

# **Bulletin of the Mineralogical Society of Southern California**

Volume 96 Number 11 –November, 2023

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*The 1,019<sup>th</sup> meeting of the Mineralogical Society of Southern California*

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*With Knowledge Comes Appreciation*

## **A ZOOM Meeting**

*November 10, 2023 at 7:30 P.M.*

**Program: "Collecting Herkimer Diamonds at Two Localities in New York"**  
**Presented by Scott Braley**

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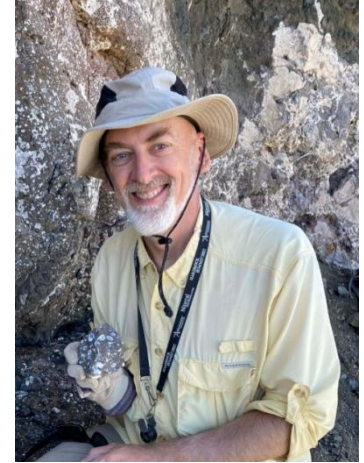
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**Remember:** If you change your email or street address, you must let the MSSC Editor and Membership Chair know or we cannot guarantee receipt of future Bulletins

**About the Program: “Collecting Herkimer Diamonds at Two Localities in New York”:  
Presented by Scott Braley**

Scott will be discussing his collecting experiences at two Herkimer diamond localities, the Ace of Diamonds Mine and the Crystal Grove Mine. Both commercial mines offer fine collecting, for all skill levels, though the host rock can be very tough! He’ll also be discussing the geological origin of the formation, as well as some of the micro-features of quartz crystals – voids, moving bubbles and inclusions. Though seldom considered, other minerals are also found in these mines, including excellent dolomite and calcite crystals.

Scott has been collecting minerals since childhood, with a focus on microminerals and photography for the last 15 years. He had previously been a member and/or officer in clubs in the Washington DC, Colorado, and New Mexico regions. After retiring from the Air Force, he completed a Ph.D. and is now a professor at a small college in northern New Mexico.



**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](mailto: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.

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**From the Editor:** Linda Elsnau.

Wow, hope everyone had a safe Halloween. It’s November already! This means that MSSC elections are here and the 2024 dues are due soon. For your convenience, I’m including a membership form with this Bulletin. You can mail it with your check or go to the MSSC website and fill out the form there and use PayPal to submit your dues. Also, don’t forget to set your clocks back to Pacific Standard Time on Sunday, Nov. 5<sup>th</sup>.

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**From Our President,** Angie Guzman

**NOMINATIONS and ELECTIONS**

**November 10, 2023 Membership Meeting**

MSSC Officer and Director nominations will be opened, and recorded. All members are welcome to self-nominate or nominate another member for office (you must have the other member’s permission to nominate them). The nominee will be asked if they accept or decline their nomination. After all nominations are submitted, the session will be closed. Then, MSSC will conduct the election of officers, including CFMS Director, and director chairs #1 and #2. All members are eligible to vote. Your participation is appreciated. Thank you.

**Taken for Granite**

Q. What did the limestone say to the geologist?

A. “Don’t take me for granite!”

How puny are you? Do you have a mineral joke or riddle you dare to share? Send it in and we’ll publish it in the MSSC Bulletin. E-mail your jokes or riddles to [president@mineralsocal.org](mailto:president@mineralsocal.org) Thank you.

## **MSSC Throwback: Taken for Granite - What is a Mineral?**

The following excerpts are reprinted from the article, *Taken for Granite What is a Mineral?* as published in Bulletin, March 2012, authored by [jerry@jerrycarter.org](mailto:jerry@jerrycarter.org).

“When it comes right down to it, most mineral collectors don’t actually know what minerals are. Sure, the status of a specimen is clear in most situations and only rarely is there uncertainty as to whether something is a mineral, a rock or something else entirely. But it is these exceptions that are the most instructive. Knowledge may perhaps be measured best not by what is known but by how well the grey areas can be defined.

### **The wisdom of the ancients**

Consider the difficulties faced by the earliest mineral collectors in distinguishing between species.

The oldest surviving mineral specimen with known provenance is a fragment of the native silver mass on which Duke Albrecht of Saxony enjoyed dinner in 1477 (Wilson 1994). Mineral collections having recognizable form began to appear in the next century. Here, long before the origins of atomic theory and even before the discovery of the first chemical elements, judgements were required to assign names to specimens and to identify novel examples. Distinctions between quartz, fluorite, pyrite, silver and dozens of other species were already being made on the basis of crystal forms and overall physical properties.

There was already consensus in the 16<sup>th</sup> century that quartz as a mineral whereas living items were not. A wire silver from Kongsberg was a natural mineral but the same metal cast by an artisan was not. And, though both might form cubes, pyrite and fluorite were distinct. On the other hand, optical techniques were still unknown and there was little understanding of geologic processes. There was consensus that chalcedony, amethyst, smoky quartz and colorless quartz were different minerals. Likewise, many authors did not differentiate between rocks and minerals and considered various types of igneous rocks as distinct species. Even the method of formation was considered, so quartz from alpine clefts and formed in a geode differed as did pyrites from Elba and from pyritized fossils.

Formal definitions came into being in the 18<sup>th</sup> century and have evolved slowly since. Writing in 1783, six years before Antoine Lavoisier published the first of chemical elements, Romé d’Lisle proposed that “all minerals that agreed in crystallization, hardness, and specific gravity [belong] to the same species” (Jameson 1804). This was further refined by René Just Haüy in his 1801 treatise, *Traité du minéralogie*. Anticipating the crystallographic unit cell, Haüy offered a definition combining crystallographic considerations with a consistent chemistry. Skipping forward to 1906, still six years before the discovery that x-rays could be used to determine crystal structure, Edward S. Dana described a mineral as “a body produced by the processes of inorganic nature, having a definite chemical composition and...a certain characteristic molecular structure which is exhibited in its crystalline form and other physical properties” (1906). The language had evolved in the hundred years since Haüy wrote, but the essentials remained: mineral species would be characterized by a combination of physical, crystallographic and chemical considerations.”

As the article continues, it explains other segments: the International Mineralogical Association’s (IMA) creation of a Commission on New Minerals and Mineral Names (CNMNC), What is a Mineral? - An Element or Chemical Compound, Normally Crystalline, formed as a Result of Geological Processes and lastly, Known Knowns and Known Unknowns.

References quoted/cited in the original March 2012 Bulletin are:

-**Casanova, I** (2009) Private communication. Isaias acquired and sold several synthetic heklaite specimen starting around 2008;

-**Dana, E.S.** (1906) *A Textbook of Mineralogy*;

-**Helmenstine, A.M.** (12 Jan 2012) Bismuth Crystals – Grow Bismuth Crystals.

<http://chemistry.about.com/od/crystalrecipies/a/grow-bismuth-crystals.htm>;

-**Jameson, R** (1804) Preface to *System of Mineralogy*. This was republished with annotations in *Mineralogical Record* **26** (4), 49-64;

- Lovering, J.F., et al.** (1971) Tranquillityite: A new silicate mineral from Apollo 11 and Apollo 12 basaltic rocks. *Proceedings of the Second Lunar Science Conference*, Vol 1, 39-45;
- Nickel, E. H.** (1995) The Definition of a Mineral. *The Canadian Mineralogist*, **33**. 689-690. See [http://www.minsocam.org/msa/ima/ima98\(04\).pdf](http://www.minsocam.org/msa/ima/ima98(04).pdf).
- Pagano, R.** (2002) Artificial "Sicilian" Sulfurs. *Mineralogical Record*, **33 (2)**, 149-154;
- Rasmussen, B** (2011) Tranquillityite: The last lunar mineral to come down to Earth. *Geology*, **40 (1)**, 83-86.
- You can just tell by the references that the remainder of the article is quite unique and interesting. Click here to connect: [www.mineralsocal.org](http://www.mineralsocal.org). (Bulletin tab)

## **November 23, 2023 Thanksgiving**

### **THEN**

Thanksgiving is modeled on a 1621 harvest feast shared by the Pilgrims (English colonists) of Plymouth and the Wampanoag people.

### **NOW**

Thanksgiving is typically celebrated by families who join together to enjoy a main meal, usually turkey, cranberries, pie and other wonderful American traditional foods.

In some public places, Thanksgiving is recognized by extravagant parades, such as Macy's Thanksgiving Day Parade in New York City, ABC Dunkin' Donuts Thanksgiving Day Parade in Philadelphia, and the Bayou Classic Thanksgiving Parade in New Orleans.

The day after Thanksgiving was considered the biggest retail sales day of the year not so many years ago. Today, *Black Friday*, the first day after Thanksgiving, marks the start of the Christmas shopping season.



[Happy Thanksgiving Greeting Free](#)

### **Membership Dues**

Membership Dues are due by January 1, 2024. Check the website to see how you can use PayPal directly through our (Membership) website. **Or**, if you prefer, you may print out the membership application form, complete applicable spaces, write a check and mail your NEW or RENEWAL Membership Form to:

Mineralogical Society of Southern California (MSSC)  
c/o 13781 Alderwood Ln., #22-J  
Seal Beach, CA 90740

Feel free to contact any Officer or Board Member for help with this process. Refer to contact information in any of our newsletter, the MSSC Bulletin.

### **PayPal Fee Change**

**NOTICE TO MSSC MEMBERS:** We expect the current \$2 PayPal fee to change in the future and, as such, the cost of using PayPal to pay MSSC Dues will likewise increase. We will keep you informed of any changes.

### **MSSC Membership Meeting**

Topics for the ZOOM November 10<sup>th</sup> Membership meeting will include:

1. Nominations and election of MSSC Officers, CFMS Director and Director #1 and #2 for terms commencing January 1, 2024;
2. Brief reports by Programs and Field Trip Chairs;
3. Update: Installation Banquet and Silent Auction slated for February 2024;
4. Announcement of Membership Chair vacancy. Who will volunteer to lend a hand for 2024? No experience required; we will train you;



5. MSSC's Speaker Series scheduled presentation by Scott Braley on "Herkimer Diamonds and Collecting Radioactive Minerals"; Q & A will follow.

### ZOOM Invitation List

If you or someone you know would like to "attend" a membership meeting, please contact Program Chair, Rudy Lopez, to get included on the ZOOM invitation list: [programs@mineralsocal.org](mailto:programs@mineralsocal.org). It's easy. It will be great to have you join us for the evening's offerings.



**November 11<sup>th</sup> - VETERAN'S DAY.**  
**THANK YOU FOR YOUR SERVICE!**

*END*

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## **MINUTES of the October 13, 2023 ZOOM Meeting**

### **Welcome**

President Angela Guzman welcomed members and guests to the 1,018<sup>th</sup> Meeting of the Mineralogical Society of Southern California. It is our 41<sup>st</sup> ZOOM meeting. The meeting was called to order at 7:31 PM. There were 27 people present.

List of Minerals: As of today, the [RRUFF](http://RRUFF) website lists 5,975 approved minerals species.

### President's Message

President Guzman said the nominations for officers and directors for the term commencing January 1, 2024, will be opened tonight and again at the November meeting. Elections will be conducted at the November 2023 meeting. The business and announcement segments of this meeting will, in the interest of time, be abbreviated due to the nomination process.

### **Business:**

1. Angie asked for a motion to approve the September 8, 2023, membership meeting minutes as published in the October 2023 bulletin. A motion was made by Gene R. and seconded by Rudy L. She asked for additions, corrections, or discussion. Hearing none she called for the vote to approve the motion. The motion carried and the minutes were approved.
2. The president opened the nominations for all officers and two director positions:  
Officer terms are 1 year, including CFMS Director, and the Director terms are 2 years. Effective date January 1, 2024. The nominee must be a member of MSSC, they may self-nominate or be nominated by another member. The current officers (Leslie O.- secretary and Carolyn S. treasurer) self-nominated themselves for another term. Cheryl L. was not present and will be indisposed for the next few months. Angie said she would like to hold the position of vice-president open for her. The two directors' self-nominated as well; they were Ahni D. and Pat C. Angie will keep the position of CFMS director, she said the job of president is available: hearing no nominations she self-nominated for president. She closed the nominations until the November membership meeting.  
Nomination and election proceedings are in accordance with MSSC current By Laws and Operating Rules & Regulations.

### **Announcements**

1. Member/Membership update (Angie): (a) VP, Cheryl Lopez, will be tending to personal business for next few months; (b) As of 10/1/23 we have 111 members. Renewal forms will be coming out soon including payment methods, check or PayPal. NOTE: To be included in the MSSC Membership Roster, dues must be paid by February 16, 2024. The MSSC Roster will be mailed to each member on March 1, 2024.
2. Events (Rudy): (a) OC Parks Event at Ralph Clark Regional Park is tomorrow, October 14, 2023. We will be handing out tumbled stones to children at the event. (b.) The club has been invited to a Zoom

with the Middle Tennessee Rockhounds on Tuesday, October 17. The speaker will be Justin Zzyzx talking about fakes and frauds.

3. Mineral collection donation (Rudy/David): Update report- Raymond Ray collection; Rudy said he was able to bag up 700 bags of tumbled stones for the OC Parks event. There are also many nice cabochons for future silent auctions.
4. CFMS (Angie): Angie said she would be attending the CFMS Convention in Visalia November 10 to 13.
5. Field Trip (Marek)- He is planning a field trip for the weekend of October 27, to Lead Mountain. He will send out an email with information this weekend. Also, this weekend is the SCFM Symposium at the Jurupa Mountains Discovery Center.

### **Program:**

Rudy Lopez introduced tonight's speaker Virgil Lueth. He is a mineralogist *emeritus*, at the New Mexico Bureau of Geology and Mineral Resources a research and public service division of New Mexico Tech. He will be speaking about New Mexico Fluorite, over one billion years of mineralization that continues today.

Dr. Lueth started by saying most fluorite actually formed starting 30 MYA. He said this talk will summarize 27 years of research into the New Mexico fluorites of the Rio Grande Rift (RGR)

~25MA the Gila Fluorspar District was formed by Oligocene caldera magmatism. There was also skarn formation during this time, forming replacement deposits of copper, lead, and zinc with fluorite (San Pedro). Another ore body was Pine Canyon (large purple fluorite) in the Gila volcanic area.

He then showed a geologic map of New Mexico, which shows how the Rio Grande Rift runs down the middle and dominates the state's geology. The rifting began after the Oligocene era magmatism. From 40MA until the present forming the features of New Mexico. Hot springs in the rift zone are associated with the fluorite deposits. The largest deposits are associated with the rift structure and form at the edges.

The next picture was the Rio Grande Valley where Hatch, home of the famous chilies, is located. The Organ Mountains are in the distance and flat-topped San Diego Mountain (aka. Tonuco Mt.) is in the middle. The Organ Mountains developed during the Oligocene Magmatism, over time, rifting has caused them to be dropped and tilted to 60°. When you drive into the mountains, you are driving into the earth and back through time. Tonuco mountain is topped with gravels containing fluorite and Barite, these minerals formed 1-2 km below the earth's surface, and were brought to the surface more recently when the mountain "popped up".

The next map showed the rift related ore deposits ranging from Santa Fe in the north down to Chihuahua, Mexico. All the deposits have similar features and somewhat similar mineralization patterns. He showed a specimen with large (2-3") fluorite crystals on quartz. The rift is "peeling" the crust open. The fluorite will form in almost any host rock. The hypothesis is that heated acidic fluids at the bottom of a fault travel upward and cause fluorite mineralization at depths of 1-2 km. Farther up near the surface there is manganese oxide mineralization. And finally hot springs at the surface. These hot springs are located along basin boundary faults.

As these fluids travel up the pathway they interact and mineralize the host rock. He showed examples of wall rock interactions. The first was features of sulfuric acid and hydrofluoric acid speleogenesis. Limestone is dissolved by sulfuric acid in fluids, calcium carbonate reacts with the sulfuric acid to produce gypsum. In shale and granite host rock, an alteration envelope forms around the developing crystals. In both cases the mineralization is isolated from the host rock.

The minerals formed in the RGR ore depots are Galena, Fluorite, Barite, Gypsum, Quartz, Jarosite, Hematite, and Goethite. The most important being Jarosite which can be dated. It contains hydrogen, oxygen, and sulfur. We can study isotopic information to understand the source of the ingredients and temperatures at formation. Jarosite needs lots of oxygen to form. Jarosite has possibly been found on Mars, indicating that Mars had much more oxygen than it does today.

The ages of Jarosite along the RGR show the oldest ages in the south and along the ridge margins, the younger Jarosite is found in the center and the north. The dates also indicate multiple episodes of mineralization. In the Hansonburg area different ages are associated with different types of fluorite deposits formed over a 4-million-year span.

They also studied fluid inclusions in the fluorites, which can help explain the chemistry of the deposits. Another study looked at Sulfur Isotope variations. This study showed mixing of Sulfur from sedimentary rocks with Sulfur from magmatic rocks. Hydrogen and Oxygen isotopic variations also indicate there was mixing. There is a strong meteoric water component and a smaller magmatic influence in the RGR.

Geologists have mapped asthenospheric mantle source rock and many of the fluorite deposits are also in this area.

The 27 years of research was summarized on a cartoon drawing of the RGR. It is a giant system that leaches fluorine from Precambrian rocks with meteoric water. A These fluids run down into the rift zone where they meet asthenospheric magma which contains more fluorine. These solutions run up the basin boundary faults where they meet host rock and crystallization occurs. The crystals are later uplifted towards the surface where we find them.

Another experiment took some “purple Juice”, a brine solution that replicated the fluids found in the RGR. By cooling the fluid, or reacting the fluid with Calcite and dolomite, or mixing two different fluids they would get specific mineral assemblages which match what is found in the RGR. For example, at Hansonburg (aka Blanchard) the minerals Fluorite, Galena, Quartz, and Chalcopryrite formed by cooling of fluids. At the Nakaye Mine, pseudomorphs of Calcite are replaced by Fluorite. This is a result of the acidic fluids reacting with the limestone. Lastly, areas of clay mineralization with Quartz, Barite, and Fluorine form from two fluids mixing.

Dr. Lueth spent a few minutes talking about the manganese dioxide deposits which formed from ancient hot springs. Dating these deposits shows that they formed near the Fluorite deposits at shallower depths and lower temperatures but at the same time. Some of these ancient hot spring areas also contain fossilized proboscideans (elephants).

In conclusion, modern geothermal systems are connected to deeper hydrothermal systems. Multiple episodes in geologically favorable areas have led to formation of these deposits in New Mexico. These deposits range in age from 10 MA to the present. He closed by saying that New Mexico is wide open for collecting. There was a short Q&A after the program.

**Last Words:**

- (a) Next Membership meeting Friday, November 10, 2023, it will include nominations and elections of officers and directors.
- (b) Guests are asked to contact Rudy Lopez to be put on the ZOOM invite list.

**Adjournment:** The president adjourned the meeting at 8:44 PM.

Respectfully submitted, Leslie Ogg, MSSC Secretary

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**List of Upcoming MSSC Events : Mark your Calender!**

Event	Date	Comments / Scheduled Program (if known)
<b>Meeting Dates:</b>	<b>ZOOM</b> December 8, 2023	Evan Jones: Wulfenite
	<b>ZOOM</b> January 12, 2024	Denise Nelson: TBA
	<b>ZOOM</b> February 9, 2024	TBA
	<b>ZOOM</b> March 8, 2024	TBA
<b>Board Meeting</b>	<b>ZOOM</b> January 7, 2024	ZOOM at 1:00 PM
<b>Field Trip</b>	<b>TBA</b>	

*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.

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## MINUTES of the October 1, 2023 ZOOM Board Meeting

- A. Call to Order: Meeting was called to order by the Chair at 1:06 p.m.
- B. Secretary: Roll call- present were Angela Guzman, George Rossman, Marek Chorazewicz, David Lesperance, Carolyn Seitz, Pat Stevens, Leslie Ogg, Ahni Dodge, and Rudy Lopez. Excused were Laura Davis, Cheryl Lopez, Pat Caplette, and Linda Elsnau. Simona Cianciulli, Ann Meister, Bob Housely, and Al Wilkins were absent. There was a quorum.
- C. Welcome Guest(s); self-introduction(s): There were no guests.
- D. Business - Angie Guzman
1. President Guzman made a motion to approve the July 9, 2023, board meeting minutes: The motion was made by George R. and seconded by Carolyn S. There were no corrections, additions, or discussion. The minutes were approved by a show of hands.
- E. New Business – Angie Guzman
1. Discussion: Angie suggested we offer Kristalle free ad space for the remainder of the year as an invitation for other dealers to buy ads. There was a question about it costing more money for the mailed bulletins. Angie said she would check with Linda E. It was suggested that we also offer an ad to Bill Larson.
  2. President Guzman said that nominations will be open at the October 13 and November 10, 2023, membership meetings. Persons may self-nominate, or someone may nominate them. Positions for a 1-year term are: President, Vice President, Treasurer, Secretary, CFMS Director. Seats for 2-year term are: Director #1 and Director #2. Elections will be held November 10<sup>th</sup> after nominations are closed.
  3. Correspondence for discussion: (A) MSSC member Robert Goss wanted to lead MSSC members on an Owens Valley Field Trip to the Reward and Brown Monster mines – to work inside the mines and to assist him with underground surveying. Status: Request denied by A Guzman; (B) Request by Miko regarding assistance in identifying various minerals that indicate influence of meteorite impaction. Forwarded by Rudy to Dr. Rossman for assistance. George R. said that identification of potential meteorites is not a good use of Caltech resources. George said he has only examined one real meteorite in 50 years. Angie said her attempt to email Miko for further information was blocked and could not go through. Status: Board discussed and there will be no further action; (C) Stephanie Martin made a request to add a Brite Co. link to the MSSC website as reference for geology and minerals/gems. The actual link was to a jewelry insurance agency. Status: Request denied by A. Guzman.
  4. Installation Banquet in January 2024 – The members present were generally in favor. Rudy said we would need at least 40 to reserve Pinocchio’s again. Ahni D. suggested “The Only Place in Town” (an actual restaurant). They have a minimum of 16 people to reserve a room in the back. There was discussion of whether the speaker would be present or via Zoom. Due to the short time frame, February may be a better month.
- F. Officer Reports
1. Cheryl Lopez - Vice President was absent, President Guzman read her report. Cheryl said we have two Zoom licenses which will need to be renewed by October 30. The cost is \$299.80. President Guzman made a motion to approve the purchase, the motion was seconded by David L. The motion was approved by a show of hands.
  2. Carolyn Seitz - Treasurer [Financial Report(s)]1. Carolyn gave a report on the club financials and a picnic summary. Angie made a motion to accept the financials as reported by Carolyn S. The motion was seconded by Ahni D. Approved by a show of hands. For the picnic, after all expenses, the club netted \$1192, the expenses were \$376.75 the biggest part was for meat. Extra was bought based on RSVPs (43); many people did not show. 2. Carolyn said we may have to increase fees on dues paid by PayPal. PayPal has raised their fees in the last year. Carolyn made a motion to increase the fee for payment via PayPal to \$2.50, (*sec note: after checking, PayPal charges nonprofits 2.89% + \$0.49 per transaction*). There was discussion about raising fees by a small amount every year. Rudy cautioned that we must wait to see if the CFMS is raising our dues this year. He also said that we lose money



when we offer sign-ups for half price from July. Angie said she will attend a federation meeting in November and find out if dues are going up. 3. Carolyn agreed to stay on as Treasurer. 4. Expenses for the remainder of the year: Zoom contract, CFMS meeting, directors' and officers' insurance has been paid until 10/24. Banquet fees? Linda E. will ask for ink and paper for mailed bulletins. And lastly CFMS dues.

3. Leslie Ogg – Secretary: Nothing to report, she will stay on as secretary.
4. Angie Guzman – There is a CFMS meeting in Visalia November 10-12, 2023. CFMS dues may be increasing.

**G. Director Reports/Comments**

1. Pat Caplette (term expires 12/31/2023) absent
2. Ahni Dodge (term expires 12/31/2023) said she will self-nominate for current position.
3. Simona Cianciulli (term expires 12/31/2024) absent
4. David Lesperance (term expires 12/31/2024) no report.
5. Patrick Stevens (term expires 12/31/2024) late, arrived at 2:05, no report.

**H. Committee Reports:**

1. Bulletin Editor - Linda Elsnau- none
2. Donations (mineral, rock, collections) – Rudy, David, Bert: David asked about disposition of potential Native American artifacts (arrowheads and flint knapping tools) from the donated collection of Raymond Ray. Pat S. suggested that David take them to the Bowers museum for possible clarification. Rudy said he thought that Mr. Ray had knapped the arrowheads. David will check with the Bowers or the LANHM for help on authentication. He showed other materials from the donations. Angie asked about documentation and cataloging of the collection. David said there is very little labeling. There were lots of tumbled stones. Rudy will pick them up from David and bag them up as give aways for the prehistoric OC event on October 14.
3. Field Trips - Marek Chorazewicz- No field trips at this time, he will probably have one set up by the next meeting on October 13.
4. Memberships - Cheryl Lopez (Angie for Cheryl) Renewal forms will go out in the November bulletin. Dues must be paid by February 16, 2024, to be included in the roster. Presently we have 111 members: 4 honorary, 7 lifetime, 62 individual, and 19 family memberships.
5. PMC – Al Wilkins, Bob Housley
6. Programs & Education – Rudy Lopez- Rudy has programs scheduled until January 2024, when he will hand over his position to Carolyn S. He needs ink (\$135) to print flyers for the OC Parks event on October 14.
7. Webmaster – Leslie Ogg- Gave report on web traffic etc. The field trip reports and bulletins are the most searched pages.

**I. Other:** President Guzman suggested we keep the ad hoc picnic committee intact and that we reserve a space at Tournament Park. Rudy will get a reservation for 2024. Rudy asked that some members come early to help him set up. We had plenty of help with clean up.

**J. Next Board Meeting:** Jan 7, 2024

**K. Adjournment by the Chair:** The meeting was adjourned at 2:57 p.m.

Submitted by Leslie Ogg, MSSC Secretary

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***With Knowledge Comes Appreciation***

## MSSC DAY AT THE PARK

**Prehistoric OC Saturday, October 14 Ralph B. Clark Regional Park by Rudy Lopez**

MSSC was excited to return to OC Parks annual Prehistoric OC Festival in Orange County.

At the event families were able explore the natural and cultural history of Orange County. Enjoying the 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'.

We had a great turn out at our booth, kids love Minerals (ROCKS).



Tessy Smith, Leslie, Carolyn, Angie, David & Rudy

We had a great turn out at our booth, kids love Minerals (ROCKS).



We handed out over 650 mineral bags to kids, Boy Scouts and School Teachers.

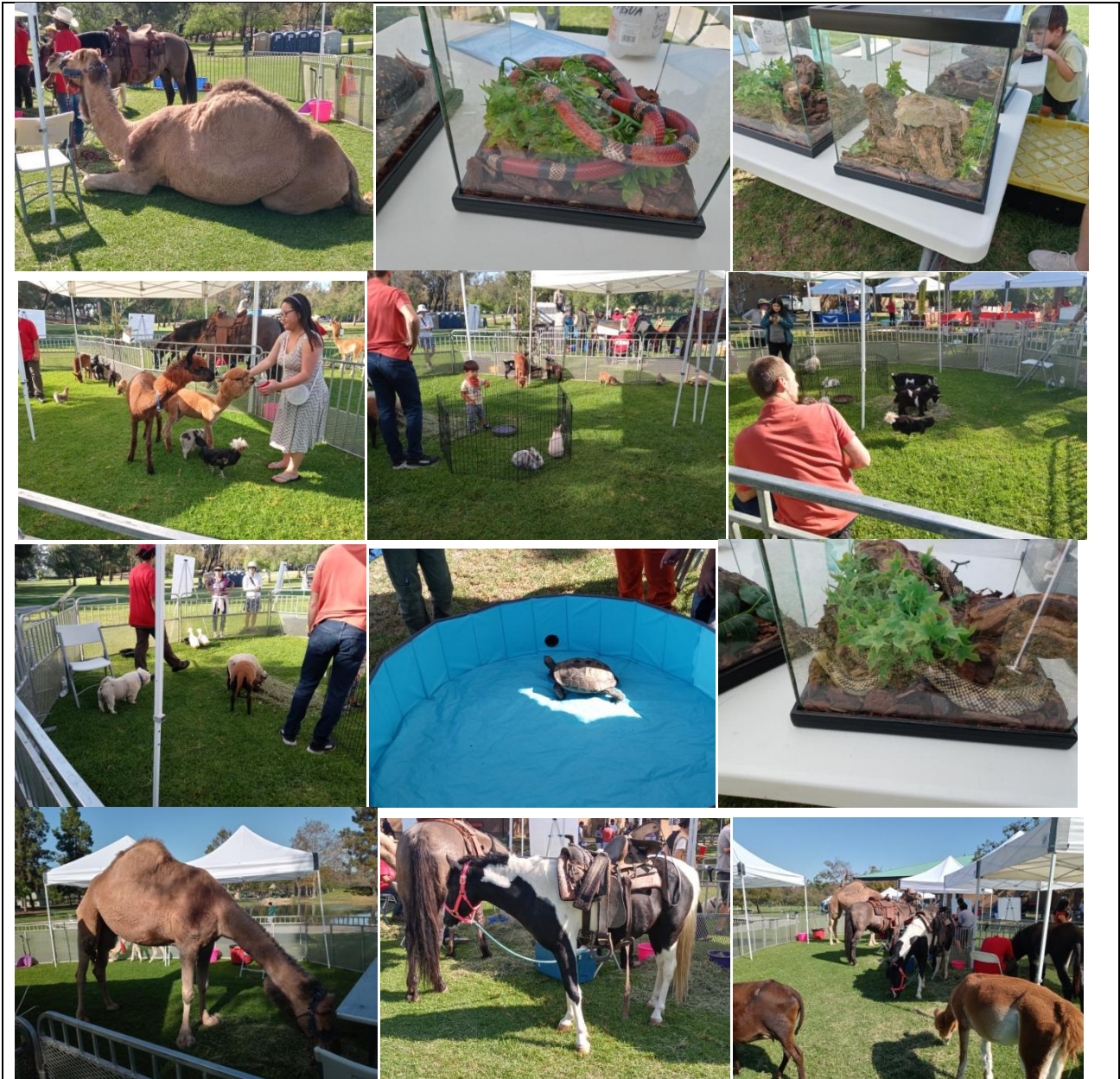
MSSC has been asked to return for next year's event.



Our kids bags were made possible by donations. I took over 900 bags to give away to the kids. A donation from Hillary Johns made up 300 great bags. A donation from the Joanne Ray Family made up 600 great bags. I also had two flats of Fluorite Micromounts (124) donated by Carolyn Seitz for back up. Our staff that worked this event was amazed at the different minerals used to make up these bags. MSSC would like to thank these donor's for their generous donations, that made our event great. The kids now have a great start to their mineral (ROCK) collection, thanks to these donors'.

I also want to thank our crew, Leslie, Carolyn, Tessy Smith, Angie, David and Rudy, for give their time to help make this a great MSSC Event

There was a lot to look at during this event. A bit different from the last time we attended. We did run across an array of exotic animals.





There were other booths to look at:



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## OTHER FREE THINGS TO DO...by Ann Meister

The **Watson Lecture** is on Wednesday, **November 8** 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 Richard Andersen, Professor of Neuroscience, Caltech. The title is **“Unlocking Movement: Helping Paralyzed People Use Thought to Control Computers and Robotic Limbs.”** A number of medical conditions can cause paralysis including spinal cord injury, stroke, neurological diseases, and traumatic brain injury. What if there was a way to help patients regain sensation and control over assistive devices using their thoughts? Brain-machine interfaces (BMIs) consist of tiny electrodes that record the activity of large numbers of cortical neurons along with artificial intelligence algorithms that can interpret a user's intent based on neural activity. In this talk, neuroscientist Richard Andersen, will discuss how researchers in his lab, working with collaborating colleagues, have used a novel approach of implanting electrodes in a variety of specialized cortical areas rather than just the motor cortex. Using this approach, paralyzed patients can control robotics and computers, allowing them to drink a beverage, play a computer piano, use video games and programs like Photoshop, drive an automobile, and feel touch in hands and arms that have previously been rendered insensate from spinal cord injury. Moreover, researchers have been able to decode speech—including patients' silent internal speech—and patients' observations of others. *Find more past Watson Lectures on [Caltech's YouTube channel](#).*

The **Von Kármán Lecture** is on Thursday, **November 16** at 7:00 PM. Available live on YouTube at [NASA Jet Propulsion Laboratory - YouTube](#). The speakers are Brad Arnold, Deputy Director for the Interplanetary Network Directorate and Amy Smith, Deputy Manager Deep Space Network, both NASA JPL. The title is, **“NASA's Deep Space Network Turns 60: What's Next?”** The heart of communications at NASA is our Deep Space Network, or DSN, which is managed by JPL. This international array of antennas located at three complexes in California, Spain, and Australia allow us to communicate with our missions in “deep space,” which we at JPL define as from the Moon and beyond. Come celebrate the DSN's inspiring 60-year legacy and

learn how advancements in communications and aerospace engineering will pave the way for the network's incredible future. Check website for information and past lectures [Lecture Series \(nasa.gov\)](#).

The **UCLA Meteorite Gallery** is open. Check the website for hours. The monthly lecture will be presented via Zoom on Sunday, **November 19** at 2:30 PM. The speaker is Professor Rhiannon Mayne of Texas Christian University. 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](mailto: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>

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### Calendar of Events:

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

**2024**  
**January 20-21, 2024 – Exeter, CA**  
 Tule Gem and Mineral Society  
 Exeter Veterans Memorial Building, 324 North  
 Kaweah Ave., Exeter, CA 93221  
 Hours: Sat 10 AM – 5 PM, Sun 10 AM – 4 PM  
 2024 Gemboree Website: <http://www.tulegem.com>

<b>MSSC Advertisement Policy:</b>			
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 <a href="mailto:bulletin@mineralsocal.org">bulletin@mineralsocal.org</a> and the payment should be sent to the <b>MSSC Treasurer 13781 Alderwood Lane, #22-J, Seal Beach, CA 90740</b>			

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# WEST COAST GEM & MINERAL SHOW

**Holiday Inn-Orange County Airport**

2726 South Grand Avenue ♦ Santa Ana, CA 92705

**November 10, 11, 12, 2023**

10 am – 6 pm Friday & Saturday | 10 am – 5 pm Sunday  
(Wholesale closes at 4 PM on Sunday)

FREE ADMISSION ♦ FREE PARKING ♦ OPEN TO THE PUBLIC

[www.MineralShowsLLD.com](http://www.MineralShowsLLD.com)

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Trapiche amethyst from Rondonia,  
Brazil. Photo: Jeffrey Scovil.

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## Mineralogical Vocabulary

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



*irocks.com photo*

### **Drusy**

A surface is drusy when covered with a layer of small crystals.

**Quartz** : over Calcite

SiO<sub>2</sub>,

**Locality:** [Shangbao Mine, Leiyang Co., Hengyang Prefecture, Hunan Province, China](#)

8.0 x 7.8 x 7.0 cm



*irocks.com photo*

### **Columnar:**

When the individual crystals are stout columnlike crystals as shown with the “columns of Hematite in this specimen:

### **Hematite , Andradite**

Fe<sub>2</sub>O<sub>3</sub> Ca<sub>3</sub>Fe<sup>3+</sup><sub>2</sub>(SiO<sub>4</sub>)<sub>3</sub>,

**Locality:** [Wessels Mine \(Wessel's Mine\), Hotazel, Kalahari manganese fields, Northern Cape Province, South Africa](#)

10.5 x 7.5 x 5.5 cm

**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](mailto:treasurer@mineralsocal.org)

**Website:** [www.mineralsocal.org](http://www.mineralsocal.org) **The Mineralogical Society of California, Inc.**

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To:



**With Knowledge Comes  
Appreciation**

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