# BRECCIA

Santa Clara Valley Gem and Mineral Society
Volume 73 Number 7, July 2026

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## Events

### July 28, 6:30 PM: Member Sale

If you have something to sell, please contact Jim Herbold.

**July 28, 7:30 PM**: The General Membership Meeting will feature **Stephen May** with a forest ranger presentation. The Bragging Rights theme is **"Red"**.

**August 4, 7:30 PM**: Board Meeting on Zoom. All Members are welcome to attend. If you want to attend, please contact Jim Herbold.

### August 20–23: County Fair

We need volunteers to set up, take down, and work the show. You will get free entrance to the Fair. **Donna Kelly** will be there with her knapping demonstration.

**August 25**: The General Membership Meeting will feature **Stephen May** with a field trip review.

## Editor's Message

I couldn't resist writing about fireworks for July. It took several tries, but I ended up emphasizing the sources of the elements used in fireworks. I gathered about a dozen pictures of types of fireworks, but ended up only using the one of "Farfalle" (butterfly), below the Contents on the first page.

I really need more articles from our members. **Jim Fox** has been sending me about 3 "Touch Table" pages each month. You could contribute anything from a short "how-to" or "my favorite thing", up to several pages of whatever rock-related information you think others would find interesting. Rock-related photos are also appreciated. The deadline for submissions is the Sunday after each General Meeting.

Deb Runyan, Breccia Editor

editor@scvgms.org, 408-628-7789

## New Members

We have two new families:

**Nick & Victoria Samoray**

**Shuang Li, Zhejun Shen and Morgan Shen**


## Sunshine

**Deb Runyan** dislocated her right hip. She is doing fine, but has to be more careful, at least for a while!

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

## Field Trips

Note: Driving times are from Campbell and are approximate.

**September 26–27 (Saturday–Sunday):** Field Trip to Mina, NV, ~8-hours

Hawthorne, Mina region in Nevada

Materials: Microcline Feldspar, Copper minerals, Black Quartz Crystals, Epidote, Epidote in Quartz, Epidote in Calcite, Grandradite and Grossular Garnet. Fossils, and possible Petrified Wood. The roads in Nevada have been thrashed in the last few years. The actual sites and available material will depend upon access issues determined just before the actual trip.

Sponsors: Co-Op Field Trip, CFMS, and Roseville Rock Rollers Gem and Mineral Society

**For questions about field trips**

Contact: Stephen May, Stephenmay0990@gmail.com

Phone: 669-248-3993 or 408-306-6782


## Smile

Scientists have grown human vocal cords in a petri dish.

The results speak for themselves.

# President's Message, July 2026

Hello, rockhounds! Happy July to you, and I hope that you are staying cool and using your sunscreen!

We just had our annual Founder's Day Picnic this past weekend and I'm pretty sure that those who attended had loads of fun! The grilled meats were delicious and so many of the potluck dishes were terrific as well. I really appreciate everything that folks did to help out, especially with the food and at the end with cleanup. I made an effort to get more people involved in helping out this year and I feel like that went well. The weather was perfect—not too hot, and not too windy. Lastly, I'm happy to have had a chance to play bingo. I recall playing bingo as a kid, and I'm glad that the club keeps this game alive!

As I sat down to write this message, I went back to scan the June issue of the Breccia that Deb put together. I landed at the section that outlines upcoming gem and mineral shows, and lo and behold, there's a show in Culver City, CA a couple weekends from now. What do you know, I'll be in Playa Vista that weekend, just about 5 minutes from Culver City! I will be excited to check out the show, say hi and introduce myself to folks, and hopefully find a nice piece or two to bring home.

I'm sure that I will always enjoy checking out mineral shows. But I also know that I am in the middle of a transition with my collecting. I've reached a point of saturation relative to the space I have to store minerals at my house, and I don't want to do anything drastic or expensive to give myself more space for minerals. Also, I just sold the Sprinter van that I've been using for nearly a decade to get to places like Denver and Tucson for various shows, and also for countless mineral collecting trips to fluorescent mineral source locations. That van had plenty of space to bring lots of rocks home, and those days are now over. So I get to be a more discriminating collector, and at the end of the day that's a good thing.

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*The Sprinter. I'll miss it, but the time was right to sell it…*

*The floor of the van, covered with petrified wood and other delights*

*The back of the van, stuffed full of rocks. This is the fluorescent mineral collection that I acquired in 2019. I needed two trips!*

That's it for now, enjoy!

Jim Herbold

SCVGMS President

# Jim Fox's Touch Table

## Copper

This metal has been important since ancient times for it's beauty and usefulness. Because it is relatively soft and easily shaped, it was used for weapons, coins, jewelry, and utensils.

Today, it is used primarily in electronics because it conducts heat and electricity so well. Copper is also important in plumbing. Archeologists discovered copper plumbing in a 5,000-year-old Egyptian pyramid and it still worked.

Copper is also an essential trace element for our health.

*Copper*

*Copper Rose, Created by* ***Jim Fox*** *for his wife,* ***Missy***

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## Dinosaur Bone

Wood, bone, shell and other organic material may become petrified or "turned to stone" by replacement of their structures with agate, calcite, pyrite and even opal. Petrification occurs under special conditions where the material is quickly covered with ash or mud that excludes oxygen. Without oxygen, the object does not decay, but retains its structure and is replaced, cell-by-cell with minerals. Usually, it is the hard parts of the organism such as the shell, bones or teeth that are petrified, but on rare occasions soft parts, such as the inside of eggs and feces have been fossilized.

The most prized petrified bone is called "gem bone" and is usually brightly colored and has distinct cells laid out in a web-like pattern. Gem bone comes in most colors.

In the USA, the largest deposits of dinosaur bones are found in Utah and Colorado. It is now illegal to collect dinosaur bone on US state or federal lands; this restriction only allows collecting on private lands, thus making dinosaur bone harder to find and rarer.

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# Flowering Tube Onyx

## (Also called Tube Onyx or Flowering Cave Onyx)

Flowering Tube Onyx is mined near the town of Bullfrog in the Henry Mountains of Southern Utah.

Onyx is a common term used for certain kinds of calcite or flowstone which are banded. True onyx is composed of quartz which has a Mohs hardness of 7, while this cave onyx is composed of calcite with a Mohs hardness of 3. Technically, it could instead be called a Travertine.

The calcite concentrations in caves are banded as they are deposited very slowly, layer by layer. The color depends on the number of pigments, like iron oxide, brought in with the water. So, they typically have red, brown, yellow, beige, white, and transparent banding.

The best specimens of this rock have areas that look like flower blossoms and a lovely complex banding pattern. This wonderful looking material used to be fairly easy to get, but is now hard to find because the source is essentially mined out.

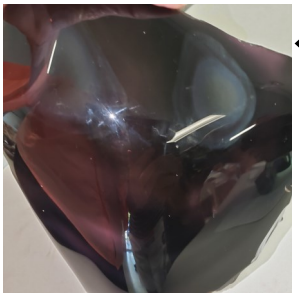
Tube onyx is beautiful when worked into cabs. It is tricky to work, because heat buildup while grinding it causes it to separate along the distinctive banding. To get past that, most slabs are now treated with cyanoacrylate or other compounds to stabilize it.

Because of its uniqueness, a specimen has been displayed in the Smithsonian.

*Flowering Tube Onyx, polished (left) and unpolished (right).*

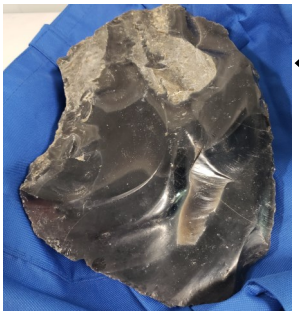
# Bragging Rights

June's Bragging Rights Theme was **"Black"**.

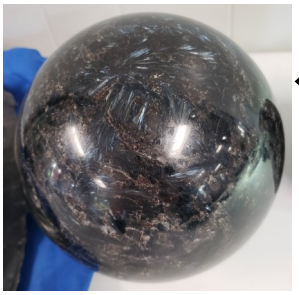


*1: "Casper" Rainbow Obsidian ... find the friendly ghost* - ***Cynthia Porter***

*2: Chrysanthenum from China* - ***Michelle Powers***



*3: Obsidian, Devil's Postpile, CA* - ***Joan Schramm***

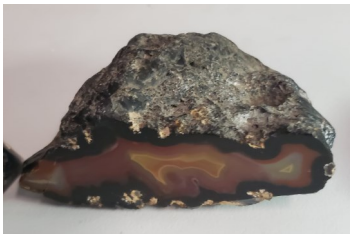


*4: Arfvedsonite, Finland* - ***Antonio Nguyen***

*5: Black & Brown Geode* - ***Antonio Nguyen***

**The winner!**

*6: Fortification Agate, black skin* - ***Jim Fox***



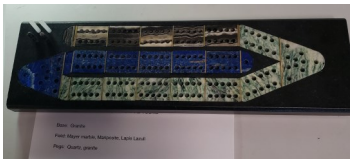
*7: Chondrite Meteorite, Hami Xin Jiang, China, fluorescent LWUV* - ***Neil Delfino***

*8: Millerite* - ***Steve Skala***

*9: Black Tourmaline* - ***Simon G***

*10: Granite, Mayer Marble, Mariposite, and Lapis Lazuli Cribbage Board with Quartz and Granite pegs*

- ***Howard Young***



July's Bragging Rights theme is **"Red"**.

# Website Links

## Your Window to the World of Important Websites

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

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

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

**American Lands Access Association (ALAA):** www.amlands.org

**BLM Rockhounding:** https://www.blm.gov/programs/recreation/rockhounding

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

**"CO-OP"—The Cooperative Field Trip Chairmen Association's Website:** https://www.co-opfieldtrips.com/field-trips

**GemKids:** https://gemkids.gia.edu/

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

**Smithsonian Science How Webcast Archives:** https://naturalhistory.si.edu/education/school-programs/grades-3-5/smithsonian-science-how/smithsonian-science-how-webcast-archives

**Smithsonian National Museum of Natural History:** https://www.youtube.com/@nationalmuseumofnaturalhistory

**Beyond 4Cs 23 Amazing Sites For Free Gemology Courses & Resources:** beyond4cs.com/free-gemology-courses-and-resources/

**Common Minerals & Their Uses:** https://mineralseducationcoalition.org

**Official State Fossils:** https://netstate.com/states/tables/state_fossils.htm

**Ultimate Beginners Guide to Rock Tumbling:** rocktumbling.co/beginners-guide

**American Geode:** http://www.americangeode.com/

**The American Opal Society:** http://opalsociety.org

**Rock Tumbler Library:** https://rocktumbler.com/questions.shtml

## Information on Shows

## 2026

**July 11–12, 2026 – Willits, CA**

Willits Gem & Mineral Society

The Community Center, 111 E. Commercial St.

Hours: Sat & Sun10–6

Contact: willitsgemandmineralsociety@gmail.com

Web: www.facebook.com/groups/willits-gemmineral-society

**July 31–August 2, 2026 – Nipomo, CA**

Orcutt Mineral Society

Nipomo High School

525 N. Thompson Rd.

Hours: Fri & Sat 10–5, Sun 10–4

Contact: nipomocowgirl55@yahoo.com,

(805) 929-2783

Web: https://oms-inc.org

**August 1–2 - Roseville**

Roseville Gem, Jewelry, Fossil & Mineral Show

@the Grounds Roseville - Roebbelen Event Center

700 Event Center Dr

Hours: Sat 10–5, Sun 10–4

Web: https://rockrollers.com/pages/gem-mineral-show

**August 15–16, 2026 – Tehachapi**

Tehachapi Valley Gem & Mineral Society

Tehachapi Senior Center, 500 East "F" Street,

Tehachapi, CA 93561

Hours: Sat 9–5, Sun 9–4

Contact: travis462@outlook.com

Web: https://www.tvgms.net/

**August 22–23 – Escondido, CA**

Palomar Gem & Mineral Club

California Center for the Arts, The Museum

340 N. Escondido Blvd.

Hours: Sat 10–5, Sun 10–4

Contact: pgmcshow@gmail.com

Web: palomargem.org

**September 18–20 – Reno, NV**

Reno Gem & Mineral Society

CFMS Annual Show & Convention

Reno Convention Center

Hours: Fri & Sat 9–5, Sun 9–4

Contact: showdirector@renogemandmineralsociety.org

Web: renogms.org

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**September 19–20 – Monterey, CA**

Carmel Valley Gem & Mineral Society

Monterey Fairgrounds

2004 Fairgrounds Rd.

Hours: Sat & Sun 10–5

Web: cvgms.rocks

**September 19–20, 2026 – Chico, CA**

Feather River Lapidary & Mineral Society

Silver Dollar Fairground

2357 Fair St.

Hours: Sat 9–5, Sun 9–4

Contact: shows@featherriverrocks.org

Web: featherriverrocks.org/show-2

**September 19–20, 2026 – Arcadia**

Pasadena Lapidary Society

Arcadia Masonic Center, 50 W. Duarte Rd.

Hours: Sat 10–5, Sun 10–4

Contact: (626) 260-7239, marcia.pls.emails@gmail.com

Web: https://pasadenalapidary.org

**September 26-27, 2026 – San Luis Obispo, CA**

San Luis Obispo Gem and Mineral Club

Alex Madonna Expo Center

120 Madonna Rd.

Hours: Sat & Sun 10–5

Contact: 2026show@slogem.org

Web: slogem.org/gems-by-the-sea

**October 3–4, 2026 – Anderson, CA**

Shasta Gem and Mineral Society

Shasta District Fairgrounds

1890 Briggs St.

Hours: Sat 9–5, Sun 9–4

Contact: sgmsrocksredding@gmail.com, (530) 722-7133

Web: shastagemandmineral.org

**October 10–11, 2026 – Redwood City, CA**

Peninsula Gem & Geology Society and the Sequoia Gem and Mineral Society

Community Activities Building

Hours: Sat & Sun 10–5

Contact: impresciaconstruction@gmail.com (650) 575-3144

Web: https://pggs.org/

# The Elements of Fireworks

## By Deb Runyan

Fireworks are made from various elements that create explosive effects and colors. Key components include potassium nitrate, sulfur, and charcoal for the propellant, while metal salts like strontium for red, barium for green, and copper for blue produce the vibrant colors.

### Colors

*From left to right: Lithium, Strontium, Calcium, Sodium, Barium, Copper, Cesium and Potassium*

*By Hegelrast - Own work, {CC BY-SA 4.0}, https://commons.wikimedia.org/w/index.php?curid=106597487, modified*

**Lithium (Li)**

Produces a medium red color.

Forms used: $Li_2CO_3$ (lithium carbonate) or LiCl (lithium chloride)

*Source: Pink lepidolite mica mineral from Hoydalen, Norway - $K(Li,Al)_3(Al,Si)_4O_{10}(F,OH)_2$.*

**Strontium (Sr)**

Produces an intense red color.

Forms used: $SrCO_3$ (strontium carbonate) or $SrCl_2$ (strontium chloride)

*Source: Strontium-bearing apatite - $(Ca,Sr)_5(PO_4)_3F$*

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**Calcium (Ca)**

Produces orange colors.

Forms used: Calcium salts, like $CaCl_2$ (calcium chloride)

*Source: Calcite - $CaCO_3$*

**Sodium (Na)**

Produces a gold or yellow color.

Form used: $NaNO_3$ (sodium nitrate)

*Source: Salt lake in Australia*

**Barium (Ba)**

Produces green colors, and helps stabilize other volatile elements.

Form used: $BaCl_2$ (barium chloride)

*Source: Barite - $BaSO_4$*

**Copper (Cu)**

Produces blue colors.

Form used: $CuCl_2$ (copper chloride)

*Source: Native copper from Arizona*

**Cesium (Cs)**

Produces indigo colors.

Form used: $CsNO_3$ (cesium nitrate)

*Source: Lepidolite - $K(Li,Al)_3(Al,Si)_4O_{10}(F,OH)_2$*

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**Potassium (K)**

Produces a violet color, and is an oxidizer.

Forms used: $KNO_3$ (potassium nitrate), $KClO_3$ (potassium chlorate) , and $KClO_4$ (potassium perchlorate)

*Source: Potassium salt in a mine*

## Sparks

**Aluminum (Al)**

Aluminum metal produces silver and white flames, and sparks.

*Source: Bauxite - $Al_2O_3 \cdot 2H_2O$*

**Iron (Fe)**

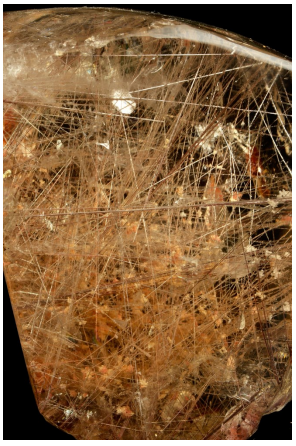
Iron powder is used to produce sparks in sparklers.

*Source: Hematite - $Fe_2O_3$*

**Magnesium (Mg)**

Magnesium metal burns a very bright white. It adds white sparks, or improves the overall brilliance.

*Source: Magnesite - $MgCO_3$*



**Titanium (Ti)**

Titanium metal can be burned as powder or flakes to produce silver sparks.

*Source: Rutile in quartz, titanium dioxide - $TiO_2$. Brazil, Minas Gerais*

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**Zirconium (Zr)**

Zirconium, like titanium, burns to produce oxides that emit brightly. It is used in "waterfalls".

*Source: Zircon crystal*

## Other Elements

**Carbon (C)**

Carbon provides the fuel to produce intense heat. Forms include carbon black, sugar, or starch.

*Black powder activated carbon*

**Chlorine (Cl)**

Chlorate and perchlorates are common oxidizers for producing intense heat.

*Source: Dead sea salty shore*

**Oxygen (O)**

Oxygen is a component of chlorate and perchlorate, common oxidizers.

**Sulfur (S)**

Sulfur is a component of black powder, a propellant/fuel.

*Source: Crystalline sulfur from Italy*

Notes: Sourced from https://en.wikipedia.org, https://www.howitworksdaily.com, and https://blog.edvotek.com.

## Did You Know?

### From the Exploratorium

A crocodile can't stick it's tongue out.

A shrimp's heart is in its head.

In a study of 200,000 ostriches over a period of 80 years, no one reported a single case where an ostrich buried its head in the sand (or attempted to do so).

It is physically impossible for pigs to look up into the sky.

A duck's quack doesn't echo, and no one knows why.

Wearing headphones for just an hour will increase the bacteria in your ear by 700 times.

## Membership Dues for 2026 Are Due

SCVGMS membership dues are due for the year 2026. Your dues are essential to the operation of SCVGMS.

Dues are $5.00 for Junior, $20.00 for an individual, and $30.00 for the household.

You can now easily pay online, at https://www.scvgms.org/product/membership-dues/

Or

Pay Frank at a meeting

Or

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

Thank you.


--Cartoon by Erston Barnhart in *Are We Having Fun Yet? An Irreverent but Affectionate Look at Rockhounds*

via Golden Spike News 11/01

## SCVGMS ELECTED OFFICERS

President: Jim Herbold, 650-743-3254

Vice President: Stephen May, 408-306-6782

Secretary: Cynthia Porter, 408-978-5848

Treasurer: Frank Mullaney, 408-691-2656

### Board Members at Large

Jim Fox, 408-356-7711

Missy Fox, 408-356-7711

Paul Kidman, 408-356-4995 (Alternate Federation Director)

Cathy May, 408-248-3993

Deb Runyan, 408-628-7789

Michele Smith, 408-374-1897

## SCVGMS COMMITTEE HEADS

Bragging Rights Chair: Cesar Nuñez

Breccia Editor: Deb Runyan

Donation Receiving Committee Chair: Michele Smith

Fairgrounds Booth Chair: Michele Smith

Fairgrounds Liaison: Frank Mullaney

Fairgrounds Volunteer Coordinator: Margo Mosher

Field Trip Coordinator: Stephen May

Founder's Day Bingo: TBD

Founder's Day Picnic Chair: Jim Herbold

Founder's Day Raffle: TBD

Hospitality: Margo Mosher

Installation Dinner: TBD

Member Displays: TBD

Refreshments: TBD

Show Chair: Margo Mosher

Silent Auction: TBD

Sunshine: Margo Mosher

Trophies: Frank Mullaney

## Santa Clara Valley Gem and Mineral Society

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

Website: www.scvgms.org

Email: inbox@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.

**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 editor@scvgms.org and by phone at 408-628-7789. The Breccia is proofread by **Pat Speece** and **Sonia Dyer**.

**Exchange bulletins** may be emailed to editor@scvgms.org. Permission to copy is freely granted to American Federation of Mineralogical Societies (AFMS) affiliated clubs when proper credit is given.