

Bulletin of the Mineralogical Society of Southern California

Volume 96 Number 3 –March, 2023

The 1,011th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

A ZOOM Meeting

March 10, 2023 at 7:30 P.M.

Program: Jurupa Mountains Discovery Center”

Presented by Virginia Odem , Education & Grant Coordinator; Maribel Vargas, Museum & Store Coordinator; Wes Andree , Executive Director

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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: “Jurupa Mountains Discovery Center” Presented by Virginia Odem , Education & Grant Coordinator; Maribel Vargas, Museum & Store Coordinator; Wes Andree , Executive Director

If you believe that children, and their families, regardless of their economic status, should have access to creative youth focused museums, then believe in Jurupa Mountains Discovery Center. JMDC is an Earth & Live Science Museum located in the foothills of the Jurupa Mountains in Jurupa Valley California.

JMDC is on 82 acres with many fascinating facets. Our primary focus is our School Learning Expectations (field trips), which support California classroom standards.

Walking gardens have dinosaur sculptures scattered within our cactus/succulent gardens, butterfly gardens and aloe fields. JMDC’s Granite Hill Nursery sells a wide selection of cactus, succulents, and plumeria for beginners and collectors.



JMDC’s Museum of Discoveries has a unique collection of rocks, minerals, fossils and other curated items. Complimenting the museum is JMDC’s Gift Shop of Discoveries with rocks, minerals, fossils, toys, and collectibles for sale. Inside the gift shop is our Critter Corner, a Collection of 50 + reptiles, amphibians, and invertebrates to look at.

With Staff assistance you can interact with many of the critters. No visit would be complete without “catching some dinosaurs to take home. Visit JMDC’s Dinosaur Trek to capture ten different dinosaurs when you visit.

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.

Hello everyone. Welcome to March, 2023. If this current cold & wet weather ever comes to an end, we may actually see spring soon.

If you’ve never visited the Jurupa Mountain Discovery Center (as discussed in our March program, you’ve missed a real treat. It’s only about 40 miles from downtown Pasadena and is open Saturday and Sunday from 9AM to 3PM. The Discovery center is a great place to take the kids/grandkids for a fun & educational day. Get more information at <https://jmdc.org/visit-us/hours/>

From Our President, HELP TO ORGANIZE YOUR COLLECTION by Angie Guzman

A while back, I had the opportunity to visit a relative in Idaho who took me up to St. Marie’s (locally, St. Mary’s) in the northern part of the state and a place well known for star garnets. We had a great adventure at St. Marie’s and I found some nice garnets and even collected some material directly out of the river that I could refine later, at home. However, when I went to look for the garnets to photograph for this article, I couldn’t find

them. I searched in all the usual places, in cabinets, drawers and boxes where I was sure I didn't put them...ok, maybe could have put them. Nothing. My garnets were in the abyss, seemingly lost for all time.

It became very clear to me that the organizational skills I'd honed, even prided myself on during my working career, needed to extend to my mineralogical interests, as well. I've collected rocks and minerals on and off for a relatively short time, about a decade. At first, I did not collect too many mainly because I didn't know what I had and also, I didn't know what to do with them. When I'd get them, I'd put some of them in little boxes, wrap some in newspaper, put some in egg crates or baggies. I'd go out to buy bigger boxes, ones I could slide under my bed where I could store my treasures. I even took over part of the garage and put rocks and minerals there...for safekeeping and to be examined "later." Eventually, I had specimens all about, all mixed up and many not catalogued properly, if at all. Now obviously, the more I've learned, the more I continue to collect, cherish and respect rocks and minerals. It was always in the back of my mind to get them all in one place and organized before it got out of hand. Well, here I am...out of hand.

Well, I listened to members and friends over these years, did internet research and came up with this *broad* tutorial. Here are steps to organizing your mineral and/or rock collection that I want to pass along to you:

1. Identify, label and catalogue: *what* is it you have? Make a *label* for the item, put a number the specimen: using a small white sticky dot, number your specimen, adhere the dot to the specimen and have a card with that corresponding number that identifies the specimen. Or print a small label to put in a box with the specimen). Create a *log* for your specimens: name of the specimen, where it was collected, when it was collected and who collected it, at the very least (add chemical formula, shape of crystal, Mohs, etc.);
2. Sort your specimens. There are several ways to do this: a) by collection location, b) mineral class, c) type of rock, d) alphabetically, e) by size or f) by color. You decide, but try to be consistent.
3. If you display your collection or part of it, what do you want to display? Do you have prized pieces to show off? Arrange your display with the most eye-catching dazzlers up front.
4. Store your collection out of direct sunlight and, if possible, in a dark and dry place (unbeknownst to me, under my bed *is* a good place). Some minerals lose their original color when exposed to light for extended periods. For example, kunzite and certain amethyst and topaz fade while other minerals may darken upon exposure to light. Some minerals are soluble in water, such as halite and others.

Take care not to crowd your specimens or cram them altogether. Be gentle when you handle them; rocks and minerals range from tough as nails to very fragile and delicate crystals. Also, many minerals react to moisture and to the oils on our skin. Wash your hands after you've handled rocks and minerals. The goal is to keep your collection safe and organized for the next time they're needed – whether it be for public display or for your own personal enjoyment.

I know this is old hat for many of our experienced members. But, if you're starting out, have no idea about rocks and minerals, this is intended for you. Many of our young or new members will take away some benefit from it. Be curious, have fun and be creative!

Meanwhile, my Idaho star garnets *are* beautiful and I have every confidence I'll find them by the time I finish organizing my small but precious collection of rocks and minerals.

'Till next time, thanks!

Did you know? Southwest of Acton (CA) in streams and on hillsides are agate, chalcedony, jasper and quartz. Any of these in your collection?

MINUTES of the February 17th, 2023 ZOOM Meeting

Call to Order (Angela Guzman, President):

President Angela Guzman called the meeting to order at 7:33 p.m. It was MSSC's 1,010th Membership Meeting and 33rd via ZOOM conferencing. She asked for visitors to introduce themselves, there were none.

Message from the President (Angela Guzman):

She announced the current mineral count, according to the International Mineralogical Association there are 5,900 valid species of minerals. About 100 new minerals are described every year, Tony Kampf was responsible for about 20 last year and 339 total. She also wished a Happy belated Valentine's Day. Next month on the 14th, we honor Pi Day. Pi, as in "circumference of a circle." She asked how many digits after 3.14 do you know? Dan Kravitz listed the most. Angie said, better yet just go to your favorite bakery and have a slice of pie, even though it is technically a partial circumference of a circle, an arc.

Message from the President (Angela Guzman):

A. Business – Approval of the Minutes

1. Ms. Guzman asked for corrections or additions to the January 13, 2023, minutes posted in the February 2023 Bulletin. There were none. She asked for a motion to approve the Minutes as written. Motion to approve made by Gene Reynolds, seconded by Rudy Lopez. No corrections or additions. Call for membership vote, minutes approved as written.
2. Ms. Guzman asked for corrections or additions to the January 15, 2023, board minutes posted in the February 2023 bulletin. No corrections or additions. Motion to approve made by Simona Cianciulli, seconded by Carolyn Seitz. Members vote unanimously approve.

B. Announcements and Reports

1. Membership Dues (Angie for Cheryl) are due now, due by the end of the month if you if you want to be included on the Roster list. We accept PayPal through the website on-line. There is a small processing fee (\$2.00). You can mail your dues check to the address listed in the Bulletin.
2. Field Trip (Marek); No report
3. Speakers/Events (Rudy); Rudy has Jurupa Valley next month, and zinc mining in April. We need speakers for the latter months of 2023.
4. Social Event-Picnic (Angie); Angie wants a social event, we used to have a picnic. Maybe at a public park. We will try to nail down details at the March meeting.
5. PMC update (Al/Bob/Carolyn); Angie reported that it was a great conference. Carolyn gave a more detailed report saying, close to 40 attendees, less than in past years. The Fallbrook volunteers were helpful and enthusiastic. After expenses the club netted \$1073. There were lots of minerals on the give-away table.
6. Media Outreach (Simona); Simona posted the meeting announcement on the club's Facebook and Instagram pages. She suggested we share pictures of our minerals on "Mineral Mondays," she will start by posting from her own collection. She also suggested posting photos of minerals from our next scheduled field trip to entice potential trip attendees. She is planning to post at least once per week.
7. Tucson Show: brief reports from any attendees, or any comments; Gene Reynolds said he heard it was well attended even though everything was more expensive. Bert Vogler said there were deals to be had, and that some dealers had museum quality specimens.
8. Gregor Losson: Mojave Trails National Monument update on collecting. Angie said she got an update that she would condense and simplify for publication in the bulletin. There is still time to send requests to the BLM for areas to allow rockhounding and collection.

C. Speaker Introduction Chair (Rudy). President Guzman turned the meeting over to Rudy Lopez to introduce our speaker. There will be a program on Fluorite from the Webers. There is lots of cross communication between the clubs. Rudy introduced the speaker Leyla Namazie, recent UC Berkeley graduate

in geophysics. She will talk about magnetism as a fundamental property of all minerals, and how it works. Ms. Namazie worked on paleomagnetism as an undergraduate and will soon be working with JPL/NASA as a remote sensing intern. She is also applying to graduate school.

D. Program and Q&A by Leyla Namazie: “Exploring Crustal Deformation with Mineral Magnetism.”

The talk was divided into six parts. The first part titled “De Magnete” covered the history of geomagnetism and paleomagnetism from the 12th century to 1906. Paleomagnetism is the study of the magnetism in rocks from when they were formed. It is used to study Earth’s magnetic field and continental motion. Recording of changing magnetic field in the sea floor helped to prove that the sea floor is spreading. The first magnetic compass was invented in the 12th century, in 1600, the claim that the earth is a giant magnet was proposed, then the discovery of a nonstationary magnetic North Pole, and finally in 1906, the discovery of magnetic field reversals in the Earth’s crust.

In the second section Leyla defined magnetism and explained some of the physics behind it. Rocks and minerals that are attracted to magnets contain iron, but not all minerals that contain iron are attracted to magnets. This magnetism is due to the movement of electrons. There are three forms of magnetism: diamagnetism, paramagnetism, and ferromagnetism. The first two only occur in the presence of a strong magnetic field. The last, ferromagnetism, is a product of the interaction of electrons within a material, it is spontaneous.

Part three: Magnetic remanence AKA fossil magnetism, the permanent magnetization of some rocks imparted by the magnetic minerals within the rock. This study of old magnetic fields is paleomagnetism. She talked about thermoremanent magnetization; as magmas cool crystals grow. When they reach the “Curie Temperature” the rocks develop magnetic moments that align with the magnetic field of the earth. Once the minerals cool past the blocking temperature the magnetization is locked into place. As crystals develop, the crystalline energies “hold” the magnetic vector in place. The minerals themselves are not oriented to the Earth’s magnetic field.

Magnetization can be used for relative age constraints in rocks, a field called magnetostratigraphy. Magnetic remanence is also used in magnetic recording devices and data storage. The extraction of magnetic data from rocks in the field requires very careful extraction and orientation. The data is directionally dependent. Field collected rock data must be corrected to paleo-horizontal (the orientation in which the rock first formed) using field measurements.

Next Ms. Namazie talked about several studies using paleomagnetism. In the first, a researcher in the UK correlated magnetic nanoparticles from diesel exhaust to matching particles in the human brain. In the second study, rocks collected from the moon were found to have a magnetic field almost as strong as that of the earth. In the last study she mentioned, rock from the west coast of north America have discordant paleomagnetic inclinations. This suggests that they were transported 4000km northward from Baja California.

The last section Leyla Namazie’s talk was about her specific area of research, the paleomagnetism of the western cordillera. The west coast of north America is composed of accreted terranes, or crust fragments, that are all completely dissimilar to each other. This is due to subduction. Ms. Namazie studied the eastern Klamath terrane. It is an old Paleozoic island arc with a controversial origin story (formed 300mya). Studies from the 1980’s found the inclination, movement of the rocks northward or southward, was consistent. But the declinations, orientation of magnetic field to the north, were not all the same. Her study was trying to answer these questions; 1. How far from the kraton did this terrane form, and 2. How can we use declination anomalies to study the kinematic history of the eastern cordillera. Early theories proposed that declinations were changed by rotation, as the rocks moved toward or along the edge of the terrane. Their new hypothesis of complex internal declination or oroclinal bending, is that the declination was changed in place, in “localized domains.” This generated their next problem; How to reconstruct Oroclinal Bending trends. They did field measurements of magnetic declination and strike of the rocks in an area called the Baird formation. Previous data was fairly consistent, with the difference between declination and strike of about 20 degrees, Layla’s data from a small area showed a declination in the opposite direction of the other area. Hence the answer is not so straightforward! The data does prove that the eastern Klamath did not deform as one block. The conclusions of

the study and next steps are: “Clean, well-defined demagnetization trends makes the Baird a suitable source of paleomagnetic data for constraining post-Paleozoic kinematics in the Eastern Klamath Province” and “Primary magnetic remanence directions suggest that declination anomalies in the Eastern Klamath are attributable to differential rotation around a vertical axis.”

- a. Next step: perform corrections on the data to determine the position of the paleofield that these rocks record.

Brief questions and discussion about magnetization in meteorites, moon rocks, and Mars. There was also discussion about magnetism in heads of people, bees, and birds. Finally she mentioned that she was accepted to MIT for her PhD program and will be working with Ben Wise on meteorites. We look forward to another program in the future.

What an interesting and informative program full of useful graphics and diagrams, thank you Leyla Namazie.

E. Adjournment The president adjourned the meeting at **8:49 p.m.**

Submitted by Leslie Ogg, MSSC Secretary

Field Trip News:

Hi, fieldtrip friends!

The January fieldtrip was a chilly start to this year’s collecting, but everybody warmed up while picking up beautiful jaspers in different colors and patterns. Since then, the weather has not been cooperating much, but the forecast shows a potential break in the clouds for Sunday in 2 weeks. (Sunday, March 12, 2023)

This trip will be much closer, only 44 miles from Pasadena. Let’s meet on Sunday at 9:00 AM, so the air will have a chance to warm up above 40F. The meeting place will be a parking spot on Davenport Rd at the following GPS coordinates: 34.479064, -118.364327. No 4x4 cars will be necessary. The Google Maps link is here: <https://goo.gl/maps/2X17YQ1ZKYqyPru68> . Link to the invite and weather updates:

<https://mineralsocal.org/lavic-jasper-jan-14-2023>

I’d like to request everybody planning to attend to refresh their MSSC membership status beforehand, so we don’t have to waste time on paperwork on the spot. Our website is an excellent spot to do that.

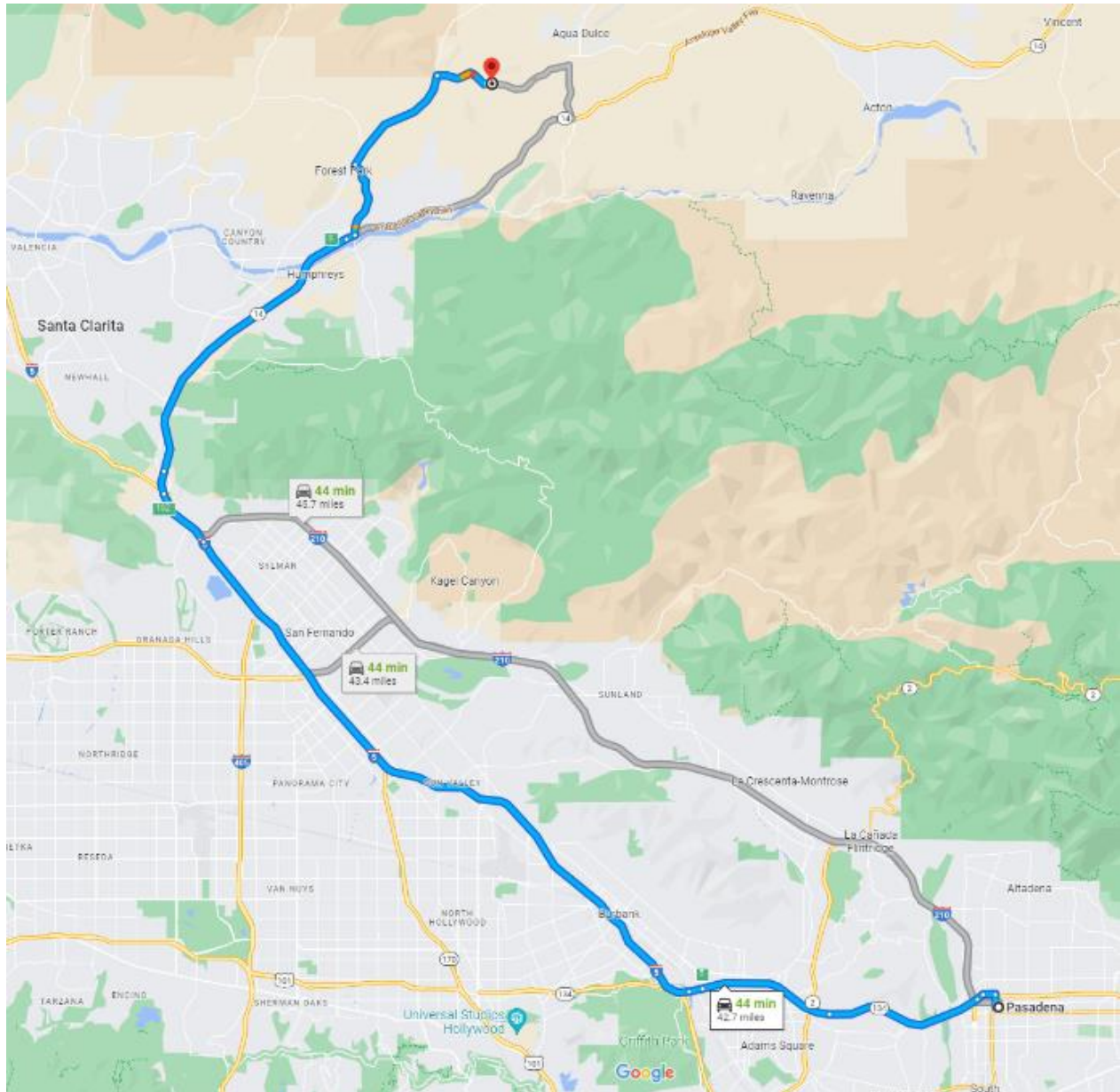
For this trip, I was inspired by great material from an old collection of William Reifel. The area used to be a site of a borate fever around the 1910s. Now the land around the canyon is used for housing development. Many people have heard about or seen howlite nodules from the area already, but the mine dumps also are a source of other borates like ulexite, probertite, datolite var. bakerite, colemanite, and gemmy calcite. It is also a type locality for a rare strontium borate, veatchite. The volcanic outcrops just north of there are a rich source of good zeolites, like natrolite, analcime, heulandite, and mordenite. Some of the material is UV fluorescent as well.

Be prepared for cold weather, mud, wet bushes, and dumps moist and very steep in some areas. Bring a hammer to break up rocks to find fresher minerals.

The weather forecast shows a 20% chance of precipitation, but if that rain gets here late, I’ll have to reschedule for a week later, Saturday the 18th.

Hope to see you all there! (Map on page 7)

With Knowledge Comes Appreciation !



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

List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	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. Milkovich, Sarah: MARS UPDATE
	ZOOM July . 2023	Leyla Namazie: The structural deformation and evolution of Terranes in the North American Western Cordillera using Paleomagnetism
Board Meeting	ZOOM April 30, 2023	ZOOM at 1:00 PM
Field Trip	Sunday, March 12, 2023	Near Agua Dulce, CA for howlite

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

UPDATE UPDATE UPDATE

Mojave Trails National Monument (MTNM) update as per Feb. 15, 2023 e-mail from Gregor Losson, MSSC member. As a member of the MTNM Subgroup, Gregor represents us, the Southern California Friends of Mineralogy, the Pacific Micromount Conference and several distinguished and familiar scientists and mineralogists. Here's a digest of his communication:

The Management Plan (MP) for MTNM is fully funded and moving quickly. Collectors and rock hounds are currently allowed to collect as per a Memorandum of Understanding (MOU) that is due to expire at the Monument's MP finalization in the Fall of 2024. ***If the plan ultimately does NOT allow for mineral and rock collecting, we stand to lose 1.6 million acres of the California desert.***

The Monument includes Cady Mountains and adjacent collecting area, the Mesquite Hills, Bagdad-Chase area and southern Bristol Mountains, Lava Hills, Marble, Clipper Piute, Little Piute, Sacramento, Ship, Calumet, Sheephole and Iron Mountains.

There are two tracks:

(1) The Bureau of Land Management (BLM) Needles has started and includes its NEPA law *requiring* public participation. It means your input! Soon there will be periods for public comment (your opportunity to speak up about your passion for mineral collecting). Other entities are also involved including JTNM, MNP, 29 Palms City and military base, the Conservation Lands Foundation and Mojave Desert Lands Trust.

(2) MTNM *Subgroup* of the Desert Advisory Committee (DAC). The Subgroup makes recommendations to the BLM MTNM management team. The main focus is two-fold, (a) collecting is to be allowed and (b) access via current roads. [Gregor is our gem and mineral collecting representative, as mentioned above.]

The BLM will do several things, such as explore and advise DAC on progress of development of the monument's Management Plan, the Subgroup will bring the public perspective and be central to public outreach. Further, the Subgroup will offer recommendations to the BLM through DAC, become familiar with plan issues and their considerations, the Subgroup will provide transparency to the public interested in the planning process and they will provide recommendations to DAC. Additionally, **the MTNM Subgroup members will share their understanding of the plan issues with their representative constituents to gain public perceptions and possible resolutions.**

Gregor tells of the recent field trip to Cady Mountains where he was able to share about our hobby and science; he showed the little impact that occurs with *responsible collecting*. He explained the importance of the educational work and how it integrated into the science of mineralogy. A demonstration of Marek and others' work with zeolites in volcanics, and descriptions of how most mineral collecting in the MTNM, (aside from the Cady Mountain jasper and adjacent agate/jasper areas) are mostly done at previously disturbed area/mines, and he also showed the small impact of micro-mounters, in particular.

Gregor tells us he informed MTNM manger, Noelle Glines Bovio, BLM Needles manager, Mike Ahrens and the Subgroup members about MSSC, SCFM, PMC and collectors who are all concerned about this area that could be possibly a closure to collecting. Losson spoke of the importance of Tony Kampf and Stu Mills' analysis and identification of minerals, and of others who have contributed so much to mineralogy.

What you can do now: Gregor conveyed some issues, what's next and how YOU can contribute and help save collecting in the MTNM. Submit your collecting localities, be specific (road name, GPS if you have it, etc.). Gregor needs a comprehensive history of MSSC, a history of our collecting (how did we get there, what routes were taken) and what was the collecting locality. **Do you know the distinction between collecting and mining? If you're an expert, contact Gregor or a Board Member – this issue is critical.**

Gregor will keep us informed on further progress, but if you have something to contribute about collecting sites or known MTNM roads, anything you think is significant, please let us know. We will compile the information and submit to Gregor. **Please do not delay.** Fall of 2024 is closer than you think. We must save MTNM for

future generations of collectors and scholars of mineralogy. **Contact me or a MSSC Board member – check the Bulletin for e-mail addresses.**

Thanks for your attention
Angie Guzman, MSSC President president@mineralsocal.org

A Milestone Birthday

On January 25, 2023, Lifetime MSSC Member Elizabeth Moller celebrated her 100th birthday. She and her husband Bill (who passed away several years ago) were very active with MSSC for many years and when they lived in the greater Pasadena area, a very long time ago, used to be a part of the MSSC group that would gather on a Friday evening to share food and put the MSSC bulletin together to prepare it for mailing to the membership.



Her birthday celebration was held on a beautiful day in her backyard in Santa Barbara, CA. with many family, friends and neighbors. MSSC members also in attendance were Janet & Paul Gordon and Carolyn Seitz.

Happy Birthday Elizabeth!

OTHER FREE THINGS TO DO...by Ann Meister

The **Watson Lecture** at Caltech’s Beckman Auditorium is on Wednesday, **March 1** 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 Morteza (Mory) Gharib, Professor of Aeronautics and Medical Engineering, Caltech. The title is **“Enigma of the Heart.”** Our circulatory system's 500 million years of evolution is on full display during the nine months of human embryonic heart development. The hallmark of this evolution is a beating, complex, autonomous muscular pump that sustains life. In this lecture, Gharib will explain the concept of a wave system established by the beating heart that moves through the human body, which can provide a window to the health of the cardiovascular system and early diagnoses of its devastating diseases by utilizing modern data science. *Find more past Watson Lectures on [Caltech's YouTube channel](#).*

The **Von Kármán Lecture** is on Thursday, **March 9** at 7:00 PM. Available live on YouTube at [NASA Jet Propulsion Laboratory - YouTube](#). The speaker is Masahiro Ono, Principal Investigator, EELS, NASA/JPL. The title is **“Exploring Ocean Worlds with EELS (Exobiology Extant Life Surveyor).”** Ocean Worlds are exciting and fascinating places to explore. The Exobiology Extant Life Surveyor (EELS) system is a serpent-like mobile instrument platform conceived to explore internal terrain structures, assess habitability and ultimately search for evidence of life. It is designed to be adaptable to traverse ocean-world-inspired terrain, fluidized media, enclosed labyrinthian environments and liquids.

The **UCLA Meteorite Gallery** is open. Check the website for hours. The monthly lecture will be presented on Sunday, **March 19** at 2:30 PM. The speaker and title have not been announced. **Zoom Registration:** https://ucla.zoom.us/meeting/register/tJEgduyupj0vGd3S0_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, 2023 – Fallbrook, CA

Fallbrook Gem and Mineral Society
123 W. Alvarado St., Fallbrook, CA 92028

Hours: 1 PM -4 PM

Parking in church lot on Pico (across from Rough & Cut entrance)

Website: <http://fgms.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 22-23, 2023 – Thousand Oaks, CA

Conejo Gem & Mineral Club
Borchard Park, 190 N. Reino Rd.,
Thousand Oaks, CA

Hours: Sa 10 AM – 5 PM, Sun 10 AM – 4 PM

Free Admission and Free Parking

Website: <https://cgamec.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/>

May 5-6, 2023 – Yucaipa

Yucaipa Valley Gem and Mineral Society
Yucaipa Blvd at Adams Street, Yucaipa, CA 92399
Hours: Fri 6 PM – 10 PM, Saty Noon to 10 PM

Website: <https://www.yvgms.org/>

May 6-7, 2023 – Lancaster, CA

Antelope Valley Gem and Mineral Club
Antelope Valley Fairgrounds, 2551 West Ave. H,
Lancaster, CA 93536

Hours: Saturday & Sunday 10 AM – 5 PM

Admission and Parking are free.

Website: <http://avgem.weebly.com>

[flyer: antelopeshow](#)

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:

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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

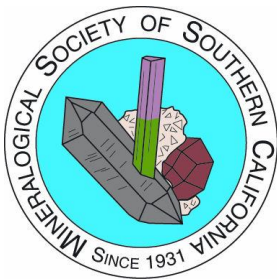
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To:



**With Knowledge Comes
Appreciation**

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