



# BRECCIA

Santa Clara Valley Gem and Mineral  
Society

Volume 72 Number 4, April 2024

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## Events

**April 23:** The General Membership Meeting will feature the four geology students, **Derek Mena Godoy, Frankie Gutierrez, Melissa Schott Atkins,** and **Suzy Brookshire,** who volunteered at the show, talking about their particular areas of study in geology.

The Bragging Rights theme is “**Your Favorite Thing**”.

**April 30:** Board Meeting on Zoom.

**May 28:** The General Membership Meeting will feature a silent auction of member contributions.

**June 4:** Board Meeting on Zoom.

## Editor's Message

March was a busy month for many of our members; they were working very hard on the annual show. In recognition for such hard work, they may fill out the [SCVGMS Continuing Education Application](#) for a week at Camp Paradise for two people. There will be a drawing at the May General Meeting where 6 people will be picked: 1 each for the 2 weeks of camp and 2 backups for each week.

For those who want to go to Camp, but don't qualify for the drawing, there is application information on [page 5](#).

**Jim Herbold** has reverted to his normal glow-hound self, with several beautiful fluorescent rocks in [his message](#).

Please see the [Rockhound Soap Box](#) for how you can help keep rockhounding available on public lands.

You might want to help mindat.org with their [expansion plans](#).

**Missy and Jim Fox's** Agates continue with [Part 3](#).

**Phil Kesten** has an article about [Gypsum](#) this month.

Do you have anything that other members might enjoy?

Deb Runyan, Breccia Editor  
[editor@scvgms.org](mailto:editor@scvgms.org), 408-628-7789

## Rockhound of the Month

Our rockhound of the month is **Cathy May**. There was a never ending line of people wanting to have their geodes broken, and she continued to break geodes with only one quick break. She was great with both the kids and the parents with a smile on her face and a positive attitude. She was also very helpful when it came to the tear down.



## Sunshine



Long time member **Kelly Van Vleck** died March 26, 2024. He was a good friend.

Pat Speece

If you know of anyone needing some sunshine in their lives, please email **Margo Mosher** at [mar-gomosher@yahoo.com](mailto:mar-gomosher@yahoo.com).

## Dear Volunteers, from Margo Mosher

I want to thank you all for the amazing job you did to make this year's Show an amazing success. I really appreciate all of you and your enthusiasm for helping out. To those of you that were given positions that weren't your first choice, thank you for graciously taking on a new one. I heard many comments about the buyers' interactions with the volunteers and all were very positive. I think everyone that attended the Show had a great time and your positive involvement was a large part of it's success.

I also want to let you know that if you wish to be included in the drawing to attend Camp Paradise, you need to fill out the application on the next page. Print and fill it out. Bring it to the meeting and give it to Missy Fox. I will bring a few forms to the next meeting.

The dates are either the week of Aug 18-24 or August 25-31.

I highly recommend it. David and I were lucky to go ZZYZX a few years back and we learned a lot. David cabbing, and I wire wrapping. I tried silver smithing but I sucked. You could be the next best silver smith!!

Again I thank you all for taking my call and volunteering. You were all GREAT!!!

The best to you all and good luck,

**Margo Mosher**

Volunteer coordinator

P.S. Please let family members who helped out know that they can also sign up for the drawing.



Teaching: **Nyssa** wire wrap-  
ping, **David** and **Jose** cabbing



The amazing ticket taker  
**Michelle Powers.**

# SCVGMS Continuing Education Application 2024

Filling out this application and returning it to the SCVGMS Board enters you into the Continuing Education drawing. The winner receives tickets for two people to attend one of two week-long stays at Camp Paradise at the end of August. The drawing will be held at the end of the May general meeting. The SCVGMS Board welcomes you all to fill out the application if you have met the eligibility criteria below:

- ◆ Attended three or more SCVGMS general meetings in the last year.
- ◆ Volunteered eight or more hours at the annual show or in preparation for the show.
- ◆ Have not been a winner and attended this camp or Camp ZZYZX in the last three years.

Name \_\_\_\_\_

What is the best way to contact you? Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Please tell us what interests you about this opportunity. We like to hear what inspires people in this hobby. If you are a winner, we would like to share your words with the club members via the Breccia newsletter. Don't worry. We'll edit for spelling and punctuation.

Why would you like to attend Camp Paradise this coming season? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What is your favorite part of our hobby? \_\_\_\_\_

\_\_\_\_\_

Things you need to know:

- The drawing will be held at a SCVGMS general meeting, the date of which will be communicated at the upcoming society meetings and in the Breccia. You do not have to be present to win.
- Up to five names will be drawn. If for any reason the winner is unable to attend the camp, the second person will be contacted, and so forth.
- The winner is responsible for his/her transportation to/from the camp and any additional material fees for special classes. The tickets include accommodations and meals.
- To assure your accommodations and attendance in one of the camps, you must contact Marion Roberts, CMFS head of Earth Science camps to make arrangements by July 1. Contact information for Marion Roberts can be obtained from Missy Fox, Continuing Education Chair.

The winner will share his/her camp experience with the club by taking some photos, doing a show and tell at a meeting, and writing a short article for the Breccia.

**The deadline for submitting the application for the drawing for Camp Paradise is the May meeting.**

**Mail or turn forms into Missy Fox, 16344 Shady View Lane, Los Gatos, CA 95032**

**Open to member and nonmembers alike.**

**Week 1: August 18 to 24, 2024**

**Week 2: August 25 to 31, 2024**

**Questions??? Contact Missy Fox (408) 356-7711 or [jfox152@comcast.net](mailto:jfox152@comcast.net)**

## THE CALIFORNIA FEDERATION OF MINERALOGICAL SOCIETIES, INC (CFMS)

Earth Science Studies—Camp Paradise 2024 12725 LaPorte Rd, Strawberry Valley CA 95930

**Camp Paradise** is approximately 50 miles east of Marysville on Highway E-21 (Marysville Rd.) towards Brownsville. Elevation is approximately 3,500 ft. The facilities are at a rustic church camp. Bunk beds are furnished in rooms and cabins. Bathrooms and showers are communal and located in each building. Housekeeping is the responsibility of each guest. On a limited basis, cabins are available for 4 or more persons, communal bathrooms and showers are located nearby. RV space with electricity, water and sewers for most spaces are available. **Room assignments are made by staff. This is a church camp facility—no alcoholic beverages are permitted.**

### PLEASE READ CAREFULLY BEFORE REGISTERING:

1. The cutoff date for registration is August 3, 2024.
2. After August 3, 2024 there will be a \$50.00 fee for late registration
3. **No refunds will be made for cancellations after August 3, 2024 unless a substitute paying guest is provided.**
4. Sign-ins will be from 1 pm-4 pm on Sunday August 18, 2024 (session 1) and Sunday August 25, 2024 (session 2)

**Make Checks payable to:** CFMS Earth Sciences.

Cost per one week session (Room/Board) is \$500.00

Send Checks to: **Glenda Keil**

1116 Fremont Way

Sacramento CA 95818

Call (916) 448-8341

gkeil@gmail.com

In Glenda's absence contact

Jill Atkins or Gary Atkins

For information contact:

**Jill Atkins**

Atkinsdesign@gmail.com

Call 775.232.6626, or

**Gary Atkins**

garysgems@gmail.com

Call 775.412.2010

Classes: Beginning Lapidary, Advanced Lapidary, Beginning Silversmithing, Intermediate and Advanced Silversmithing, Lost Wax Casting, Beading, PMC-3 Clay, Fused Glass, Enamel, Cold Connection, Intarsia, Wire Wrapping and Chainmaille.

**\*\*\*\*\*Changes may be made as Necessary\*\*\*\*\***

**Applications will be accepted starting March 15, 2024. You will receive confirmation by email.**

## Field Trips

Note: Driving times are from Campbell and are approximate.

**April 14, Sun:** Sonoma Coast State Park, Bodega Bay, CA, 2.5-hour drive

Santa Rosa Mineral & Gem Society

Talk by geologist about local rock formations followed by beach combing, small Ziploc bag only. Must have proof of membership.

Karol Deasy: 707-696-9282 Text preferred or [karol@deasy-opus.com](mailto:karol@deasy-opus.com)

**April 19 – 21, Fri – Sun:** Hauser Geode Beds, Palo Verde, CA, 9.5-hour drive

CO-OP (Field Trip Chairmen's Association)

Geodes, Porcelain Jasper

Contact: Jim Barton, (916) 847-7321, [geologist1@surewest.net](mailto:geologist1@surewest.net)

Website: <https://www.co-opfieldtrips.com>

**Sat May 4:** Clear Creek, CA

More information later.

**May 29 – June 2, Wed – Sun** (1 single day in this time-frame, TBD): Rainbow Ridge Opal Mine, Denio, NV, 9-hour drive, with tolls

3 scoops available, up to 3 adults per scoop. \$900.00 fee dig.

**June 7, Fri:** Rainbow Ridge Opal Mine, NV, 8.5-hour drive with tolls.

3 scoops available, up to 3 adults per spot. \$900.00 fee dig.

**June 13 – 16, Thu – Sun:** Prineville, OR, 10-hour drive.

Pow Wow Field Trips.

A 4-day Rock Show and 3 Field Trips, Fri (6/14), Sat (6/15), Sun (6/16). Locations to be announced.

**August 3 – 9, Sat – Fri:** Delta, UT, 11.5-hours drive through Reno; 13-hours through Las Vegas

Dugway Geodes, Topaz Mountain, Drum Mountain agate, Copper varieties, multi-colored druzy and fine crystals, mine tailings

2 travel days, 5 collecting days. Potentially, Garnet Hill, Ely, NV, on the way home.

**Proposed for a time in the future:** Ocean View Mine, San Diego Area, 7- to 8-hour drive

Tourmaline and Quartz



# April 2024 Breccia Prez Message

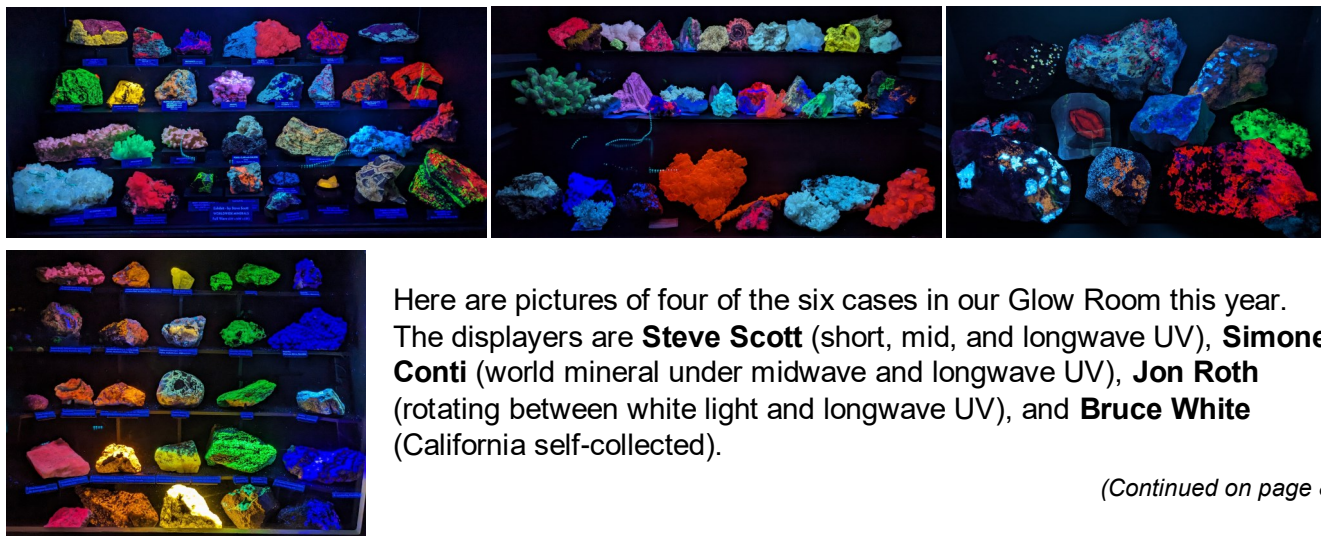
## Hello SCVGMS Members and Friends!

Spring has sprung, everything is green, and the Annual Show was a rousing success! I hope that you are able to get outside to enjoy the warmer weather and get your body moving. I really enjoyed seeing so many of you at the show, including a large number of people that I have not seen in a while, or ever! I am always impressed by people who love minerals. We have the widest array of interests and backgrounds and careers, but are all just mineral friends to each other when we are in our element. (That pun was intended, by the way!)



In my last Breccia message I focused on non-fluorescent pictures, but that will end up being an anomaly. This month I am back to glow rocks! This picture shows the entrance to the Fluorescent Mineral Display Room at the Annual Show. We had 6 displays and lots of happy visitors.

I could write a long essay on all things related to our Annual Show, but I'll hold back from doing that. All of the numerous volunteers deserve a huge thanks, especially our Show Chair (**Michele Smith**) and Volunteer Coordinator (**Margo Mosher**). I can't name everyone else in a message like this, but you all had your part. It seems that our advertising campaign showed great returns, and the sustained foot traffic on the floor, especially on Saturday, was impressive. I spoke to almost every dealer at the show and they all were pleased with their sales and the show more generally. I know that everyone took a well-deserved rest right after things wrapped up, and we can now look forward to a spring and summer that are a bit more relaxed than the last couple months have been.



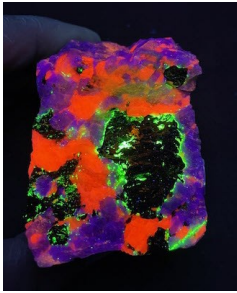
Here are pictures of four of the six cases in our Glow Room this year. The displayers are **Steve Scott** (short, mid, and longwave UV), **Simone Conti** (world mineral under midwave and longwave UV), **Jon Roth** (rotating between white light and longwave UV), and **Bruce White** (California self-collected).

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Our March General Meeting was held on the 26th. Dr. Phil Kesten gave us a presentation on “The Colors of Rocks”. You might recognize that Dr. Kesten has been providing chapters from his upcoming book in recent issues of Breccia. To note, and a call for volunteers: I have three presentation slots to fill in August, September, and October meetings. I’d like to encourage you to present to us during one of these meetings. It can be very informal and you don’t absolutely need to create a slide deck, so this can be an easy way to share your particular passions in the world of geology,

gy, or lapidary.



A small hardystonite (blue), calcite (red), and willemite (green) with franklinite (non-fluorescent) under shortwave UV light. This is a classic from the Franklin Mine, in Franklin, New Jersey. Long considered the fluorescent mineral capital of the world, more than 360 different mineral species have been found there - a world record for such a small area. About 90 of these minerals are fluorescent and more than two dozen of these have been found nowhere else on Earth. I acquired this specimen at our Annual Show.

We now have three initiatives underway with the Board of Directors. The Capital Planning Committee is on standby while the By-Laws Review Committee completes its work. The By-Laws have not been updated in a very long time, so we have a chance to simplify them in many places to ensure that we are able to easily comply with our own rules. We will also need to add new and correct legal language so we are fully in compliance with state laws that have changed over the years. The proposed new By-laws will be voted on by club members at an upcoming General Meeting, and notice and information will be provided in the emails that I send in advance of such meetings. Lastly, we have formed an Audit Committee to review our financial records and practices, and this is an annual requirement. I do not yet have any information to share, but I can tell you that the committee will produce a final report that will be sent to all club members.



Greenland is a top contender for second-best place in the world for glow rocks. Here we have a tugtupite (cherry red) and chkalovite (green) from Kvanefjeld, Ilimaussaq Complex and a “fantasy rock” with tugtupite eyes (red), analcime (blue/white), and chkalovite (green) from the Taseq Slope near Narsaq. Both specimens are under shortwave UV light. I acquired both specimens at the Annual Show.



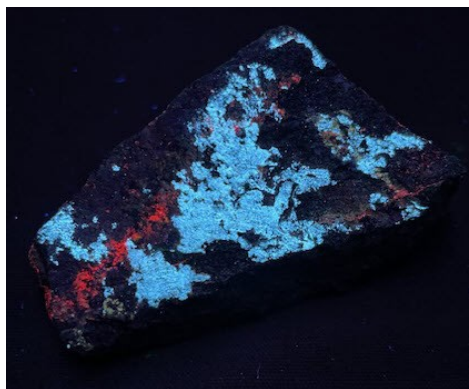
Lastly, I want to announce that the Club has provided each of four geology students at San Jose State University with a grant of \$1500 to offset the costs of their education. The students are: **Derek Mena Godoy**, **Frankie Gutierrez**, **Melissa Schott Atkins**, and **Suzy Brookshire**. You may have met them at the Discovery Center at the Annual Show where they volunteered. We are delighted to provide them with these funds, and these gifts are very in line with the mission and goals of the Santa Clara Valley Gem & Mineral Society to further the study and appreciation of geology. You will have the op-

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(Continued from page 8)

portunity to hear from these four students at our April General Meeting which will be held on Tuesday, April 23, 2024. I hope that you can make it and hear more about their particular areas of study in geology.



This is a platy margarosanite (bluish white) with a bit of calcite (red) from the Jacobsberg Mine in Nordmark, Sweden. This mineral is a rare lead silicate, and the lead analogue of walstromite. Specimens from Franklin, NJ are highly-prized and expensive, but pieces from Sweden are far more reasonably priced and often provide more coverage. This piece was also acquired at our Annual Show!

Stay well and I'll see you at one of our upcoming meetings.

Jim Herbold

SCVGMS President

## Bragging Rights

March's Bragging Rights Theme was "the Color Blue".

### The Winner!



Benitoite (the Blue Angel),  
**Cynthia Porter**



Blue Calcite Sphere  
and worry stone,  
**Michelle Powers**



Microscopic Benitoite under SW  
UV and plain light (with a pin-  
head). **Jim Fox**

April's Bragging Rights theme is "Your Favorite Thing".

Please text (408-561-8815) or email ([woodnbus@yahoo.com](mailto:woodnbus@yahoo.com)) a photo of your **favorite** treasure to **Cesar Nuñez** by 4:00PM on Monday, **April 22** to have it included in the contest.



## Member Displays

Prof. Phil Kesten brought a rainbow of samples to go along with his talk on Colors of Rocks.



Red—Cinnabar



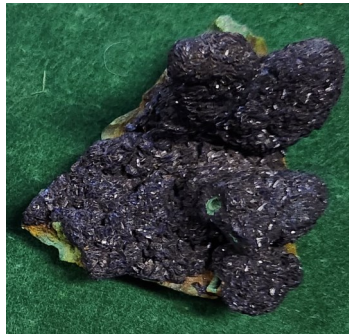
Orange—Crocoite



Yellow—Sulfur



Green—Fluorite



Blue—Azurite



Indigo—Spinel



Violet—Amethyst

And a box of  
fluorescent  
rocks, too.



**Bruce Poehlman:** Calcite Crystals encrusting Smoky Quartz; Willemite with Franklinite and Calcite; and Labradorite.



Please email a photo of the items that you wish to display to [Michele Smith](#) by the Sunday before the general meeting, so that the people who attend the meeting on Zoom can view your items.

**Please bring your items with you to the Cabana Club, if you are attending the meeting.**

**Don't know what to display?** Any type of rock, mineral, or fossil (identified or not), your latest project, information on a field trip, ideas for a display case, or anything to do with rocks is appreciated. Sharing items helps to educate all who are attending. Show off what you love, so that we can enjoy it with you.

## Website Links

### Your Window to the World of Important Websites

Click on links below for sites you want to visit!

**SCVGMS Website:** <https://www.scvgms.org/>

Note: After you click on the above link, if you want to see the Breccia and other news items, scroll down and click on "Download", shown under the Newsletter option.

**American Federation of Mineralogical Societies (AFMS):** <https://www.amfed.org>

**American Lands Access Association:** [www.amlands.org](http://www.amlands.org)

**BLM's Website For Rockhounding:** <https://www.blm.gov/programs/recreation/rockhounding>

**California Federation of Mineralogical Societies (CFMS):** <https://www.cfmsinc.org/>

**Mindat.org** (world's largest open database of minerals, rocks, meteorites): <https://www.mindat.org/>

**SCVGMS Facebook Page:** <https://www.facebook.com/santaclaravalleygemandmineralsociety>

## BLM's New Website For Rockhounding

### Rockhounding on Public Lands

<https://www.blm.gov/programs/recreation/rockhounding>

"BLM's regulations (43 CFR 8365.1-5(b)(2)) **generally** allow members of the public to collect reasonable amounts of nonrenewable resources such as rocks, mineral specimens, and semiprecious gemstones for noncommercial purposes on BLM-managed public lands. Noncommercial means that the collector is not selling the items for a business or financial gain. Such collection is generally not allowed, however, in certain areas, such as on developed recreation sites, where there are active mining claims or other authorized mineral uses, or on lands where the mineral estate is owned privately."

"Learn more about Rockhounding by reading our FAQs or visiting the links below to download rockhounding guides and to explore rockhounding areas offered by the BLM."

John Johnson U.S. Department of the Interior, Regions 8 & 10

Bureau of Land Management - California

California Desert District Outdoor Recreation Planner

1661 S. 4th Street El Centro, CA 92243

Office: (760) 337-4442 [jojohnso@blm.gov](mailto:jojohnso@blm.gov)

## Rockhound Soap Box

John Martin, [john.martin@amlands.org](mailto:john.martin@amlands.org)

### Rockhounding on Public Lands

On February 29, 2024 an email was sent out from the BLM District in El Centro, CA. with a new Website for Recreational Rockhounding on Public Lands. The website includes definitions, FAQ, A Guide to Collecting on Public Lands and Collecting areas in many states.

Take a look at the New BLM Website "Rockhounding on Public Lands" that has just been posted.

The website contains very good information and the Rockhounding Community needs to engage in a way to take action as to increase the awareness of Recreational Rockhounding on Public Lands!

When you visit the website: <https://www.blm.gov/programs/recreation/rockhounding>, check out the Rockhounding on Public Lands on the right side of the page.

Look at all the states listed there and see if Rockhounding as a recreational activity is listed. If it is, then things are close to being all right.

If it is not listed, you need to contact the BLM in your area (State) and ask that it be included. Work with the Land Managers to help insure that the Recreational Rockhound does not go the way of the Passenger Pigeon. As many Recreational Rockhounds as possible need to do this and make their voices heard by the Land Managers. Recreational Rockhounding needs to be listed as a recognized Recreational Activity in as much detail as reasonable.

This needs to be done on an individual, Club/Society, Regional Federation and National (AFMS) levels.

Make the voice of the Recreational Rockhound be heard!

I am off my Soap Box and my Rant is over. The Sphere is in your hand.

This information is available on the ALAA Website: [www.amlands.org/](http://www.amlands.org/)

from ALAA Newsletter, Volume 16 Issue 1

## Quotes from Famous People

I don't feel old. I don't feel anything until noon. Then it's time for my nap.

- Bob Hope

We could certainly slow the aging process down if it had to work its way through Congress.

- Will Rogers

"Heavier-than-air flying machines are impossible."

- Lord Kelvin, 1895





## FUNDRAISING

**Mindat is on a mission!** We are working hard to update our equipment, applications and technology to today's computing and networking standards and are requesting your help as part of the mineral collector, researcher, dealer and friend community!

**mindat.org** is part of the **Hudson Institute of Mineralogy**, a 501(c)(3) not-for-profit, and if you are a US individual or organization your donations may be tax-deductible.

## IMPROVEMENTS

Thanks to a **very generous donation from a fine mineral collector** and supporter of Mindat we were able to purchase two state-of-the-art Database, Application and API Servers, one as our main server and the second as a staging and real-time mirror. In addition, we purchased a third as a File Server, Storage and Back-up resource. This was over **\$80,000 of equipment** that will allow us to ensure faster and more reliable search performance as well as much better reliability and uptime for Mindat!

## EXPANSION

Our plan is to have those improvements in place and making users happy by the Denver Show in the Fall of 2024. The next phase of Mindat's journey is even more exciting! We are actively detailing plans for expanding support for fast upload and download of high-resolution videos. This demands even higher performing servers and greater storage capabilities as well as higher monthly recurring costs for rack space and support. **The Mindat Board of Directors is appealing to the broad mineral community to help us raise at least another \$120,000** to cover the cost of additional equipment + funding to address annual recurring costs of about \$8,000 per year. So, you are asking, **"How can I help?"...**

## DONATIONS

**Mindat exists, survives, grows and improves through donations.** The most notable donation was that from the Rock Currier estate which annually covers a significant part of operating costs through funds that act like an annuity. We need your help in our efforts to improve and expand Mindat today! Please donate today!...

Check made out to: **Mindat.org**

PayPal to: **mindatdonation@hudsonmineralogy.org** or

Zelle payment to **info@hudsonmineralogy.org**





## Information on Shows

### April 6-7 – Vista, CA

Vista Gem and Mineral Society  
Antique Gas and Steam Engine Museum  
2040 N. Santa Fe Ave., Vista, CA  
Hours: Sat 10–5, Sun 10–4  
Contact: [info@vistarocks.org](mailto:info@vistarocks.org)  
Website: <https://vistarocks.org/>

### April 13 – Lake Elsinore, CA

4th Annual Lake Elsinore Rock & Craft Show  
Lake Elsinore Gem & Mineral Society  
32097 Corydon Road, Lake Elsinore, CA  
Hours: 10–4  
Website: [www.facebook.com/groups/530281757337262/](https://www.facebook.com/groups/530281757337262/)

### April 13-14 – Mariposa, CA

Mariposa Gem and Mineral Club  
Mariposa County Fairgrounds, 5007 Fairgrounds Rd.  
Hours: Sat 10–5, Sun 10–4  
<http://mariposagemclub.org>

### April 13-14 – Placerville, CA

El Dorado County Mineral and Gem Society  
El Dorado County Fairgrounds  
Hours: Sat 10–5, Sun 10–4 PM  
Contact: (530) 676-2472, [office@edcmgs.org](mailto:office@edcmgs.org)  
<http://edcmgs.org>

### April 20-21 – Thousand Oaks, CA

Conejo Gem & Mineral Club  
Borchard Park, 190 N. Reino Rd, Thousand Oaks, CA  
Hours: Sat 10–5, Sun 10–4  
Contact: (805) 209-3173  
Contact: [conejogemandmineral@gmail.com](mailto:conejogemandmineral@gmail.com)  
Website: <https://cgamc.org>

### April 27-28 – Santa Cruz, CA

Santa Cruz Mineral and Gem Society  
307 Church St., Santa Cruz, CA  
Hours: Sat 10–5, Sun 10–4  
Contact: [scruzmgs@gmail.com](mailto:scruzmgs@gmail.com)  
Website: <https://scrockngem.org>

### April 27-28 – Anaheim, CA

Searchers Gem and Mineral Society  
Brookhurst Community Center  
2271 W. Crescent Ave., Anaheim, CA  
Hours: Sat 10–5, Sun 10–4:30  
Contact: [Nancyjbird68@gmail.com](mailto:Nancyjbird68@gmail.com)  
Website: <https://www.searchersrocks.org>

### May 3-4 – Yucaipa, CA

Yucaipa Valley Gem & Mineral Society  
Yucaipa Blvd near Adams Street, Yucaipa, CA  
Hours: Fri 5–10, Sat 12–9  
Contact: [grandpasgems@gmail.com](mailto:grandpasgems@gmail.com)  
Website: <https://www.yvgms.org/>

### May 4-5 – Lancaster, CA

Antelope Valley Gem & Mineral Club  
2551 W. Ave. H  
Hours: Sat 10–5, Sun 10–4  
Contact: [marylandoriele@gmail.com](mailto:marylandoriele@gmail.com)

### May 18 – Grass Valley, CA

Nevada County Gem and Mineral Society  
Tailgate Rock Swap Sale  
Banner Grange  
12629 McCourtney Road  
Hours: 8–3  
Contact: [oominerals@gmail.com](mailto:oominerals@gmail.com)

### May 24-26 – Ventura, CA

CFMS/AFMS Combined Show and Convention  
Seaside Gems at Ventura  
Hosted by Ventura Gem & Mineral Society

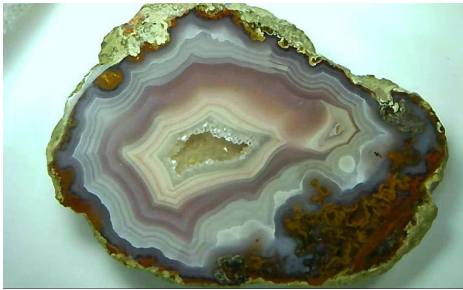
# AGATES - Part 3

Presented by: Missy Fox

(Continued from the March 2024 issue of the Breccia.)

## Fortification

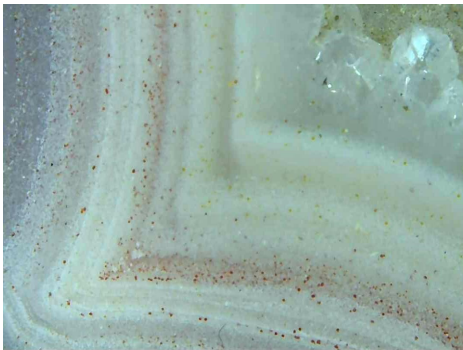
**This is a banded agate with parallel layers that more or less follow the shape of the nodule or vein.** The banding often makes sharp angular turns that resemble the parapets of old fortresses which is how the term fortification originated. The bands are actually composed of micro dots of color vs. a solid banding of color. The dots are not normally seen with the naked eye but can be seen with a high magnification microscope.



Laguna Agate



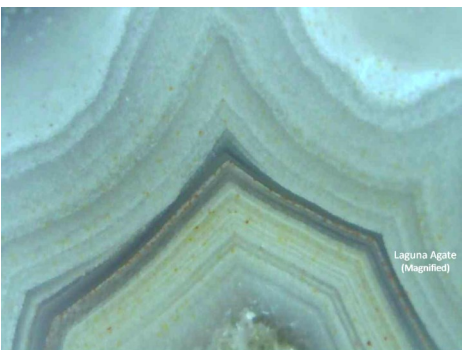
Laguna Agate



Laguna Agate (Magnified) Please notice the micro dots vs. solid banding



Laguna Agate (Magnified)

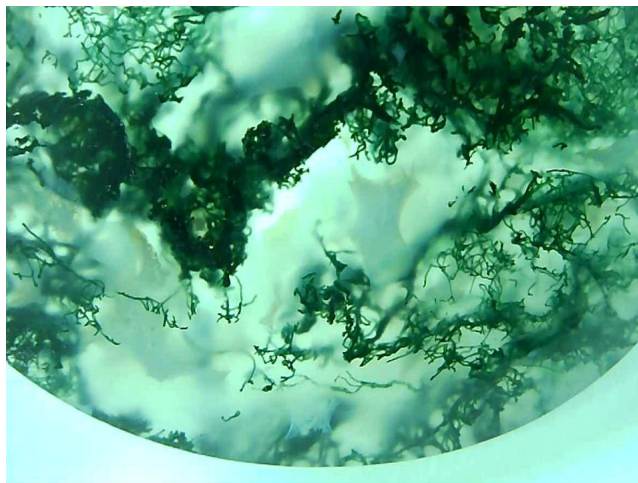


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## Moss Agate

Agates sometimes appear to have sections of moss or bush-like inclusions. For many years it was thought that the “moss” was actually organic plant matter but eventually it was determined that there was no carbon in the rock and the “bushes” were composed of mineral impurities, typically iron or manganese oxides.



Green Moss Agate Cab



Moss Agate Cab



Moss Agate Cab (Magnified)

(To be continued in the May 2024 issue of the Breccia.)

# Gypsum

By Prof. Philip R. Kesten, Ph.D.

Nearly 30 million years ago, hot magma driven upward from deep inside the Earth forced hot water to bubble up into the caverns, gaps, and even the tiny pockets within the limestone that undergirds so much of the surface of the Earth. This water was rich in minerals, and a significant fraction of those minerals was in the form of calcium sulfate. The molecules in calcium sulfate are made up of a calcium (Ca) atom, a sulfur (S) atom, and four oxygen (O) atoms bonded together, that is,  $\text{CaSO}_4$ . As the hot water cooled, and as it drained away over time, a variety of secondary minerals formed from the minerals it left behind, most notably the crystal composed of a calcium sulfate molecule bonded to two water molecules. A water molecule is two hydrogen (H) atoms bonded to an oxygen (O) atom, or  $\text{H}_2\text{O}$ . And a calcium sulfate molecule connected to two water molecules? That is  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ... the mineral known as gypsum. The most common crystalline form of gypsum is selenite, which is often found as clusters of long, prismatic, transparent or translucent blades (Fig. 1a.), or as roundish balls of flat blades, known as “desert rose” (Fig. 1b.).



Fig 1a.

1a. A cluster of translucent selenite crystals.

<https://www.amazon.com/Museum-Quality-Extremely-Selenite-Cluster/dp/B08F4LFZR4>



Fig. 1b.

1b. A specimen of desert rose.

<https://www.piatraonline.com/desert-rose-selenite-crystals-decorative-stone-kg#lg=1&slide=1>

Gypsum is soft, at a hardness of 2 on the Mohs hardness scale. (The Girls Can Flirt And Other Queer Things Can Do: talc, gypsum, calcite, fluorite, apatite, orthoclase feldspar, quartz, topaz, corundum, and diamond in order of hardness from 1 to 10. So said the German geologist Friedrich Mohs.) Nearly anything else you can find, a piece of fluorite or quartz, say, will scratch gypsum. And, oh my, even your fingernail, at a Mohs hardness of 2.5, will leave a scratch on a specimen of gypsum.

The relative softness of gypsum is a result of the way that the calcium sulfate molecules are connected to the water molecules in  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ . The structure of gypsum consists of double layers of water molecules interspersed between layers of calcium sulfate molecules. The bonds between the hydrogen atoms in the water are relatively weak, so the bonds that hold together the layers of molecules in gypsum are also relatively weak. Relatively weak bonds that are easily broken... which allows flakes of calcium sulfate to become separated from the surface of a chunk of gypsum. As a result, gypsum is soft and easily scratched.

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You might have a specimen of gypsum in your collection. But even if you do not, the chances are good that you already have some gypsum close at hand. For starters, alabaster – a form of gypsum – is a popular material from which flooring tiles are made. And while some geologists distinguish between them, there is at least some overlap between alabaster and travertine, another popular flooring material. So you might likely be walking around on gypsum in your house! Although truth to tell, with a Mohs hardness of 1.5 to 2, alabaster tiles are not particularly resistant to scratching, and travertine is not much harder. They both look nice, though!

Gypsum is also used in the manufacture of drywall boards (“sheetrock”). Most home construction today (and for many years) has used drywall boards as wall boards. These boards are often made by applying a layer of plaster, in liquid form, to a sheet of paper. The plaster slurry hardens as it dries, and becomes the main component of the boards that are used to make walls in most new construction. And that plaster slurry? Plaster is a mixture of water and powdered gypsum. And as a fan of etymology, I find this is cool: we get the word “gypsum” from the Greek γύψος («gypsos»), meaning plaster.

Is there any cement in your immediate environment? Probably so... cement is used to hold bricks together in the construction of the foundations of houses and other buildings, and also of sidewalks and walkways. And there is certainly gypsum in that cement: without gypsum added as a “retarding agent” to wet cement, the cement would dry too quickly, causing it to be too weak to withstand the stresses generated when more material is added upon it. As the agent that regulates the setting time of wet cement, gypsum it is truly indispensable in construction.

(To be 100% on the up-and-up, over the last few years the cost to mine and process gypsum has risen. So in more and more construction applications, artificial gypsum is now substituted for natural gypsum – gypsum that comes out of the ground.)

Gypsum has many industrial applications. Surely, though, you would not want to put any gypsum in your mouth! Rocks in your mouth – not appetizing. But surprise! You likely put some gypsum in your mouth every day. And you might even eat some gypsum every day!

Because of the way that it holds itself together, and also the way it holds other materials together, gypsum – in powdered form – makes an excellent additive with which to stabilize food products. And when firmness is a desired attribute of a food product, gypsum powder also makes food products firmer. No need to worry about gypsum in your food, though: gypsum is recognized by the U.S. Food and Drug Administration as safe for humans to ingest.

Calcium sulfate, derived from gypsum powder, finds its way into many foods and beverages. It can be found, for example, as an additive in most cheeses, in various nut butters, and in custards. Small quantities of powdered gypsum are often added to water in the process of making beer. to increase the hardness of the water and also to make it less acidic. In scientific terms, “less acidic”, means a

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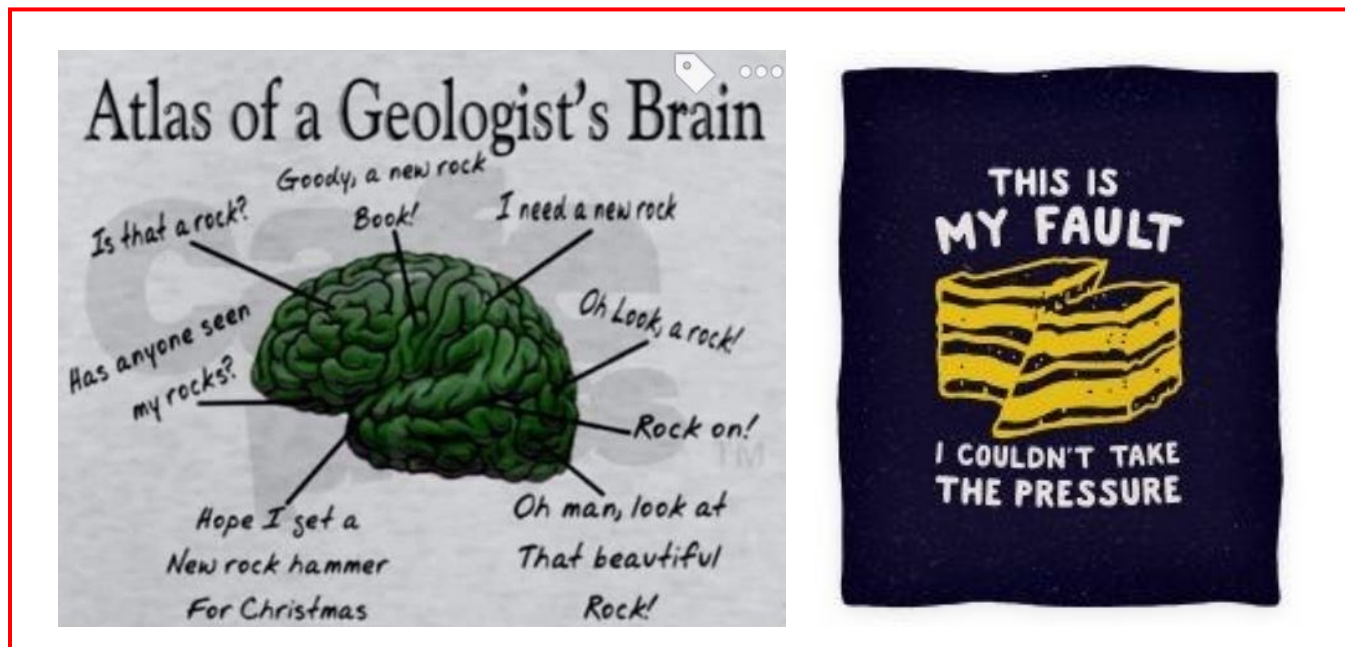
higher “pH” of the water; this higher pH tends to enhance the perception of hop flavors in the finished product. And “hoppiness” is favored by many beer connoisseurs! Small quantities of powdered gypsum are also often used in the production of red wine – the sulfur in the calcium sulfate kills bacteria that could otherwise ruin the wine.

As an added bonus, gypsum enriches the calcium content of foods... calcium is one of the most important minerals required to promote good health in humans. Calcium helps build and maintain strong bones, for example, and our muscles and nerves need calcium to function properly. In addition, recent studies have suggested that calcium can protect us against cancer, diabetes, and high blood pressure. Okay, do not try to take a bite out of that specimen of selenite in your collection. But yes, know that in powdered form, gypsum has been added to make other things you eat and drink.

And wait, one more important use of (powdered) gypsum: there is likely some in your toothpaste. Nearly all toothpaste sold today contains fluoride, known to prevent and even reverse tooth decay. But for the same reason that our bodies need calcium to build strong bones, putting calcium (yes, ground up gypsum!) in toothpaste helps harden the enamel that forms the outer covering of our teeth, and in general helps promote strong teeth.

Gypsum. It has many applications in construction. It finds its way into the foods we eat and the beverages we consume. And best of all... pieces of gypsum, in its various forms, make a great addition to any rock and mineral collection!

Prof. Philip R. Kesten, Ph.D., Department of Physics, Santa Clara University



## March 26, 2024 - SCVGMS General Meeting

Call to Order -7:32 PM

### Pledge of Allegiance

**Program for the evening: Phil Kesten** presenting on “Colors of Rocks”

**New Members (Cynthia Porter):** None to report

### Member Displays:

**Phil Kesten** brought a rainbow of samples to go along with his talk on Colors of Rocks. Red, Orange, Yellow, Green, Blue, Indigo and Violet. And a box of fluorescent rocks.

**Bruce Poehlman:** Calcite Crystals encrusting Smoky Quartz; Willemite with Franklinite and Calcite; and Labradorite.

### Annual Show post-mortem (Michele)

A note from a dealer:

Dear Dean,

Thank you so much for an awesome show. I didn't get a chance to say goodbye to you, as it was quite hectic getting out, but I wanted to express my sincere gratitude for you, the club, and the awesome volunteers. Everything was amazing and it was a true pleasure being there.

I look forward to next year and I have it on my calendar already since you were way ahead of the game with the cards that I picked up at the hospitality table.

With the kindest regards,

Claudia Gray

### Volunteer Roles that need to be filled:

Secure volunteer who is responsible for snacks for the April 23, 2024 general meeting

\$100 reimbursement with receipts

Please bring something sweet, something savory, and something vegetable

**Stephen May**

### Calling for Member Presentations at monthly general meetings!

We want to recruit people to present on interesting mineral and lapidary topics. Show off parts of your collection!

Currently we have openings for Aug 27, Sept 24, and Oct 22.

Suggested timing: anywhere from 5 to 15 minutes. You can create a presentation deck to use, or not. Bring in specimens to show off. Think of this as one or two steps deeper than what we do with Member Displays each meeting.

Email [president@scvgms.com](mailto:president@scvgms.com) if you are interested to present.

**Break for snacks/food/beverage** - thanks to **Cal Hansen** for March snack delights!

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**Correspondence (Frank Mullaney):** AFMS Newsletter

**Field Trips (Stephen May)**

April 19-21 Hauser Geode Beds: 10 hour drive

Sat May 4 Clear Creek \$5 permit for vehicle and \$6.95 for person

May 18th Tailgate Rock Swap Nevada County Club

June 3 (Monday): Rainbow Ridge Opal Mine, 3 scoops available, up to 3 adults per spot. \$900.00 fee dig.

June 13 – 16, Prineville Or. Pow Wow Field Trips: A 4-day rock show and 3 Field Trips, Fri. (6/14), Sat. (6/15), Sun. (6/16). Locations to be announced. Drive time 8 hrs. 42 min.

August 3(Sat) – 9(Fri), Delta Ut: -Dugway Geodes-, -Topaz Mountain-, -Drum Mountain agate-, -Copper varieties, multi-colored druzy and fine crystals, mine tailings-. 2 travel days, 5 collecting days. Potentially, Garnet Hill, Ely NV, on the way home.

**Rockhound of the Month for March 2024: Margo Mosher**, for her coordination of all the volunteers at the Annual Show. Thanks!!

**Bragging Rights (Cesar Nunez):**

For this month of February the theme is “Blue”. Specimen review and voting.

Submission 1: benetoite under UV - **Jim Fox**

Submission 2: Benitoite in matrix - **Cynthia Porter**

Submission 3: Blue Calcite Sphere and polished piece - **Michelle Powers**

Winner: **Cynthia Porter** and Benitoite in Matrix

For April, Cesar is nominating the following topic: “Your Favorite Thing”. Send pictures to Cesar at [woodnbus@yahoo.com](mailto:woodnbus@yahoo.com) or text to 408-561-8815.

**Hospitality:**

31 Members and 6 Guests in attendance

**Introduce Guests:** Raquel, Steven, Laurie, Petr, Elinka and Alex

**Sunshine (Margo Mosher):** None

**Federation Report (Karen Welder):** None

**Camp Paradise drawing (Missy Fox):** Will be at the general meeting in May

**Coming in April:**

General Meeting on April 23

Rick Kennedy presenting on Jackson’s Crossroads 2023 dig and American Museum of Natural History visit report is pushed to August so we can have our four 2024 Grant Recipients present to the Club

April 27-28 - Santa Cruz gem and mineral show

Adjournment: Meeting adjourned at 9:10PM

# SCVGMS Board Meeting, April 2, 2024

**Meeting called to order at 7:35 PM**

**Roll call:** Jim Herbold (President), Bruce Poehlman (Vice President), Cynthia Porter (Secretary), Frank Mullaney (Treasurer), Noel Runyan (Board), Jim Fox (Board), Missy Fox (Board), Stephen May (Board), Michele Smith (Board), Deb Runyan (News Editor), Dean Welder (Parliamentarian), Karen Welder (Federation Director), Paul Kidman (Alternate Federation Director)

**Absent:** Stephen May, Dean Welder, Karen Welder

**Reading of the Minutes** from 3/5/2024 board meeting (Cynthia Porter):

Revisions to the Minutes: M/S/P Bruce Poehlman/Paul Kidman

**Correspondence** (Frank Mullaney): None

**New Members** (Cynthia Porter): None

**Treasurer's Report:** (Frank Mullaney): See Report posted

Permission to write check as thank you gift to Rick Porter for use of square for the show \$100 Frank Mullaney/Bruce Poehlman

**Federation** (Karen Welder):

May 24-26, 2024 AFMS/CFMS show in Ventura

CFMS SHOW: SCVGMS Award for Best Piece of Jewelry in Show

SCVGMS Ruth Bailey Award for Best Case in Show

Motion to approve 2 trophies for awards M/S/P Paul Kidman/Frank Mullaney

**Field Trips** (Stephen May): Three new entries (See general meeting minutes)

**Show 2024** (Michele Smith): Michele to call debrief meeting

Shortening the chain on the geode cutter - Frank to proceed.

**Old Business:**

Capital Planning Committee: no updates

By-Laws Review Committee: Meeting held 3/19. Complete rewrite is needed to bring the Club into a new form of flexible compliance with our By-Laws and California laws. Paul Kidman has completed a first draft.

Draft shared to board mid-April

Present to membership at April Gen Meeting

Solicit membership feedback

Board to vote May meeting

Club checking account signatories: Frank Mullaney, Jim Herbold, Bruce Poehlman, Cynthia Porter: Frank to update.

Dodge & Cox transfer: Paul Kidman to partner with Frank on this.

Filing of Statement of Information to CA authorities. Submitted by Paul K as of 3/21/24. Done.

Audit Committee setup and status update. Meeting #1 held 3/21/24, Frank has provided most documentation that is needed. Meeting # 2 held 3/29/24. Report for the board/membership is being drafted

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by Paul Kidman.

Board meeting and General Meeting minutes are now stored in Google Drive folder named "SCVGMS Archive". Cynthia and Jim have editor access, everyone else has read-only + commenter access.

**New business:**

Nomination of Rockhound of the Month for March 2024. Jim and Missy Fox would like to nominate Cathy May. There was a never ending line of people wanting to have their geodes cut, and she continued to cut geodes with only one quick break. She was great with both the kids and the parents with a smile on her face and a positive attitude. She was also very helpful when it came to the tear down.

Need to secure new volunteers for Parliamentarian (and Federation Director?).

Review proposals from Frank about county fair participation in relation to Fairgrounds commitment for 2025 for the Annual Show

End July - Early Aug Thursday-Sunday

**Upcoming Business:**

Set first month to hold Member Swap Meet before a monthly meeting (different from DRC Mini-Sale): MONTH.

Paused until August/September: Next group of scholarship/grant recipients

By-Law changes. 1) Semi-permanent Club safety deposit box access: Frank Mullaney, Jim Herbold, Stephen May. Per current By-Laws, it should be Prez, VP, and Secretary. To resolve with new By-Laws.

Frank wants to purchase geodes before price goes up. \$300 there is free shipping.

**Upcoming Programs:**

Program schedule for 2024 General Meetings

April 23 - 2024 Grant Recipients presentation

May 28 - silent auction with member contributions

June 25 - Phil Kesten - Tungsten

July 23 - ice cream social

August 27 - Rick Kennedy - Jackson's Crossroads 2023 dig and AMNH visit report

September 24 - Open

October 22 - Open

November 26 - silent auction

December 3 Installation Dinner 5 PM.

**Meeting adjourned:** 8:47 PM (Motion to adjourn Frank Mullaney)

## Puns

What did the sedimentary rock say to the metamorphic rock?

"You've changed!"

What do you call a rock that's just OK?

Meh-tamorphic.



## SCVGMS ELECTED OFFICERS

President: Jim Herbold, 650-743-3254  
Vice President: Bruce Poehlman, 818-912-1866  
Secretary: Cynthia Porter, 408-978-5848  
Treasurer: Frank Mullaney, 408-691-2656  
Editor: Deb Runyan, 408-628-7789  
Federation Director: Karen Welder, 408-353-2675  
Alternate Fed. Director: Paul Kidman, 408-356-4995

## Board Members at Large

Jim Fox, 408-356-7711  
Missy Fox, 408-356-7711  
Stephen May, 408-306-6782  
Noel Runyan, 408-866-7564  
Michele Smith, 408-374-1897  
Parliamentarian: Dean Welder, 408-353-2675

## SCVGMS COMMITTEE HEADS

Bragging Rights Chair: Cesar Nuñez  
Donation Receiving Committee Chair: Michele Smith  
Show Chairpersons 2024: TBD  
Fairgrounds Booth Chair: Michele Smith  
Fairgrounds Liaison: Frank Mullaney  
Fairgrounds Volunteer Coordinator: Margo Mosher  
Field Trip Coordinator: Stephen May  
Founder's Day Picnic Chairman: Jim Herbold  
Founder's Day Raffle: TBD  
Founder's Day Bingo: TBD  
Hospitality: TBD  
Installation Dinner: Tamara Bell, and Michael Paone  
Member Displays: TBD  
Refreshments: TBD  
Silent Auction: TBD  
Sunshine: Margo Mosher  
Trophies: Frank Mullaney  
Librarian: Deb Runyan

## Santa Clara Valley Gem and Mineral Society

P.O. Box 54, San Jose, CA 95103-0054

Website: [www.scvgms.org](http://www.scvgms.org)

Email: [info@scvgms.org](mailto:info@scvgms.org)

Phone Number 408-265-1422

Like us on Facebook:

<https://www.facebook.com/santaclaravalleygemandmineralsociety>

## An Invitation

This society is pleased to invite guests to attend general meetings, study groups, and field trips. **General meetings are held the fourth Tuesday of every month with meet and greet time beginning at 7:00 followed by the meeting at 7:30 PM at 100 Belwood Gateway (the Cabana Club), Los Gatos, CA 95032.** Belwood Gateway is just south of Blossom Hill Road between Leigh Avenue and Harwood Road. **The Next General Meeting is on April 23 at 7:30 at the Cabana Club and also available on Zoom.** The Next Board Meeting is at 7:30 on **April 30** on Zoom.

**Our Society's Purpose:** The inculcation of a love of rocks and minerals by the furtherance of members' interests in the earth sciences and by education in all facets of related educational activities with the promotion of good fellowship, proper ethics, and conduct.

**Our Membership Requirements:** Attendance at two general meetings within twelve months.

This society is a member of the California Federation of Mineralogical Societies (CFMS) and is affiliated with the American Federation of Mineralogical Societies (AFMS).

**Our Newsletter, the Breccia, is published 11 times annually. The deadline for all articles is the Sunday after each general meeting.** The Breccia editor is Deb Runyan who may be contacted by email at [Deb4Rocks@gmail.com](mailto:Deb4Rocks@gmail.com) and by phone at 408-628-7789. The Breccia is proofread by Noel Runyan, Pat Speece and Sonia Dyer.

Exchange bulletins may be emailed to [Deb4Rocks@gmail.com](mailto:Deb4Rocks@gmail.com). Permission to copy is freely granted to American Federation of Mineralogical Societies (AFMS) affiliated clubs when proper credit is given.