



BRECCIA

Santa Clara Valley Gem and Mineral Society

Volume 71 Number 8, September 2023

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Events

September 16th, 11:00 am - 3:00 pm: Our Founders Day Picnic for Members is Saturday, at the General Meeting location. Please RSVP to **Jim Herbold**, jimherbold@gmail.com, so that we know how much meat and drinks to buy. Let Jim know what you plan to bring, a side, salad, or dessert to contribute to the feast!

September 26: General Membership Meeting will feature a video from **Jo Borucki**, or a CFMS speaker. The Bragging Rights theme is **"Something You Made"**.

September 28: Board Meeting on Zoom.

October 24: General Membership Meeting will feature something about Opals.

October 26: Board Meeting on Zoom.

See Page 3 for Time and Talent Form.

See Pages 4-5 for Field Trip Information.

Editor's Message

At the August meeting **Michele Smith** talked about our display at the Santa Clara County Fair. There were people surrounding **Donna Kelly's** Flint Knapping Demonstration, the Stone Touch Table and the Stone Polishing Display. **David Mosher** made cabochons on three days, and **Bob Vinton** joined him one of those days. **Jim Fox** had fun polishing bits of stone he wanted to try.

Noel Runyan talked about "Working Obsidian and Other Fragile Stones", a version of which is in this newsletter.

Thanks to **Cal Hansen**, we had a great Ice Cream Social with Ice Cream Sundays, Banana Splits, Ice Cream Bars, Ice Cream Floats, and cake too.

Members, please fill out the Time and Talent Form on page 3 to have it ready for the next general meeting.

Jobs that need to be filled:

President, 2024 – ?; Vice President, 2024 – ?; Bragging Rights, 2024 – ?.

The DRC made \$1,620.50 at the Rock Sale we had on 8-26-23

Do you have anything that other members might enjoy?

Your contributions of anything from a short "how-to" or "my favorite thing", up to 2 to 3 pages of whatever you think others would find interesting. Rock related photos are also appreciated. The deadline for submissions is the Sunday after the General Meeting.

Deb Runyan, Breccia Editor

Rockhound of the Month

Our rockhound of the month is **Cal Hansen**, for everything he does!



Membership Dues Are Due

SCVGMS membership dues are due for the year 2023. Your dues are essential to the operation of SCVGMS. They are \$5.00 for Junior, \$20.00 for an individual, and \$30.00 for a household.

Please send your check to **Treasurer, Santa Clara Gem and Mineral Society, Box 54, San Jose, CA 95103-0054, or to Frank Mullaney, 5705 Begonia Drive, San Jose, CA 95124**

Thank you.

Time and Talent Sharing

Each year we have elections. To do that, we have three people from the Board and general membership put together a slate of proposed officers. To construct this slate, the nominating committee must ask other members to run for offices. If they know ahead of time who would be willing to run for a particular (or any) office, AND who wouldn't or couldn't accept any position for the following year, their job is made much simpler.

Please note that many positions can be filled by members with little to no experience, and mentoring is available to anyone who would like to take on a position, but is unsure as to how to do the job.

Please fill out this sheet to indicate what offices and or committee you are willing to fill, and turn it in at the next general meeting, or mail it to Stephen May, 1092 Candlewood Ave, Sunnyvale, CA 94089-2641. If you live out of state, you don't need to fill out this sheet.

Your Name _____

Your Phone Number _____

Board of Directors and Positions (elected by the membership)

- ☐ President
- ☐ Vice President
- ☐ Secretary
- ☐ Treasurer
- ☐ Editor
- ☐ Federation Director
- ☐ Alternate Fed. Director
- ☐ Board Member (need 5)
- ☐ Parliamentarian (non-voting)
- ☐ Historian (non-voting)
- ☐ Unable to accept a board position at this time.

Other ways to contribute:

- ☐ Be a greeter at meetings
- ☐ Put on a program
- ☐ Submit articles for the Breccia
- ☐ Lead a study group
- ☐ Start a new study group
- ☐ Start up a junior group again
- ☐ Work at the festival (set up, tear down, sell tickets, overnight security, demonstrate skills)
- ☐ Support the Santa Clara County Fair with SCVGMS displays
- ☐ Help on committees. Please check any committees of interest shown in the next column.

Committees

Chairpersons are appointed by the President.

- ☐ Bragging Rights
- ☐ Donation Receiving Committee (DRC)
- ☐ Festival Committee (2023)
- ☐ Field Trips
- ☐ Financial Advisory Committee (FAC)
- ☐ Founder's Day Picnic Committee (Summer)
- ☐ Founder's Day Picnic Food, and/or BBQ
- ☐ Founder's Day Picnic Bingo
- ☐ Founder's Day Picnic Raffle
- ☐ Hospitality
- ☐ Installation Dinner Committee (December)
- ☐ Installation Dinner Set Up, Food and/or Clean Up
- ☐ Librarian
- ☐ Programs
- ☐ Member Displays
- ☐ Nominating Committee
- ☐ Public Lands Access (PLAC)
- ☐ Refreshments (yourself or create a committee)
- ☐ Silent Auction
- ☐ Study Group _____
- ☐ Sunshine
- ☐ Trailer Custodian
- ☐ Trophy Chair
- ☐ Unable to accept a committee chair position at this time

Field Trips

Note: Driving times are from Campbell and are approximate.

September 9, Saturday: Valley Springs, CA - 2 ½-hour drive.

Red Dumortierite.

Sponsored by Nevada County Gem and Mineral Society

Contact: John Doleman (530) 272-3752 Email: john95670@yahoo.com

September 15—17, Friday to Sunday: Fallon, NV - 5 ½-hour drive.

Wonderstone, Selenite, Chalcedony orbs.

Sponsored by El Dorado Mineral & Gem

Contact: John Doleman (530) 272-3752 Email: john95670@yahoo.com

September 23, Saturday, 11 AM: Fossil Discovery Center, Chowchilla, CA - 2 ½-hour drive.

A Co-op Field Trip sponsored by Fossils For Fun.

A new hands-on science museum displaying Ice Age Fossils like mammoths, smilodons, dire wolves, saber tooth cats, sloths, camels and horses. Located in Chowchilla CA.

Contact: – Debbie Bunn, (916)798-3362. PLEASE call her ahead of time so she can let them know how many are coming.

Location: Fossil Discovery Center

19450 Avenue 21 1/2, Chowchilla, CA 93610

September 23—24, Saturday—Sunday: Markleeville, CA - 4 hour drive.

Rhyolite with crystal-filled vugs, Silver Ore, a Brown Agate, and some Jasper.

Sponsored by Nevada County Gem and Mineral Society

Contact: John Doleman (530) 272-3752 Email: john95670@yahoo.com

Contact before Sep. 20, 2023.

September 28—October 1, Thursday—Sunday: Topaz Mountain and Dugway Geode Beds, UT - about 13-hour drive.

A Co-op Field Trip sponsored by the Roseville Rock Rollers Gem and Mineral Society

Topaz Crystals, Bixbite (Red Beryl), Pseudobrookite Crystals, Hematite Crystals, and Geodes.

Field Trip Leader and Contact Information: Gene Doyle, CO-OP & Roseville Rock Rollers. Text or leave message, Cell: (408) 605-9457, Email: eugene.doyle@sbcglobal.net or Jim Barton, CFMS-N, Home: (916) 773-0458, Cell: 916-847-7321, Email: geologist1@surewest.net. Gene Doyle will email you a more detailed write up upon request.

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October 6—8, Friday—Sunday: Davis Creek, CA – 6 ½-hour drive.

Geodes, Petrified Wood, Crystals, Obsidian.

Sponsored by Nevada County Gem and Mineral Society

Contact: John Doleman (530) 272-3752 Email: john95670@yahoo.com

Contact before Oct. 3, 2023.

Oct 14—15, Saturday—Sunday: Royal Peacock Opal Mine, Denio, NV. - About 10-hour drive.

A Feather River Lapidary and Mineral Society Members Only dig.

Precious Opal, Fluorescent Minerals, Petrified Wood.

To join FRLMS: <https://www.featherriverrocks.org/membership-application/>

November Elections

Elections for SCVGMS Officers and Board of Directors members are held at our November General Meeting. Participating as one of the board members is a superb way of getting to know your fellow club members, and an excellent way to serve SCVGMS. If you are interested in any of the offices listed below, contact **Stephen May**, our president. His email address is stephenmay0990@gmail.com.

The **President** and **Vice-President** are leaving office after December, so we need new people to step up!

President—sets the agenda and presides at all meetings of the society using Robert's Rule of Order as a guide.

Vice-President—performs all duties of the president when the president is absent or unable to perform duties customary to the office. The vice-president is also responsible for all club publicity except for the publicity of our annual show.

Secretary—keeps an accurate record of the proceedings of all meetings of the society and the board of directors, keeps a roster of the members, publishes a membership directory to members, sends members notices of special meetings, and answers the routine correspondence of the society. The secretary may appoint members to help as needed.

Treasurer—receives all dues and other monies and disburses monies when so authorized by the board of directors, keeping a full and accurate accounting of all transactions. The treasurer also renders reports at the Annual Meeting, is responsible for timely and accurate filing of tax returns, and makes a monthly report to the board of directors and to the president.

Breccia Editor—prepares the Breccia each month except December when customarily, no Breccia is published. The editor may appoint an assistant.

Federation Director—reports on all Federation activities the month following Federation meetings.

Alternate Federation Director—reports on all Federation activities the month following Federation meetings taking the place of the federation director when needed.

There are five **Board Members at Large** positions. These members attend all board meetings and participate in the discussions and voting on any business at hand.

Bragging Rights

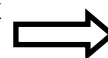
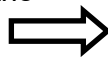
August's Bragging Rights Theme was "Starting with the letter 'C'".

There were two entries

1) Mangano Calcite from Racracancha Mine, Cerro de Pasco, Peru - **Bruce Poehlman** - winner. Under white light on the left and under UV on the right.

And

2) Charoite from the Charo River, Siberia, Russia, 18" x 11.5" x 6.25" - **Jim Fox**



Next month's Bragging Rights theme is "Something You Made".

Please email a photo of your fossil treasure to **Alan Achor** by 4:00PM on Monday, **September 25** to have it included in the contest. Alan's email address is kayakbb7@gmail.com.

Alan Achor-Bragging Rights Chairman

Sunshine



Jo Borucki is getting a knee replacement on September 8th. We wish her a successful operation and a speedy recovery. Then she'll be all set to run marathons!

Sunshine gives a huge shout out to all the volunteers who answered her call to help out at the Santa Clara County Fair. You are the stars. You gave your time to make our display area a huge success.

We had such fun with the kids. They were in awe that they could pick out "free" tumbled rocks. We gave out three 5 gallon buckets of rocks! The touch table always draws a large super interested crowd. The cabbing exhibit was a hit as people watched a pendant come to life. Flint knapping is an art form and people were thrilled to see how it's done.

Without the volunteers to man these areas and talk with people about rocks and our club it would not work. I truly thank you all. **Margo Mosher**

If you know of anyone needing some sunshine in their lives, please email **Margo Mosher** at margo-mosher@yahoo.com.

Quote

Be careful about reading health books. You may die of a misprint.

- Mark Twain

Member Displays

We had 3 member displays at the August meeting.

Joan Schramm: Beautiful Blue Calcite
(from Mexico). ➡

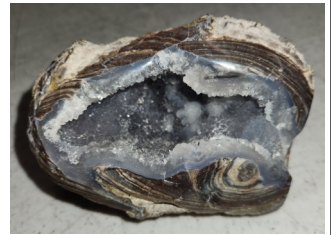


Joan Schramm: a Mystery Soft Red Stone (Mohs 2, maybe stained talc). ➡



← **Bob Kout:** Ruby on Zoisite, from Tanzania.

Stephen May: Dugway Geode, from Delta Utah. ➡



Stephen May: Petrified Wood from Old MacDonald's Farm in Oregon. ➡



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 rather than in person 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 the blue area of whatever site you want to visit!

Link to Our SCVGMS Website: <https://www.scvgms.org/>

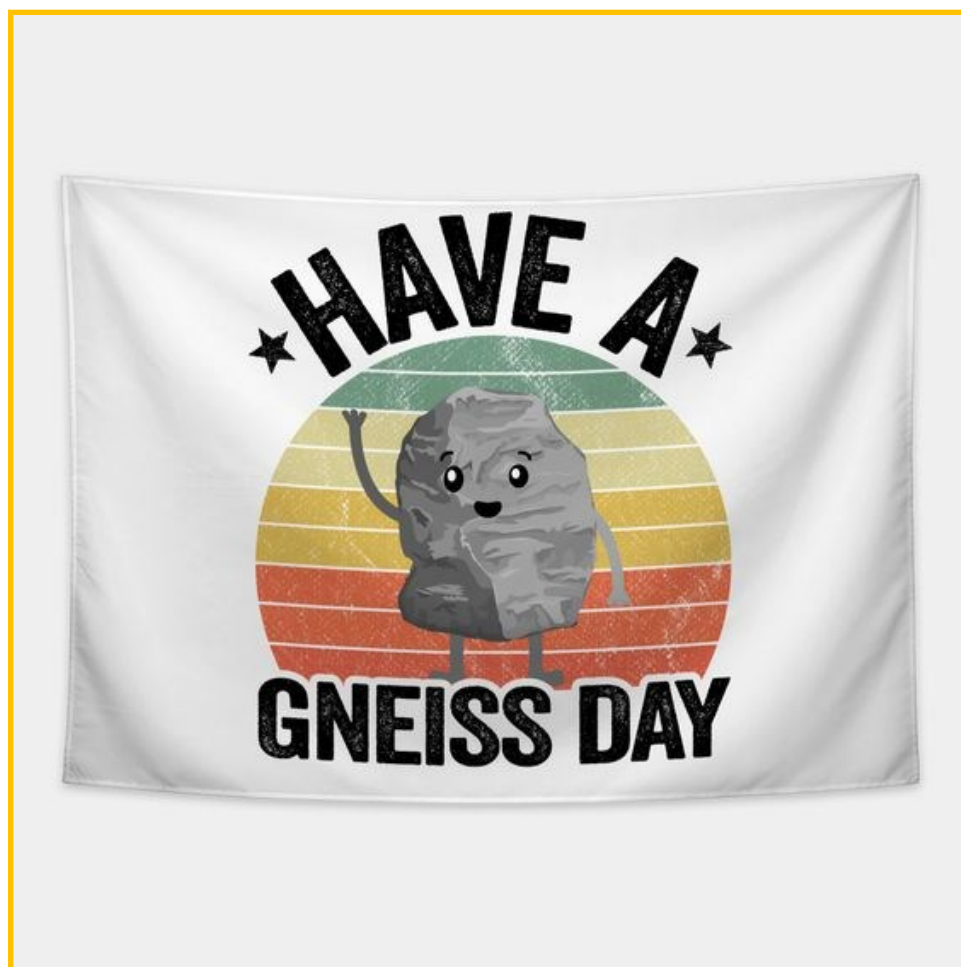
Note: After you click on the above link, if you want to see the Breccia and other news items, scroll down and click on "Download", shown under the Newsletter option.

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

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

To access the news from the American Lands Access Association: www.amlands.org

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



Working Obsidian and Other Fragile Stones

By Noel and Deb Runyan

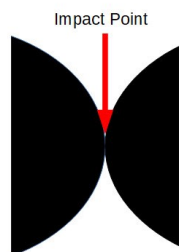
In this article we talk about working with brittle, glassy stones, Obsidian, Volcano Glass, Rhyolite, etc.

Why do so many people try tumbling Obsidian only once?

Because it is difficult to avoid getting an ugly rash on the curved portions of the stones.

The big secret to polishing Obsidian and other fragile stones is that they are fragile, so **Be Gentle!**

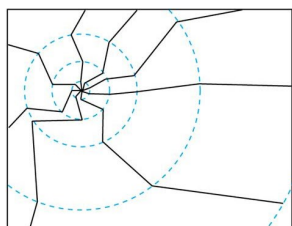
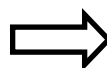
Rash or Bruising Occurs on Curved Surfaces



High pressure at the point of contact makes microcavities in the stone's surfaces.



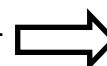
Our friend Gerry Perko using a microscope, found microcavities like those in the Obsidian shown on the right.



Stress lines radiating from an impact point.



Air rifles blow similar conical shatter holes in window glass, like the one on the right.



The cavities trap dirt, grit, or polish that gives the stone a speckled appearance, especially when the particles are of a color different from the stone. The cavities also trap calcified scale when wet stones are allowed to dry out without rinsing in distilled water.

Mitigating Rash and Bruising

Consider using grit and polish of the same color as the stone.

Clean stones with a combination of:

- Use a pin or needle to clear the holes;
- Burnish in soapy water with lots of cushioning media;
- Soak in vinegar or muriatic acid to dissolve any calcium scale;
- Use an upholstery pressure sprayer;
- Use a dental water pick;
- Use an ultrasonic bath;

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It is best to avoid the rash by being gentle and not getting the micro cavities in the first place!

How to Work Rocks Gently

Be prepared to be patient; being gentle means it will take longer to get nice results.

Especially after coarse grinding, you want your stones rubbing each other, not banging into each other, so use lots of media and water to cushion them.

Over fill your barrels to cushion the stones. Cushioning with extra water helps and does not present dissolving problems for glassy stones.

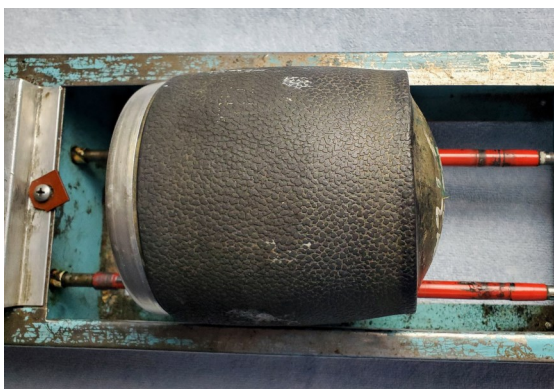
Vibrating tumblers can be more gentle than rotating tumblers, but they can still let stones rap against each other too hard if you do not have enough media and water to cushion them. If you hear stones rattling against each other, it is not gentle enough.

Cushioning Stones With Thickened Liquid

Especially when doing stone-on-stone burnishing, you need cushioning.

Thickened solutions for cushioning may include:

- Concentrated soap;
- Mineral oil;
- Antifreeze (ethylene glycol);
- Apple sauce;
- Molasses;
- Sorghum,;
- Cane sugar;
- Honey.



Given the right nutrients, even honey ferments rapidly!



A rock hound friend who was also a beekeeper tried using honey as a tumbling thickener, because he knew that honey did not ferment easily. However, when supplied with the necessary nutrients from the dissolving rocks, his unattended tumbler exploded from fermentation, leaving a horrible mess of sticky and hardened tumbler cement.

Media Types to Use and to Not Use

To Use

- Ceramic pellets;
- Glass craft marbles (cheaper than game marbles);
- Small obsidian stones;
- Chunks of broken glass (not quartz glass);
- Plastic beads (work well, but get eaten up quickly by coarse grit and can't be reused with finer grit stages);

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- Sand (not quartz sand).

Avoid After Coarse Grind

- Ceramic micro beads;
- Chunks of broken quartz glass;
- Quartz half inch gardening stones;
- Gravel may have hard scratchy bits;
- Quartz sand.

It is best to pre-polish any hard media to smooth its surfaces before using with fragile stones.

Dry Tumbling Media (generally not needed for glassy stones because they don't dissolve easily)

- Crushed corncobs,
- Crushed walnuts.
- Roasted garbanzo beans
- Rice

(Soft media should not be reused for finer runs.)

Thermal Stress

Repeated heating and cooling cause stress in glassy stones.

You should cut or grind slowly to prevent overheating.

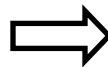
You can anneal the stones in a furnace or self-cleaning oven at 850 to 900 °F.



The Zuni bear on the left cracked when the warm bear was dipped in cold water.

Single Stone Tumbling

If you are trying to tumble a single stone, you need lots of small stones, sand, and/or other media to rub against and to cushion the stone. When tumbling a single stone, you may get less grit breakdown than you are used to, so you may need to use a range of grits, both for coarse and fine grits. A range of several finer and finer polish may also be needed, if there are not multiple rocks to grind the polish finer and finer.



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Grinding and Polishing

Our best results come from using Silicon Carbide grit for 80, 220 and 500 grit, then Aluminum Oxide for 1,100 pre-polish and polish.

Silicon Carbide particles have jagged edges that gouge grooves in stone surfaces, and Aluminum Oxide has flat edges that tend to shave rock surfaces flat. Some of the available cheaper Aluminum Oxide polish is more like 2,000 grit.

TXP or other 3 micron polishes work well.

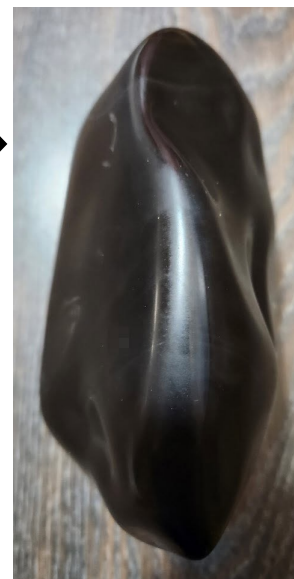
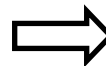
Rapid Polish 61 gives a good shine in vibrating tumblers, but is not recommended for soft stones like turquoise.

In general, people are starting to find that using only a quarter the normal amount of polish may work better than the traditional recommended amount; probably because the limited amount of polish quickly breaks down more thoroughly into a consistently very fine polish.

We've tried all types of polish and found that using the proper polishing procedure is more important than the type of polish used.

Buffing Wheel Polishing

I improved the polish on a large obsidian stone by hand buffing. However, when I washed it, the nice finish washed off. The buffing compound had left a layer of wax, and that is what buffed into a shine.



This wax surface may be the cause of some buffed finishes dulling or yellowing with time. To avoid this, you could buff with polishing powder mixed with water, or you could also use a non-oxidizing oil mixed with the polishing powder.

Apache or Indian Tears

Apache tears are found in perlite in Arizona. There are also tears found in pumice in New Mexico, and in tuff in Nevada.

In the Jemez, NM, mountains, we found another type of Indian Tears, ejecta, or Sky Tears, which were from outgassed hot pools of glass that were blown up to 20,000 feet high in the atmosphere and cooled into small blobs, as they fell back to Earth.

Despite the popular misconception, rain drops and ejecta obsidian drops are not actually tear shaped. Although a liquid droplet forming under a faucet or spout will start as a tapered tear drop, it will reshape into a spheroidal blob after breaking off and falling free.

Obsidian tears must be tumbled gently, even though they are small.

You may get flattened sides when tumbling tears, if they slide along the side of a roller barrel without turning and tumbling. We use a thick O-ring placed side-



wise in the barrel to prevent the tears sliding.



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Cutting Stones

With a Mohs hardness of 5 to 5.5, obsidian saws and grinds pretty easily.

Sometimes it is better to break or cleave obsidian, rather than sawing it. Gentle tapping can chip off edges, and pressure knapping also works, if you avoid high impact knapping or smashing. You can also squeeze obsidian in a vise.

A nibbler tool, pliers, and vise grips can be handy for breaking edges. You can also dress knife edges by directly tapping with a hammer.

Summary

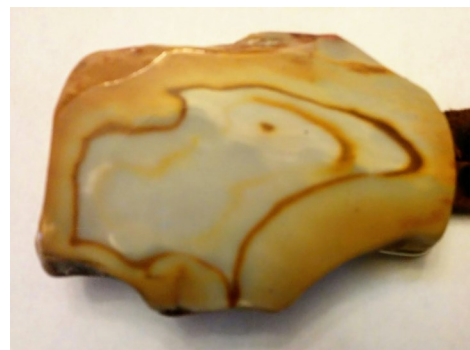
- Be gentle.
- Cushion fragile stones with lots of small stones and/or media, or thickened liquid.
- Avoid tumbling harder stones with obsidian.



"Little Bird"
Mahogany Obsidian



"Rock Ness Monster"
Black Obsidian



Chalcedony Critter

Jemez Obsidian

By Noel and Deb Runyan

In the May 2020 Breccia newsletter of SCVGMS, **Michele Smith** wrote a great article about Apache Tears, marekanite, from the area just south of Superior, Arizona.

Los Alamos, NM, where we grew up, is nestled in the Jemez mountains near the 13.7-mile diameter super-volcano Valles Caldera. Los Alamos is surrounded by the ancient homes of both cliff dwellers and Pueblo Indians. Native Americans in the Valles Caldera region near Los Alamos and Santa Fe, NM referred to the local obsidian pebbles as "tears" long before the Conquistadores arrived.

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Redondo Peak, a resurgent lava dome of rhyolite located in the Valles Caldera.



The super-volcano's eruptions resulted in high quality obsidian in many forms that local Native Americans shaped into tools. It was easily knapped into arrow heads, knives, spearpoints, and scrapers with edges as thin as 3 nm, many times finer than the best metal surgical scalpels. There was an area we called "Obsidian Ridge" near the Valles Caldera where we collected a lot of nice, pure black, obsidian, and even found pieces that had obviously been knapped and tossed away as broken (phooey!). Obsidian was also turned into a valuable trading material. The Conquistadores took polished obsidian hand mirrors back to Europe.



Obsidian knives and scrapers were even useful for sharpening the end of a long stick that would then be fire hardened, so it could be used to gouge out a cliff dwelling in the nearly vertical, 400-foot-high walls of the tuff plateaus in the area surrounding the Valles Caldera.



Cliff dwellings at Bandelier, near the Valles Caldera.

In the Jemez mountains there are several well-known exposed pumice cuts that are the main source for the local marekanite obsidian tears. These obsidian tears are similar to the marekanite tears found in Arizona, where they are usually called "Apache Tears".

We discovered that there was a very different source for obsidian tears. Since my mother made pottery, we and other "psycho ceramicists" (crack pots) went on clay hunting field trips, similar to rock hound field trips. In the mountains a short way to the north of Los Alamos, we were harvesting raw clay from a hillside vein, when we discovered many obsidian tears in the loose sediment layer overlaying the clay.

According to a geologist from the Los Alamos Scientific Labs (now LANL), some obsidian tears were formed from molten siliceous lava that was explosively ejected about 20,000 feet up in the atmosphere. As they fell back down, these molten blobs of obsidian cooled into roughly spheroidal pebbles about 1/2 to 3/4 inch in diameter. Unlike the marekanite tears from perlite, pumice, or tuff deposits, the ejecta tears do not have white material in their surface holes or grooves.

These were locally referred to as "Ejecta Tears", "Sky Tears", "Indian Tears", and "Hopi Tears". (The Hopis, whose name means "Peaceful People" did not consider tears a sign of weakness, since they felt that crying tears demonstrated being strong enough to allow one's feelings to show).

Despite the popular misconception, rain drops and ejecta obsidian drops are not actually tear shaped.

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Although a liquid droplet forming under a faucet or spout will start as a tapered tear drop, it will re-shape into a spheroid after breaking off and falling free.

In modern times, the mostly solid black obsidian from the Jemez super-volcano is still made into fine jewelry and decorative art works. However, the teardrop-shaped obsidian used in some jewelry has been ground to shape, and is not naturally formed teardrops.

Improbable Rock Story—Rauks are Rocks

August 3, 2022

Marc Abrahams

Tom Gill alerted us to this study, saying "I've been a geology nerd for fifty-plus years. I was today [sic] years old when I learned that a type of rocks exists which is officially named... rauks." The study is:

"Limestone Sea Stacks (Rauks) Record Past Sea Levels and Rocky Coast Evolution in the Baltic Sea (Gotland and Fårö Islands, Sweden)," Mateusz C. Strzelecki, Filip Duszyński, Sebastian Tyszkowski, and Łukasz Zbucki, *Frontiers in Earth Science*, 2022.

<https://www.frontiersin.org/articles/10.3389/feart.2022.895419/full>



With permission from Marc Abrams - <https://improbable.com/2022/08/03/rauks-are-rocks/>

More Quotes

By all means, marry. If you get a good wife, you'll become happy; if you get a bad one, You'll become a philosopher. - Socrates

I was married by a judge. I should have asked for a jury. - Groucho Marx

Tourmaline Puzzle

Tourmaline is one of my favorite minerals. One website calls it the most candy of all of the candy-colored gemstones. All of these colors captivate all that is within me that loves color, lots of color. The colors include all of the colors in the rainbow, and to make it even sweeter, some tourmaline crystals are bicolored and even tricolored such as the tri-chromatic elbaite crystal from the Himalaya Mine near San Diego. During our years of rockhounding throughout the west, the tourmaline mines in the Pala Region, San Diego County in Southern California were some of our favorite haunts. To sweeten the gemstone color pot a bit, the mines also contained blue aquamarines and the violet kunzite, but it was the wide varieties of tourmaline colors that intrigued me. I think that I have at least a small specimen of each color except Siberite and Paraiba.



Photo by Chris Ralph, Nevada Out-back Gems

I have enjoyed making jewelry with some of my tourmaline. My most bizarre piece is so large that one of my friends, as he viewed it, exclaimed that I must have a very strong neck to wear it. The piece is a wire wrap of prehnite, watermelon tourmaline, schorl, pearlized lining of an abalone shell, and an enameled hummingbird from an earring. I would include the photo of it but you might be laughing so hard that you would be unable to do the wordsearch puzzle. Suffice it to say that I admire tourmaline and sometimes I have fun with it.

Tourmaline is found in granite, granite pegmatites, schist, and marble. It is found throughout the world, and in the United States, in addition to Southern California, it is also in several sites in the southern part of Maine.

The tourmaline group of minerals are crystalline silicate minerals, borosilicates where boron is compounded with other elements such as aluminum, iron, sodium, lithium, potassium, or magnesium. Which element is combined with boron determines the color of the mineral.



The borosilicate is assumed in all of the colors described below so, only those minerals that create the specific color are listed.

Dravite Tourmaline is a sodium, magnesium, aluminum borosilicate. It is named after Dravograd, Slovenia where it was first described. It is also called brown tourmaline and is usually rather drab but occasionally is highly lustrous and beautifully crystalized.

Watermelon Tourmaline's outer green ring composition is lithium, iron, titanium, or vanadium, and the inner pink area is lithium, chromium, or magnesium. As magma cracks form, they fill with a solution containing water and a variety of minerals such as iron, lithium, and manganese. This variety was first found in Maine. I have bought small samples several times and used them to make earrings.

Elbaite Tourmaline is shown on the chart as a specific form, but from what I read, I see that it can be a group of several varieties including Rubellite (red to pink), Indicolite (blue), Verdelite (green) and Achroite (colorless). It was first found on the island of Elba, Italy in 1913 but is found throughout the

(Continued on page 17)

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world. The Tourmaline Queen Mine in Southern California produced some of the most beautiful Elbaite. The pink variety was beloved by the Empress Dowager Cixi of China who bought large quantities of it from the Himalaya Mine for gemstones and carvings.

Liddicoatite Tourmaline is almost identical in composition to Elbaite except that the calcium atoms are replaced with sodium atoms. It was considered a form of elbaite until 1977 when its unique chemical composition was noted. It is named after Richard T. Liddicoat, a well-known gemologist who was president of GIA and inventor of the diamond grading system.

Siberite and Paraiba Tourmalines are both very rare and consequently, very expensive. Siberite is known for its intense purple color and is found in Mozambique and Madagascar, and Paraiba is colored by copper, is a beautiful, intense blue and is found in Brazil.

Schorl Tourmaline is the most common form, but it is beautiful in its intense black color. It is never transparent or even translucent. Sometimes Schorl is found within Quartz crystals where it is known as **Tourmalinated Quartz**. I have found schorl in Southern California and other areas where I have enjoyed rockhounding. There are several samples of it in my rock garden.

For photos of beautiful and varied Elbaite crystals, go to mindat.org/gm/1364 . For more information, go to [Elbaite - Wikipedia](#)

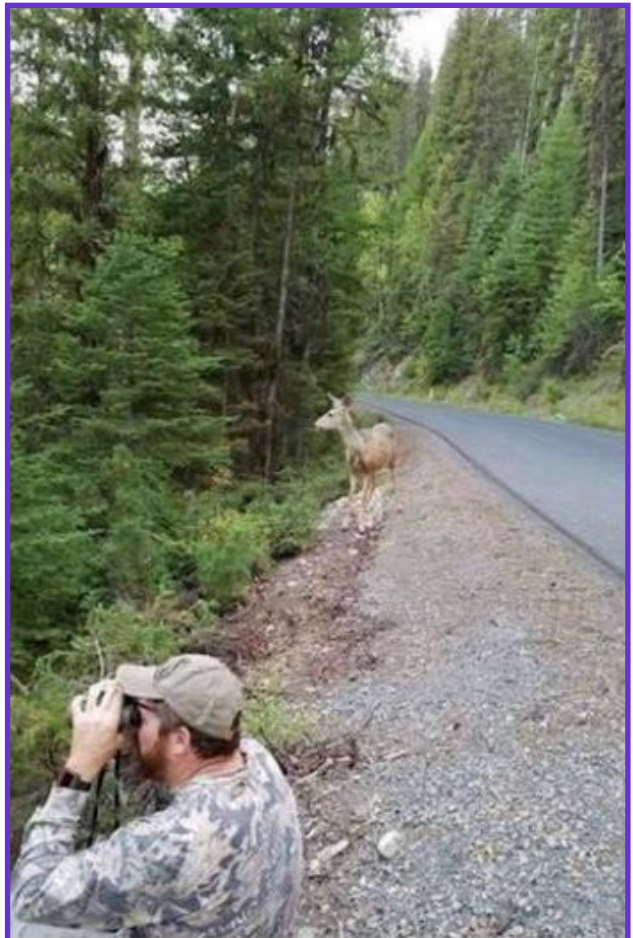
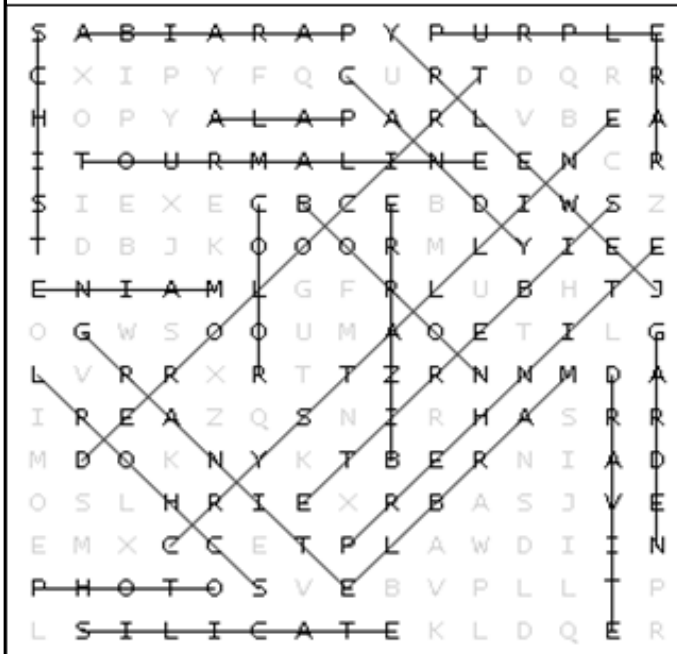
Note: The words in the wordsearch puzzle have been underlined and are also listed below.

By **Jo Borucki**

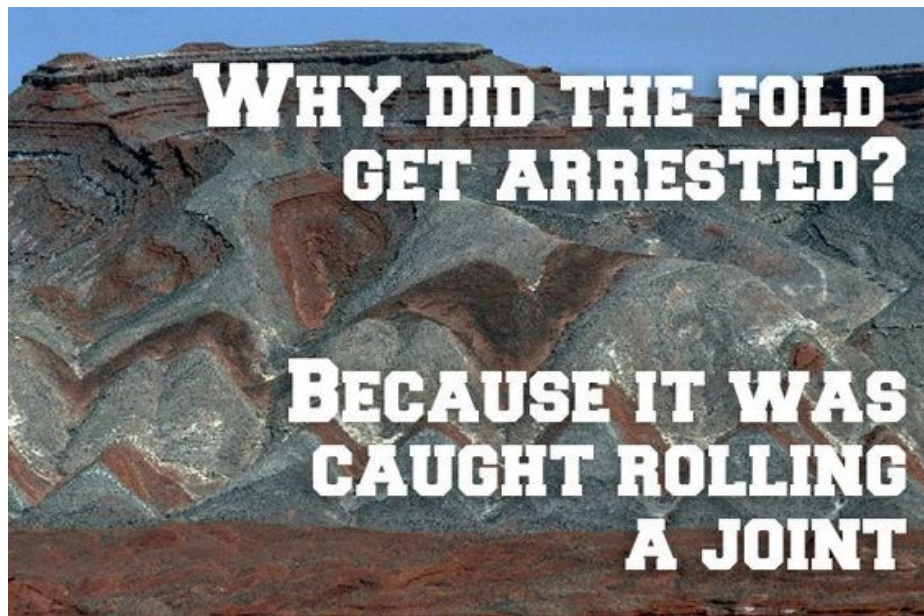


| | |
|-------------|------------|
| BIZARRE | PARAIBA |
| BORON | PHOTO |
| CANDY | PREHNITE |
| COLOR | PURPLE |
| CRYSTALLINE | RARE |
| DRAVITE | SCHIST |
| GARDEN | SCHORL |
| GRANITE | SIBERITE |
| JEWELRY | SILICATE |
| MAINE | TOURMALINE |
| MARBLE | TRICOLORED |
| PALA | |

Answers to Tourmaline Wordsearch Puzzle



Maybe he is a rock hunter



Information on Shows for 2023

September 16-17, 2023 – Monterey, CA
Monterey Fairgrounds, Monterey, CA

Hours: 10—5

Contact: (831) 801-5887

Website: www.cvgms.rocks

September 16-17, 2023 – Reno, NV

Reno Gem and Mineral Society

Reno/Sparks Convention Center

4590 S. Virginia St., Reno, NV

Hours: Sat. 10—5, Sun. 10—4

Contact: (775) 229-4420,

sailondan55@aol.com

Website: <https://renogms.org/>

September 16-17, 2023 – San Luis Obispo, CA

San Luis Obispo Gem and Mineral Club

San Luis Obispo Veteran's Memorial Building

801 Grand Avenue, San Luis Obispo, CA

Contact: 2023show@slogem.org

Website: <https://slogem.org/>

October 7-8, 2023 – Grass Valley, CA

Nevada County Gen and Mineral Society

Nevada County Fairgrounds

11228 McCourtney Rd., Grass Valley, CA 95949

Hours: Sat. 10—5, Sun. 10—4

Contact: 4vanclan5@att.net

October 7-8, 2023 – Anderson, CA

Shasta Gem and Mineral Society

1890 Briggs Street, Anderson, CA

Hours: Sat. 9—5, Sun. 9—4

Contact: sgmsrocksredding@gmail.com

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

October 7-8, 2023 – Signal Hill, CA

Long Beach Mineral & Gem Society

Signal Hill Library

1800 E. Hill Street, Signal Hill, CA

Hours: Sat. 10—5, Sun. 10—4

Contact: (562) 253-1390, lmineralgemociety@gmail.com

Website: <https://www.facebook.com/LBMGS>

October 8, 2023 – Fallbrook, CA

Fallbrook Gem and Mineral Society

123 W. Alvarado St., Fallbrook, CA

Hours: 9—4

Contact: (760) 728-1130,

info@fgms.org

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

October 14-15, 2023 – Redwood City, CA

Peninsula Gem & Geology Society AND Sequoia Gem & Mineral Society

Redwood City Community Activities Building

1400 Rosevelt Ave., Redwood City, CA

Hours: 10—5

Contact: (650) 575-3144, cci@pacbell.net

Website:

<https://sequoiagemandmineralsociety.org>

October 28-29 – San Diego, CA

San Diego Mineral & Gem Society

Liberty Station Conference Center/Point Loma
Nazerene University

2660 Lanir, San Diego, CA 92106

Hours: Sat. 10—5, Sun. 10—4

Contact: luannz@att.net

Website: <https://sdmg.org>

October 28-29, 2023 – Orange, CA

American Opal Society

Velvet Rose Event Center

300 S. Flower St., Orange, CA 92868

Hours: Sat. 10—6, Sun. 10—5

Contact: Veronica Purpura, (714) 501-9959,
info@opalsociety.org

Website: <http://www.opalsociety.org/>

Preliminary Membership Meeting Minutes

August 22, 2023

Call to Order - 7:38 PM

Pledge of Allegiance

Program for the evening will be **Noel Runyan**, Fragile Minerals

New Members (Cynthia Porter): No new members to report

The Vice Corner (Michele Smith): A Family A Fair! Report on our representation at the County Fair this year. 22 lb Pumice Family Photos and Dance Video. Families enjoyed all the interactive displays and members' demonstrations. Let's do it all again next year!

Member Displays:

Joan Schramm: Blue Calcite (from Mexico) and a Mystery Soft Red Stone

Bob Kout: Zoisite / Peruviana Ruby

Stephen May: Dugway Geode (Delta Utah) and Old MacDonald's Farm Petrified Wood

Jobs that need to be fulfilled:

President, 2024 – ?

Vice President, 2024 – ?

Snacks for September: Cesar Nunez; October: ?

Nominating Committee Volunteers (3 Needed): ?

Correspondence (Frank Mullaney):

Insurance information for trailers

Information cards for Santa Rosa show for October 21st and 22nd

Field Trips (Stephen May) : Updates

August 25, 26 No Group Permit,

Davis Creek, California – 6 ½ hour drive, Obsidian, Rainbow, Pink, Silver, Mahogany, Electric Blue, Needles

Rockhound of the Month – Cal Hansen, for everything.

Bragging Rights for the month of August, General Meeting, the theme is "The letter C" – **Alan Anchor**

1. Mangano Calcite (Fluorescent, from Peru) **Bruce Poehlman**

2. Large Charo River Charsite (from Siberia) **Jim Fox**

Bragging rights won by **Bruce Poehlman**.

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Hospitality: Introduce Guests;

Steve Stan, Sydney Hane, Stephanie Lawton, and Elizabeth Cyr.

24 Members and 4 Guests in attendance.

Sunshine (Margo Mosher): None to report

Federation Report (Karen Welder): None to report

Ice Cream Social – Thank you, Cal Hansen

Program: Noel Runyan, Fragile Minerals

Upcoming event:

Founders Picnic Saturday September 16th 11:00-2:00

Meats and Drinks provided

Members bring a side or dessert to share

Adjournment: Meeting adjourned at 9:29 PM.

Respectfully submitted, Cynthia Porter, Secretary

Preliminary Board Meeting Minutes

August 24, 2023

Meeting called to order at __:__

Roll call: Noel Runyan (Board), Michelle Powers (Board), Jim Fox (Board), Missy Fox (Board), Rick Kennedy (Board), Paul Kidman (Alt Fed Dir), Stephen May (Pres), Frank Mul-laney (Treasurer), Cynthia Porter (Sec), Michele Smith (Vice Pres), Dean Welder (Parliamentarian), Karen Welder (Fed Dir), Deb Runyan (News Editor)

Absent: Rick Kennedy, Karen And Dean Welder, Stephen May

Reading of the Minutes from June 29th board meeting:

Approval of \$500 per person for Camp Paradise was made via e-mail.

Approval of Gem and Mineral Show cards is required.

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(Continued from page 21)

Correspondence (Frank Mullaney):

Bill for insurance on both trailers.

Show cards for Santa Rosa show

New Members (Cynthia Porter): No new members

Treasurers Report (Frank Mullaney): (Deb Runyan / Jim Fox) Approved

July: (Deb Runyan / Michelle Powers) Approved; August: (Michelle Powers / Deb Runyan) Approved

Trailer wheel covers to be replaced

Committee Reports:

Federation – (Karen Welder) No new report

Field Trips – (Stephen May) Update:

August 25, 26, (27) Fri. Sat.

Davis Creek, California – 6 ½ hour drive, Obsidian Rainbow, Pink, Silver, Mahogany, Electric Blue, Needles

September 28th – October 1st - Topaz Mt & Dugway Geo Beds, Delta UT. Sponsored by Roseville Rock Rollers, CFMS, Gene Doyle, CO-OP & Roseville Rock Rollers Field Trip.

DRC Sale, August 26th from 9:00 am – 12:00 pm at the home of Michele Smith

Santa Clara County Fair – July 26th to August 6th: The Geological display was very successful. There were always people surrounding the Flint Knapping demonstration, the Stone Touch Table and the stone polishing display. David Mosher gave three days of cabochon making. Bob Vinton joined him one of those days and Jim Fox had fun polishing bits of stone he wanted to try. Next year we should have a fluorescent display (Jim Herbold has agreed to build one or two), get the Almaden Quicksilver Museum involved with volunteers and displays. Any other ideas? The volunteers were great and very helpful.

Founders Day Picnic Saturday, September 16th – Jim Herbold, Sign-up sheet to help. Stephen May, Alan May

Need Bingo materials.

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Old Business:

How much to charge for admission to the show. Document from Frank was shared. (Missy Fox / Frank Mullaney) admissions costs approved

New business:

New section of our site, Members only Trading Post. Not financially connected to the SCVGMS.

Persons posting must have dues that have been paid in full.

(Noel Runyan / Jim Fox) Approved

Stephen volunteers to print 6 copies of the Breccia each month.

Upcoming Programs:

September: ??? Video from Jo Borucki, or CFMS speaker

Founders Day Picnic September 16th: Jim Herbold, volunteers. Stephen May

October-? Opal Program (Michele to provide Stephen with contact)?? Australia,

November- Silent Auction

December- Installation Dinner

Next Board meeting is September 28th

Meeting adjourned: 8:28 pm

Respectfully submitted, Cynthia Porter, Secretary

Puns

What did the rockhound say when he found gold?

"Au yeah!"

How far do rockhounds travel?

A mylonite.

Rockhounds dig Mother Earth.

SCVGMS ELECTED OFFICERS

President: Stephen May, 408-306-6782
Vice President: Michele Smith, 408-374-1897
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
Michelle Powers, 408-694-8686
Noel Runyan, 408-866-7564
Rick Kennedy, 408-529-9690
Parliamentarian: Dean Welder, 408-353-2675

SCVGMS COMMITTEE HEADS

Bragging Rights Chair: Alan Achor
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: Rick Kennedy
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

Email: 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 7:15 followed by the meeting at 7:45 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 September 26 at 7:45 at the Cabana Club and also available on Zoom.** The Next Board Meeting is at 7:30 on **September 28** 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 ten times annually. The deadline for all articles is the Sunday after the general meeting. The Breccia editor is Deb Runyan who may be contacted by email at Deb4Rocks@gmail.com and by phone at 408-628-7789. The Breccia is proofread by **Pat Speece** and by **Sonia Dyer**.

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