Within this terrane, variable paleomagnetic anomalies have complicated models of Paleozoic tectonism and paleogeography. I will present the results of an ongoing project that uses rock magnetic data to constrain geometric models of crustal deformation and resolve a long-standing debate on the accretionary history of the Klamath Superterrane.

Leyla Namazie is a recent graduate from UC Berkeley, with a Bachelor's Degree in Geophysics. Her research interests lie in the applications of Paleomagnetism to regional tectonism and patterns of deformation. In previous work, she has helped use magnetic fabrics to characterize mid ocean ridge heat flow processes and inform on the accretionary mechanisms of lower oceanic gabbro layers. She has completed Paleomagnetism projects with the Berkeley Geochronology Center at U.C. Berkeley, the Scripps Institution of Oceanography at U.C. San Diego, and the University of Minnesota's Institute for Rock Magnetism. Leyla has received accolades for her performance in the classroom and in the field and is currently finishing an internship as a field geologist with the U.S. Forest Service in the Inyo National Forest, California.

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 will allow time to get everything organized.

From the Editor: Linda Elsnau.

Welcome to February. Happy Valentines Day, Groundhog Day, President's Day and any other day in February that is special to you. Please note that there has been a change in speakers for our meeting this month and the meeting is on the Third Friday of the month to work around the Tucson show that happens at the beginning of the month. Looks like Rudy found us a really interesting program for this month.

Don't forget to send in your Membership renewal by the Feb. 17th deadline to have your information appear in the 2023 MSSC Roster.

Some Words from Our President, Angela Guzman

I am deeply honored and humbled to accept the position of President of the Mineralogical Society of Southern California. I come with different talents and skills than those of my predecessors. I bring a lot of enthusiasm. I am committed to do my best to lead MSSC.

In this regard, my duties are to guide MSSC's administration, keep a balance within our society to move forward and achieve the goals of the society as set by the founders: 1) to support mineralogical interests, 2) mineralogical education, 3) have an environment where like-minded people meet and 4) exchange information. These are achieved through outreach events, speakers who share their knowledge and experiences with us, organized field trips, contributed articles in the Bulletin and the website, to name a few.

Since the COVID pandemic, our meeting procedures have changed. We've stepped onto a newer technological stage. In January 2023, we had our 32nd Membership meeting via the ZOOM conferencing platform! Our meetings are open to a global audience.

As in any organization, it's the people who are important. Among MSSC members are seasoned and experienced individuals who I can turn to for advice. Thank you in advance for your expertise and time. To our other members, I look to you to help me stay focused and on course.

Lack of member involvement is a concern in many organizations and MSSC is no exception. I sincerely hope we can garner enthusiasm and resolve that issue in the coming year. Truth be told, there is nothing like volunteering. Being of service to others is a tremendously gratifying experience. It's great to be a member, but it is *awesome* to volunteer - knowing you made a difference in our organization. Please tell me how you want to participate.

I'm rolling up my shirt sleeves... Are you ready? Onward!

Here's some thought-provoking fun:

(1) It is naturally occurring, has crystalline solids, was formed in a geological process, has elements or compounds, is homogenous and is characterized by well-defined composition that can be described as a formula. What is it?

(2) What is a werewolf's favorite mineral?

Answers: (1) a Mineral, (2) Howlite

Important Reminder

It is time to renew your MSSC membership. Please renew by **Feb. 17, 2023 to continue to receive your MSSC Bulletins, Zoom invites, and be listed in the MSSC 2023 Roster.**

MINUTES of the January 13th, 2023 ZOOM Meeting

Call to Order (Dr. Rossman, President):

President Dr. George Rossman, Ph.D. called the meeting to order at 7:33 p.m. It was MSSC's 1,009th Membership Meeting and 32nd via ZOOM conferencing.

Message from the President (Dr. George Rossman):

Dr. Rossman gave a few brief statements about his service over these past years as President. He said he was happy to perform his duties and very much enjoyed it. He mentioned his thoughts about the turnover to new people and their participation. George said his academic approach to leadership and presentations is, after all, who he is as a mineralogist who writes about and discusses minerals – emphasis on minerals.

Unlike other societies in California that primarily focus on lapidary, rock hunting or gems, a major focus of our society has actually been on the minerals themselves. Early on, when he first attended MSSC at Eaton Canyon Nature Center, it was common to have an audience of 50 plus, but over time, increases in traffic congestion caused that number to diminish. Now, thankfully, our ZOOM format enables expansion of our audience, even internationally. Dr. Rossman thanked Caltech, in particular, for providing the Internet and their ZOOM for our earlier meetings.

To remain healthy, our society needs many people to participate, we need members to participate in the governance and activities of our society. We need to encourage new and younger people to join. He said he thinks our revitalized field collecting activities may well help very much with this. He thanked Angie Guzman

for being willing to take over the duty as new President and expects she will bring new perspectives and help keep the Mineralogical Society of Southern California the longest running mineralogical society west of the Mississippi.

Dr. Rossman reports that there are 5,865 approved mineral species as per the International Mineralogical Association, the IMA. When he started as President in 2018, there were 5,327, that's a bit more than 100 new minerals per year being announced.

MSSC members and local people have been a very significant contribution to the growth of new minerals. Tony Kampf, here tonight, in particular, is one of the outstanding people in the world describing, characterizing and publishing new minerals. Chi Ma at Caltech has been very active, particularly in meteoric minerals, the microscopic primordial condensates from outer space. Rossman himself and Dr. Bob Housley have been relevantly important in discovery or description and characterization of new minerals. Some of our previous members have minerals named after them, for example, Devitoite (Fred DeVito), Billwiseite (Bill Wise), Desautelsite (Paul Desautels). We have a vibrant Society; indeed, we want to keep it going.

Dr Rossman asked any guests to introduce themselves. Maggie Zickrick, Angie's sister, lives in Southern Oregon. Beth Heesacker said she is from Northern Oregon.

Business – Minutes:

Dr. Rossman asked for corrections or additions to the December 2022 Minutes posted in the January 2023 Bulletin. There were none. He asked for a show of hands to approve the Minutes as written. The approval was unanimous. He asked for any objections and seeing none declared the Minutes approved.

Announcements and Reports

Board Meeting: Dr. Rossman announced that there is a MSSC Board Meeting on Sunday, January 15th, at 1pm via ZOOM. If you have something you want the Board to consider, please let one of the officers or board members know.

Field Trip: Marek Chorazewicz reported from Barstow about the Lavic Field collecting trip tomorrow, Saturday, January 14th. Collection target is jasper.

Treasurer's Report (Carolyn Seitz)

Carolyn gave the status on the financial health of the society with reports. We showed we spent more than we generated, and this was due to lack of fund-raising activities due to another year of COVID repercussions. Hopefully this year's PMC may fill our coffers.

Pacific Micromount Conference (Wilkins, Housley)

Dr Bob Housley said registrations are going through Al Wilkins. Bob sent all the normal notifications and announcements about the January 27, 28, 2023 event in Fallbrook have gone out. According to Al, there will be a historically large amount of giveaway materials which will make it an attractive conference. There was a question about the field trip. Marek said the field trip will be Sunday, Jan 29th, with meet up in Barstow. Dr. Rossman reminded members to check the MSSC website for information.

Programs/Speakers (Rudy Lopez)

Rudy announced that Paolo Sanchez, Caltech doctorate candidate, will be our speaker in February. In the succeeding months Jurupa Valley will present dinosaurs, we'll be going back to Mars and others. We have 3 openings, if anybody has speakers, or if Rudy missed someone that you sent him, please e-mail him. E-mail requests have gone out but not everyone responds, some say it's too far in advance, etc. We really enjoy Dr. Rossman's presentations, but we can't count on them all the time.

Installation of newly elected Officers and Directors (Ann Meister)

Ann said it is her honor to install the Officers and Directors, having been a part of this society for many, many years and that she really appreciates the opportunity. Ann announced the new Officers and Directors, term starting 2023:

Directors (two-year term 2023-2024)

Simona Cianciulli, David Lesperance and Patrick Stevens

Officers (one-year term, 2023)

Leslie Ogg, Secretary; Carolyn Seitz, Treasurer; Cheryl Lopez, Vice President and Angela Guzman, President and CFMS Director.

Ann Meister administered the formal installation, each Officer and Director with raised right hand promising to abide by MSSC's By-Laws and Operating Rules and Regulations, as well as any applicable State and Federal laws. After the installation, there were congratulations all around for the new Officers and Directors.

Dr. Rossman's 2nd to last Official Act – Dr. Rossman turned the meeting over to Rudy to introduce our speaker.

Rudy wanted to say a few words: “George, we’re gonna miss you. You did a fantastic job and, I’m gonna call on you if I need you. Okay? But you know what? Thank You.” Several “Thank You, George” were voiced from the audience. Indeed, Thank You!

Program

Rudy Lopez says that usually she would be in New England, but tonight our snowbird, Denise Nelson, comes to us from San Diego. Denise is a graduate GIA gemologist and an appraiser. She’s a world traveler who has attended trade shows, visited mines and collected treasures from Brazil, Thailand, Malaysia, China, Japan, Germany and many other interesting places. Denise designs and crafts fine jewelry. We’ve had the pleasure of Denise’s great presentations in the past and we welcome her back. Her presentation this evening will tell of the *Secrets of Gem “Enhancements”*.

Denise says there are government regulations regarding enhancements but that she won’t go into that aspect during this presentation. She mentions that enhancements are an issue for appraisers. Some enhancements have developed so well that it could be a difficult task to appraise gemstones without tools of the trade at the ready, but that is not always possible.

She starts her visual presentation with a photo of gemstones in their basic form. A photo Denise took at a Tucson Show is of a gorgeous cluster of emeralds, in their basic form, on a matrix of a dark material. About the photo, Denise says some gemstones come out of the earth looking quite beautiful. The color is good and while these may not be very gemmy, the rough material is stunning to look at. She mentions that she’s travelled with Tony Kampf to Brazilian mines, has appreciated the time spent with him and says it made a lot of her talks possible. Thanks, Tony!

Enhancements were actually known thousands of years ago, hundreds of years ago, and, depended on technology as it developed, i.e., In King Tutankhamen (1550 BC,) burial chamber, on his burial mask, was found imitation lapis and turquoise that was actually colored glass. She tells of Pliny the Elder, Roman Scholar (1st Century AD), who used early enhancements on gems, such as, foil backed gems, heated gems, thin coats of paint, oils and dyes were all used. Next, Denise shows a listed history of gem treatments from 1850 to 2020, including (1850) garnet-glass *doublet*, (1868) thermoplastic celluloid, (1877) synthesis of ruby and sapphire, (1893) culturing of pearls, (1909) change of coloring, (1980) laser cuts and irradiation, (2000) deep diffusion and (2020) coatings, hi-tech chemicals + ???

When going to actual mining locales, all of a sudden you realize enhancements start at a very basic level.

Enhancements, like cutting a gemstone, close to where they’re mined, some called an *old mine cut*.

Interestingly, it only takes a minimum amount of shaping of the stone to be brought to market. Denise showed a broach she made that shows a rich color from a not very finely cut emerald and another one of citrine from Brazil.

Why enhance? One reason is that it lends marketability for designers who make jewelry, and in turn, these drive the gem market. Modern trends cater to the industry with colors that are unusual or new – happens every year. Go to Tucson, you will see new trends and new treatments because design houses are asking for new things.

Pearls (Denise shows a photo), fresh water pearls are pink, a natural color for them. You will, however, see green ones that have been color treated. They’re fashionable. Gemstones with very popular color combinations

that are unusual encourage designers to find gemstones that go with new designs. That's a selling point. Nature provides subtle colors, often, but our eyes want brightness on very clear color combinations and, of course, exquisite cuts.

With regard to pearls, Denise says that if pearls are dyed, there must be disclosure. She shows a collection of South Seas pearls, different shades, darks from Tahiti (36 different shades), golden, silver, pinks, whites and there are even some "barrel" pearls that are coated with a proprietary substance. Denise shows photos from her travels to Japan, where at Isa Bay, the first cultured pearl farm was established by Kokichi Mikimoto over 100 years ago. Cultured pearls come out of the water with a yellowish or greyish tone and some are even spotted. Very few of the aqua cultured pearls come out white. Most of them are bleached, but care must be taken not to over bleach otherwise the pearl will end up chalky and may even be unsalvageable. The range of color in pearls is quite large: pink, mauve, white, golden, grey, black, silver and so on. Well, how do you tell if your pearls are "enhanced"? Look at the drill hole, if it has a black (or other color) layer inside, your pearl was enhanced.

Are your pearls real or fake? Or are they natural, man-made or natural and enhanced? Watch out for deceptive advertising in newspapers and magazines. Many of them cater to older people. One of Denise's favorite warnings is *buyer beware!* She shows us an article advertising for the Australian giant golden pearls - they are not natural but man-made.

Natural gem material which has not received an enhancement using dye, heat or other treatment is therefore a natural color and natural material. There are, however, acceptable procedures for certain gemstones. They are faceting, cutting, drilling, polishing, carving, and oiling. For instance, a piece of jade that has been carved received only one kind of enhancement, carving, and that is acceptable. Denise shows a photo of a wonderfully carved jade versus treated jade.

Denise talks about garnet and tourmaline. A garnet she showed is from a mine she visited at the same time as with Tony Kampf, the Navegadora Mine in Minas Gerais, Brazil. The garnet is natural color. [TIDBIT: Another method to identify gemstones is knowing what they look like coming out of the ground and what they should look like made into jewelry.] Tourmaline has elongated beautiful natural crystal rods. It's wonderful rod shape can easily be crafted using minimum enhancement. They can be cut and drilled to fashion beautiful designs whether with the natural crystal rods, or can be fashioned into cabochon or other shapes. The photos she shows is of tourmalines that have not been enhanced. This tourmaline setting has natural diamonds. It is a stunning piece... Wow!

Soft or non-durable material tends to not be enhanced. Opal is an example. They are, however, oftentimes backed with onyx doublets, even triplets to lend stability to them. They are rarely color enhanced other than being chemically treated with "sugar treatment" that tends to make them look black.

Rarer gemstones are rarely enhanced. These include hiddenite, brazilianite and eucrase. Usually, they are unstable in some way and may be too soft to be worn in jewelry. Beryl's are fun but Denise said she was looking for aquamarine while in Brazil. She saw a green beryl, but when it's heated, it changes to a more blueish tone that is highly marketable.

Also, some enhancements actually deplete, eradicate, make inclusions disappear; that may actually be important to the gemstone and add interest. Quartz druzy takes a minimalist approach because what needs to be done is cutting it out of the natural matrix, polishing and shaping it then it's done. Obsidian, interestingly, may show many different layers of color when it is carved. [Secy Note: Obsidian colors range deep black to blackish green.]

Melo and Conch pearls are extremely rare and very expensive. Denise says that no treatments are ever done to anything that is rare and exquisite. As time has gone on, more and more beautiful colors in pearls that are guaranteed to not have been enhanced, are appearing. Denise talks about **pearl embellishments** which include faceted pearls, gem-studded pearls (what a sight to see!) and carved "Galatea" pearls. So, carved Galatea pearls are done by hand using a trademark procedure. These are relatively new, but the procedure is fragile and may result in loss of fine pearls through human error.

She talks about **synthetics** which is anything a laboratory created that mimics the natural gem in chemical make-up and appearance. It's natural vs synthetic. For example, there is corundum versus synthetic corundum (late 1800's-early 1900's); emeralds versus Chatham emeralds (75 years ago); ruby versus ramura ruby (1960); diamond versus Gemesis diamond (GE made synthetic diamonds in 1954, Gemesis Corp. synthetic yellow diamonds 2.5-3.5ct in 1990's); quartz versus man-made quartz (\pm 1959) and alexandrite (very rare) versus synthetic alexandrite (\pm 1964).

Imitations are anything which appears to be a gem material but is a non-gem substance. These include glass, plastic, polymer, metal. They simulate the real deal. Some imitations are dyed, have uniform color, have bubbles and have no inclusions and are, well, too perfect. Then there is Ivory. It has many substitutes on the market such as plastics and polymers, foam, horn or antler material. All are made to look like the controversial ivory. And other plastic or polymer imitations are amber and pearls. There are no inclusions or imperfections, color is too uniform and they just don't "feel" right.

Simulants and Substitutes are any material (natural or otherwise) used in place of a more valuable gem. Examples of these include bone instead of ivory, Mother of Pearl instead of pearl, cubic zirconium instead of diamond and even lesser-known gems such as 1908 synthetic spinel replacement(s).

Denise warns us: buyer beware. If something is supposed to cost \$1,000 but you then see the same thing for \$100, you should know something is not sitting right! She shows a few pictures: mixed pearls of different varieties and beads of coral "stretched" with pieces of carnelian.

Common Enhancements, a natural gem that has been color enhanced or had other treatment for stability, durability or appearance. These include (a) polymer filling for Mabe pearls, (b) oiling emeralds, (c) heating aquamarine, tanzanite citrine and amber, (d) bleaching and light dyeing of pearls, (e) paraffin filler to stabilize turquoise, malachite, lapis and other porous gemstones and (f) waxing, dyeing, heating, polymer filling of jade. Here Denise shows photos of Mabe pearls with stability treatment on backside of the pearl (a bit bumpy), and, after some bleaching, how the now white pearls are sorted then strung. Other photos she shows include the Belmont Mine in Brazil performing an approved procedure for emeralds, oiling, seemingly right out of the adit!

Amethyst, when heated, turns into citrine. You've seen those huge amethysts with citrine inside – the kiln must be huge, as well, to heat that amethyst. In the southern Brazilian amethyst mines, the geode is drilled with a hole, a camera is inserted in the hole to see where the beautiful crystals are located inside the geode. They are natural color, at the time. To see natural color amethyst, you need to go the country of origin or head to Tucson shows in February. But, when the amethyst is heated in a kiln, the result is beautiful citrine. Denise shows a photo of the "works" at the mine. The process (to keep the kiln hot or to create some friction) is not as modern as you'd think; the old-fashioned way is using a bicycle wheel, a chain or some belt to drive the wheel. This is probably how it was done years ago and is still done today.

Let's talk about a favorite, sapphire. It's a beautiful natural blue stone that can be enhanced. Corn flower blue is best! And zoisite, when heated becomes this beautiful purple tanzanite. Amber, when heated, includes tiny circular fractures. The egg yolk and clear Baltic amber are so pretty to look at and when heated, the amber sparkles and becomes a more desirable item to sell.

Dramatic Enhancements are natural gems that are changed dramatically in appearance by: (a) foil-backing (quartz and diamonds), (b) doublets and triplets (opal, quartz, garnet), (c) fillers (diamond, emerald, ruby), (d) reconstitution or reconstruction (amber, turquoise) and (e) sugar curing of opal. Denise describes the procedures for this type of enhancements. Fascinating are the doublets and triplets, gemstones with glued backing and even double backing to make them appear more appealing than they would be on their own. You can detect the layers by looking at a side view of the gemstone.

Other dramatic enhancements include *irradiation* of diamonds, topaz and chrysoberyl. The radiation changes the color of the gemstone. Denise showed pictures of natural diamonds then irradiated diamonds. It's difficult for appraisers to detect yellow diamonds that have not been enhanced. Then, she showed blue topaz and coral which had been enhanced and a stone with diffusion treatment of corundum (sapphire). Diffusion treatment

became a big issue because there was no disclosure. She showed a variety of examples of dramatic enhancements – wow...

Misleading Terminology is just that, misleading. Some examples are “Japanese” amethyst, citrine, peridot or “Angel Skin Mother of Pearl, South Sea” used in connection with plastics, glass and manufactured items. Others are “Paraib, Amethysta, Citronell”, Quartz (doublets), “Australian Jade” (natural chrysoprase) and then there’s “California or Oriental Ruby” (natural red garnet).

Denise says, the rarer the gemstone, the more it is imitated. So, look for the Common Errors. She cites a few: Russian “Alexandrite” purchased abroad, mainly Russia, the Middle East, in the Caribbean or Mexico. If you see Russian Alexandrite over 1 carat, an alarm should go off in your head. Genuine alexandrite is rare and expensive. Mallorca pears/shell(y) pearls are man-made. Mystic topaz generally sold on cruise lines to the Caribbean and Alaska. “Natural” Baltic Amber is reconstituted or plastic. Finally, Natural Zircon, which is beautiful blue, IS NOT Cubic Zirconium!

Disclosure is an important aspect in any field. Here Denise tells us about ethics and laws regarding chemical composition (not usually disclosed), treatments and enhancements (need to be disclosed), laboratory reports for rare and expensive gems (a must) and any potentially harmful chemical exposure (important to disclose so as not to put someone’s life in danger). Denise explains that authentication papers usually increase the value of an already rare or expensive gemstone; GIA reports are good to have, too. She gives an example of a natural blue sapphire versus one that had been heated. The value of the natural sapphire will command a much higher return than the heated one. Finally, another good piece of advice from Denise: trust your source.

And that is a wrap! Lots of good information to absorb and keep in mind while you visit venues to make purchases or browse at eye candy. Great Q&A followed including topics of black onyx, Persian turquoise and other items the presentation. Thank you for another great one, Denise. Please come again!

Dr. Rossman’s Final Official Act:

Dr. George R Rossman, as his final official duty of the Mineralogical Society of Southern California, passed the gavel over to Angie Guzman, to close the meeting.

Angie Guzman accepted the gavel then thanked George for his 4 years of leadership and other contributions to MSSC as President. Other thanks went to Ann Meister for the Installation, to Denise Nelson for a riveting presentation then she congratulated the new officers and directors. Before adjourning the meeting, she mentioned next month’s speaker, Paolo Sanchez.

Adjourned at 9:07 p.m.

Submitted by Angela Guzman, MSSC President

Announcements and Reminders (Guzman)

Change up in February: Our next Membership meeting will be **February 17, 2023**, the 3rd Friday, due to the February 2023 Tucson shows. Members will automatically be notified via e-mail of our next ZOOM presentation. If you’re a non-member, kindly sign up to support and be a part of a great society. Notify our Programs Chair, Rudy Lopez, to be added to the ZOOM invite list. All are welcome!

Membership dues are due. Please check the Bulletin for details or look on the website for information.

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

With Knowledge Comes Appreciation !

List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	ZOOM Mar 10, 2023	Wes Andree: "JMDC's Dinosaur Trek" .. our augmented reality (AR) dinosaur hunt.
	ZOOM Apr 14, 2023	Michael "Mike" Kaas: Zinc Mining in the Friedensville Mining District and The Birth of the U. S. Zinc Industry
	ZOOM May 12, 2023	Mike Sanders: "Digging for Blue Barite at Stoneham, Colorado"
	ZOOM Jun9. 2023	Dr. Sarah Milkovich: MARS UPDATE
Board Meeting	ZOOM April 30, 2023	ZOOM at 1:00 PM
Field Trip	No Future Field Trips planned at this time	

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

Minutes of the January 15, 2023 Board Meeting

Call to Order and Roll Call

The MSSC Board meeting was called to order at 1:04 p.m. by President, Angie Guzman. The following Officers, Directors and Committee Chairs were present: George Rossman, Cheryl Lopez, Carolyn Seitz, Angie Guzman, Ann Meister, Pat Caplette, Simona Cianciulli, David Lesperance, Leslie Ogg, Rudy Lopez, Marek Chorazewicz, Bob Housley, and Patrick Stevens. Excused were Al Wilkins, Linda Elsnau, and Laura Davis. There was a quorum.

A) **Message from the Chair** (Angie Guzman) President Guzman thanked the past presidents in attendance (George Rossman, Ann Meister, and Bob Housley) she also complemented the members on their outreach to new members and asked for support and guidance from all.

B) **Business**

- 1) Approval of the October 16, 2022, Board Meeting Minutes as published in the November 2022 Bulletin. Motion to approve made by: Carolyn Seitz, Seconded by George Rossman. After asking if there were any corrections or additions to those minutes. She asked for a show of hands for approval, unanimous. She then asked for a show of hands for opposition and seeing none, declared the minutes approved.
- 2) Motion from the Chair for Board consideration: CFMS/AFMS Scholarship Honoree nomination. Angie explained that the CFMS (California Federation of Mineralogical Societies) has a \$2000 scholarship it awards to an Earth Science or Lapidary student. Angie nominated George Rossman to award a scholarship to a Caltech student. Motion to approve the nomination made by Carolyn Seitz, seconded by Cheryl Lopez. All members present voted to approve. George will write a letter of nomination to the CFMS scholarship committee. Angie also mentioned a \$4000 scholarship from the AFMS (American Federation of Mineralogical Societies), she suggested we work on awarding this scholarship after we nominate for the CFMS scholarship.

C) **Reports**

- 1) Vice President (Cheryl Lopez)
 - a) Comments – ZOOM license status, the license was renewed in October for another year. We did get a discount for being a current subscriber.
- 2) Treasurer's Report (Carolyn Seitz)
 - a) financial status: we started out the year with \$17,506.53 in our bank accounts, including the \$30 in our petty cash account and on December 31, we finished the year with \$16,366.05. We had a short fall of \$1,278.57. Carolyn said it's the result of our not really having any fundraising activities over the last 2 years (almost 3 years). Memberships for this year are coming in via check and Paypal.
 - b) Tax forms filings will be updated by the end of January.
 - c) CFMS Dues will be paid by the end of the day (1/15/23)
 - d) Transition – bank signatures, can be completed after the minutes of this meeting are published in the next bulletin. Carolyn said she will file a State form with the California Secretary of State that lists

the current club officers, what our contact information for officers is, and who is the agent designated for service of a process and that's always the president of the club. If somebody sues us or the Federal or the State Government does, The Attorney General for the state of California requires a tax return. We must pay a \$25 filing fee.

- 3) Secretary's Report (Leslie Ogg)
 - a) ZOOM transition, Cheryl will upload meeting transcript, and recordings to Google Drive and share with Leslie.
- 4) CFMS Director Report (Angie Guzman)
 - a) Mojave Trails National Monument – no update yet
 - b) Next CFMS meeting/show June 2023 in Lodi, CA

Directors – Welcome- President Guzman welcomed the new board members and asked them to say a little about their background and interest in mineralogy and MSSC.

- 5) Simona Cianciulli- said she is willing to take on the club Instagram and Facebook accounts. Simona has a Masters in Geology that she earned in Italy. Since moving to the US 18 years ago she hasn't worked in the field of Geology. She would go to her children's school and present geology lessons and bring samples for the classrooms.
- 6) David Lesperance- is a practicing geologist working in hydrogeology. He has recently rediscovered his love of geology for fun, and has joined several societies.
- 7) Patrick Stevens- is a long-time member, since about 1985. His interest is pegmatites and the associated minerals, especially Tourmalines.

Angie thanked the new directors for volunteering and assured them that there will be something for them to do to help the MSSC.

D) Committee Reports/Comments/Issues

- 1) Bulletin Editor (Linda Elsnau) Linda was not present. Angie commented on what a great bulletin we have. She reminded everyone that bulletin submissions are due by the 22nd of each month.
- 2) Field Trip (Marek Chorazewicz)
 - a) Jan 14th Field trip report the most recent field trip to the Lavic Jasper was attended by 7 people. There was a little rain. They collected lots of Jasper in red orange, yellow, banded and some chalcedony nodules. The kids on the trip had a good time.
 - b) No other field trips are currently planned.
- 3) Membership (Cheryl Lopez)
 - a) At the end of 2022 we had 112 members, 47 have renewed for 2023 so far.
 - b) The cutoff date for being included in the 2023 roster is 2/17.
 - c) Non-renewals will be notified by email on 2/1.
 - d) Also, after discussion last year, Richard Stamberg was made a life member. He receives a printed bulletin, last year Carolyn Seitz donated to pay for his bulletin, Rudy Lopez volunteered to pay the bulletin fee this year.
- 4) PMC (Al Wilkins, Bob Housley) (Fallbrook Jan 27,28, Field Trip 29th)
 - a) Al was not present. Bob Housley said announcements have gone out. Al is receiving the reservations. Bob doesn't have a head count. Rudy will be skipping the conference; he will deliver his conference materials to Bob. Rudy mentioned that attendees who want to sell at the conference must be MSSC members. Angie said she will be there Saturday to help Carolyn.
 - b) David asked about the possibility of Zooming the talks. Rudy said we are not set up to Zoom the PMC right now.
- 5) Programs/Education (Rudy Lopez)
 - a) has programs for most of 2023.
 - b) he will also be emailing LANHM and OC Parks about outreach activities for kids.
 - c) Rudy say that we have people attending our Zoom meetings from all over the US.

- 6) Webmaster (Leslie Ogg)
 - a) Web statistics: from last October to January the site had 1400 new users and 186 returning users. The new users are probably bots. The pages that are viewed the most are 1. Home page, 2. Field trips, 3. Bulletins, 4. PMC, 5. Membership. Facebook followers 713, Instagram 158.
 - b) the membership page was modified so that people do not get the Paypal link until they complete the membership form.
 - c) Simona said the donation box listed in the membership form does not have an associated PayPal button. Leslie will work on this problem.
- 7) Past President(s)-George Rossman “Well, I'll give a few words like I said, I very much enjoyed having the opportunity to serve as the President, but I very much feel there are two things important to our society, number one, that we get a variety of people willing to dig in and actually do the work, and I think it's critically important we increase the membership. What I've seen over the years is the diminution of the number of people in the society, and a diminution of the number of people attending the meetings. We are getting many, many fewer, younger people than we used to have in the past. Part of that, I think, is related to the field trip experience, which is, thanks to Merrick growing again. I see in my position as a professor at university a very clear demographic sweep against Geo. Science in the classical rock and mineral sense, and much more environmental concerns. So I think we're in some ways butting up against a couple of demographic trends of what the youth are interested in. I think we're butting up against the problem that a lot of our former collecting localities are being closed by the BLM. Either in terms of access or being gated shut or taken over by private landowners. I don't see an easy way around this, but that certainly is the thing we have to worry about if we want to maintain viability of a society like ours.”
- 8) Guest (s) none

E) **Other**

- 1) Updates or late reports-
 - a) Dave’s list of colleges and universities that we can tap into to grow our membership. Angie suggested he form an ad hoc committee to work on this proposal. George mentioned the number of geology students has severely dwindled.
 - b) Marek proposed that past presidents should be awarded life membership in exchange for their service. Ann mentioned a procedure for life members is in the by-laws. We need to look up and bring it up at the next meeting.
- 2) Next Board Meeting April 30.
- 3) Adjournment at 2:00 p.m.

Respectfully submitted; Leslie Ogg, MSSC Secretary

OTHER FREE THINGS TO DO...by Ann Meister

The **Watson Lecture** at Caltech’s Beckman Auditorium is on Wednesday, **February 8** at 7:30 PM, or you can view the livestream at [Caltech Watson Lecture Series - YouTube](#). By entering the auditorium, attendees attest to being fully vaccinated or having a legal medical exemption. Masks are optional inside Beckman Auditorium. The speaker is Chuck Steidel, Professor of Astronomy, Caltech. The title is **“Galactic Paleontology with JWST: Finding Living Fossils in the Ancient Universe.”** Since it began its scientific mission in July 2022, the James Webb Space Telescope (JWST) has provided the first detailed glimpses of the most distant reaches of the observable universe, when the first galaxies were emerging more than 13 billion years ago. History suggests that opening new observational windows leads to entirely unanticipated discoveries, and JWST has already begun to fulfill that promise. In this lecture, Steidel will explore what enables the unprecedented power of JWST for studying galaxy formation in its infancy and what we can expect to learn from JWST images and spectra over the next several years. *Find more past Watson Lectures on [Caltech's YouTube channel](#).*

The **Von Kármán Lecture** is on Thursday, **February 16** at 7:00 PM. Available live on YouTube at [NASA Jet Propulsion Laboratory - YouTube](#). The speaker is Dr. Sunanda Sharma, Postdoctoral Fellow, Mars 2020, NASA/JPL. The title is “**Perseverance: Two Years on Mars.**”. The Perseverance Rover has changed the way we look at Mars. Perseverance is investigating Jezero Crater – a region of Mars where the ancient environment may have been favorable for microbial life – probing the Martian rocks for evidence of past life. The rover carries an entirely new subsystem to collect and prepare Martian rocks and sediment samples that includes a coring drill on its arm and a rack of titanium sample tubes in its chassis. Throughout its exploration of the region, Perseverance will collect promising samples, seal them in tubes and store them in its chassis until depositing them on the Martian surface for retrieval by a future mission. We’ll talk with members of the Mars 2020 team about the past two years of operation and discovery.

The **UCLA Meteorite Gallery** is open. Check the website for hours. The monthly lecture will be presented on Sunday, **February 19** at 2:30 PM. The speaker and title have not been announced. **Zoom Registration:** https://ucla.zoom.us/meeting/register/tJEgduyupi0vGd3S0_52FsbHTbPjYr0sZQUj If you need detailed instructions on [how to join a meeting](#) via Zoom please contact our Curatorial Assistant, Juliet Hook, at jahook@ucla.edu. Note: Registration is only needed once as this is a recurring meeting in Zoom. The speaker and topic will be announced on the website. Visit the website and check on events and videos and other neat things about meteorites, go to <https://meteorites.ucla.edu>

Calendar of Events:

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

March 4-5, 2023 – Ventura, CA

Ventura Gem & Mineral Society
Ventura County Fairgrounds, 10 W. Harbor Blvd.,
Ventura, CA 93001
Hours: Sat 10 AM-5 PM, Sun 10 AM – 4 PM
Website: <http://www.vgms.org>

March 10-12, 2023 – Stoddard Wells

Victor Valley Gem and Mineral Club
47th Annual Stoddard Wells Rockhound Tailgate
Time: Friday, Saturday & Sunday – 9 AM – 5 PM
Website: <http://vvgmc.org>

March 18-19, 2023 – Lemoore, CA

Lemoore Gem & Mineral Club
Trinity Hall, 470 Champion St., Lemoore, CA
Hours: Sat 10 AM – 6 PM, Sun 10 AM – 4 PM
Website: <https://facebook.com/AndLemoore>

March 24-26, 2023 – Clovis, CA

Fresno Gem and Mineral Society
The Clovis Rodeo Grounds, 748 Rodeo Dr.,
Clovis, CA 93612
Hours: Fri & Sat 10 AM – 5 PM, Sun 10 AM – 4 PM
Parking and Free Admission
Website: <https://www.fgms.online>

April 1-2, 2023 – Vista, CA

Vista Gem and Mineral Society
Antique Gas and Steam Engine Museum, 2040 N. Santa
Fe Ave., Vista, CA 92083
Hours: Sat 10 AM -5 PM, Sun 10 AM – 4 PM
Website: <https://vistarocks.org>

April 29-30, 2023 – Anaheim, CA

Anaheim Searchers Gem & Mineral Society
Brookhurst Community Center, 2271 W. Crescent Ave.,
Anaheim CA
Hours: Sat 10 AM – 5 PM, Sun 10 AM – 4:30 PM
Website: <https://www.searchersrocks.org/>

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 13781 Alderwood Lane, #22-J, Seal Beach, CA 90740</p>			

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 Elsnaue	bulletin@mineralsocal.org
Field Trip	Marek Chorazewicz	
Historian	Ann Meister	
Hospitality	Laura Davis	
Membership	Cheryl Lopez	membership@mineralsocal.org
Micro Mount Conf. Chairman	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.**

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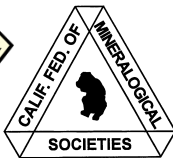
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To:



**With Knowledge Comes
Appreciation**



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