



# BRECCIA

Santa Clara Valley Gem and Mineral Society

Volume 72 Number 3, March 2025

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## Events

### SCVGMS ANNUAL SHOW

March 14, 8AM: Setup

March 15-16, 10-5: Show

March 25, 7:30 PM: The General Membership Meeting will feature **Bruce Pohlman** with an Ocean View Mine trip report. The Bragging Rights theme is "Something Green".

April 1, 7:30 PM: Board Meeting on Zoom. All Members are welcome to attend. If you want to attend, please contact [Jim Herbold](#).

April 22, 6:30 PM: The General Membership Meeting will feature a **Member Sale**.

April 29: Board Meeting on Zoom.



I will be posting telepathically today. So if you think of something funny, that was me.

## Editor's Message

Happy Spring Forward!

### SCVGMS Annual Show

As I write this, there is only 1 week until the Show, on March 15th and 16th!

If you are signed up to work the show, think about coming early, or staying late, so you have time to enjoy the exhibits, and maybe to buy some great stuff from our vendors, too.

We are all looking forward to seeing everyone there!

### SVCGMS College Student Grant Recipients

Our grant recipients are **Carla Dumaguit**, **Samantha Lei**, **Reza-Gene Milani**, and **Ellie Murdoch**. They all spoke at the February General Meeting, and they will be working the show.

Do you have anything that other members might enjoy?

The deadline for submissions to the *Breccia* is the Sunday after each General Meeting.

Deb Runyan, Breccia Editor

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

## Sunshine

There is nothing to report for Sunshine this month.

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



## Smiles

You know you are getting old when friends with benefits means having someone who can drive at night.

Just once, I want a username and password prompt to say: "CLOSE ENOUGH".

Someone said, "Nothing rhymes with orange". I said, "No, it doesn't".

## Field Trips

Note: Driving times are from Campbell and are approximate.

**April 5, Saturday:** Pala Ocean View Mine, San Diego Area - 7 ½-hour drive.

Tourmalines, Kunzites, Morganites and more.

9:30–1:30, pay to dig

Register: <https://digforgems.com/oceanview-mine-book/>

**Dates Pending:** Davis Creek

### 2025 Co-Op Field Trips

**May 18,** Dead Camel, NV Fossils, Petrified wood, Pink Rhyolite, 4X4 only

**TBD Late Apr - Early May,** SCVGMS, Clear Creek

**June 14–15,** SCVGMS Davis Creek, CA, Obsidian

**June 17–29,** Central OR, Prineville, Madras Pow Wow's additional field trips, 12 days

**TBD,** CA, Highway 108 Geology, Pine Crest to Sonora Pass

**Aug 8–9,** Black Butte and Stony Creek, CA, Jasper, Agate, Petrified wood

**Aug 8–10,** WY, Petrified Fish, Blue forest

**Aug 17–23 and 24–30,** Camp Paradise, Marysville, CA

**Aug 27–31,** Texas Springs, NV, Limb casts, additional materials

**Sep 25–28,** Delta UT, Red Beryl

For questions about the above listed CO-OP field trips

Contact: Stephen May, [Stephenmay0990@gmail.com](mailto:Stephenmay0990@gmail.com)

Phone: [669-248-3993](tel:669-248-3993) or [408-306-6782](tel:408-306-6782)

## New Members

We welcome new members to SCVG&MS!

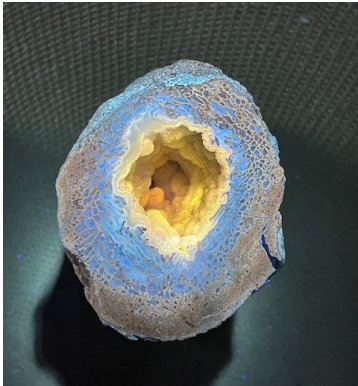
**Karen Hokanson**

**Danny Wong and family**



## President's Message

Hello, everyone! As I mentioned last month, I doubled up this year and attended both the Quartzsite and Tucson mineral shows. These events were separated by a week and a half this year and not concurrent, which I heard will be resolved in 2026. Tucson is a fun town—it has an authentic “old-west” feel, with lots of old adobe houses in the original barrios where I like to stay, and also freight trains passing through the city at all hours of the day. Of course, the large appeal of Tucson in the winter is the moderate temperatures. I'm not sure I'd want to live in Tucson in the summer.



*A beautiful representation of my two areas of focus in fossil and mineral collecting: a section of a dinosaur limb bone fossil, illuminated under longwave UV. The yellow fluorescence with the botryoidal + druzy quartz in the marrow cavity is extremely unique, and the blue reaction in the surrounding agate is also rare. From the Colorado Plateau area, likely from Utah or Colorado. This fossil presents as a sauropod, a plant-eating lizard - the irregularly-shaped circular border of the marrow core is the give-away. A sharp circular border of a once hollow bone is the indicator of a meat-eating theropod.*

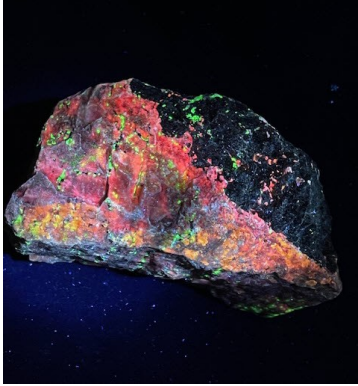
All that said, the Tucson gem and mineral shows are a huge event. I spent 4.5 days visiting pretty much every dealer that was there. Tucson, like Quartzsite, is evolving. The 22nd Street tent used to be a place to find a wide variety of bargains. Today, it's been upleveled with lots of high-end jewelry vendors and the prices there have definitely gone up.

There used to be a huge concentration of mineral dealers at the old Hotel Tucson City Center. That hotel is closed and many of those dealers are now located at a new permanent facility called Mineral City. Mineral City is a great place to poke around, and the quality of available material is high—there's lots of museum-grade pieces to look at there that are very much out of my price range, but there's plenty there that is right in my sweet spot.

The Pueblo Show has remained largely unchanged—there's lots of dealers, including overseas dealers, who have material straight from the mines. The Kino Show is the one that has degraded the most from my perspective—there's far fewer mineral dealers there now and it's mostly vendors selling bulk material that I'd otherwise call low-end and not interesting. But, at the end of the day, I am able to find interesting minerals at every show in Tucson. The hunt is the draw, the bargains are the spur to purchase, and my collection grows nicely every time I visit Tucson. I love it all!

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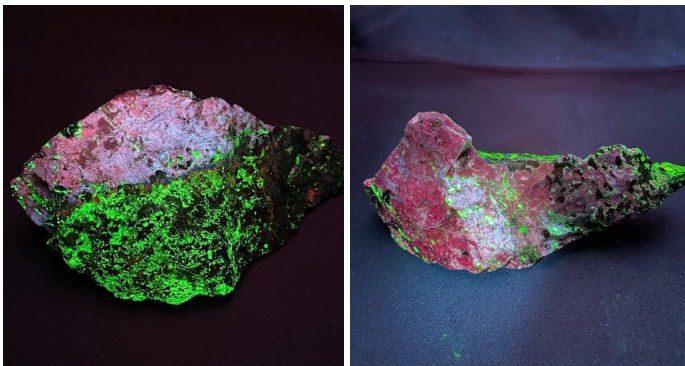
(Continued from page 4)



*Oh, what a find! This piece was mislabeled and quite underpriced. The dealer had not identified the rare and valuable presence of **bustamite** and had labeled it as a more common, albeit still fairly rare, piece of clinohedrite and willemite. The red reaction under longwave and the pink color under daylight was the indicator that bustamite is present. It's the most massive piece of bustamite I've ever seen. It's from Franklin, New Jersey, the fluorescent mineral capital of the world. I love this piece!*

Another fun aspect of Tucson is that many fluorescent mineral collectors come to visit. There's a meeting of the Fluorescent Mineral Society, a glow rock swap meet, an invite-only fluorescent mineral sale, a field trip to a fluorescent-bearing location, and lots of side meetups between glow friends.

The advent of UV flashlights has led to an increase in the number of people looking for fluorescence. This year I've been using flashlights with new quad LEDs - having the equivalent of four flashlights in one is definitely brighter and better, and these new LEDs produce less heat and do not draw the batteries down as quickly.

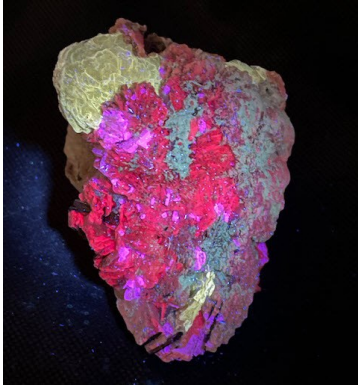


*Leaning in on the super-rare from Franklin, NJ, I present the largest chunk of **margarosanite** that I've ever seen. It's about 6 inches across. The pink to white fade under shortwave UV on one face is sublime, and the deep cherry red and white fluorescence on the other face gives us the other classic presentation of this metamorphosed lead silicate. This piece is now a centerpiece in my collection, and a real stunner to my eyes! If you know, you know, and I'll say no more...*

All this action in Arizona this year has gotten me excited for our own gem and mineral show in March. **Michele Smith** and team are knee-deep in preparation, and I'm looking forward to volunteering with all of you across the weekend. Please consider setting up a display case at the show to show off some part of your collections—it can be very rewarding, and our attendees just love seeing curated displays. You'll find me in the fluorescent display room once again with my glow-nerd friends.

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*There are plenty of other significant locales around the world for fluorescent material, and **Mont Saint Hilaire** in Quebec, Canada is certainly on that list. That is the source of this beauty. It is albite (SW cherry red), leucophanite (SW pink), polyolithionite (SW yellow), with several other non-fluorescing alkali minerals.*

Lastly, I'm calling on all of you to consider giving the club a presentation at one of our general meetings. Please let me know; we need to fill the roster!

Enjoy, and I'll see you soon!

Jim Herbold  
SCVGMS President

## Letter to the Editor

Dear Editor, on behalf of all who are hard of hearing:

Meetings are held to communicate — or at least to enjoy the refreshments. However, many of us cannot understand what is being said. We can hear, but cannot differentiate the words because we aren't able to pick up all the sounds.

We can turn up our hearing aids, but that only makes the garbled words louder. We need clarity. I think if the speakers use the microphone, it would be helpful.

So, please use the microphone! We will have a much better chance, and you will get more volunteers, and more interest in field trips etc.

I assume most people don't like using the microphone. Understandable. However, as the speaker, you want to be heard. You will get a better response if everybody can hear you.

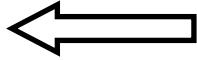
Thanks.  
Pat Speece

# Bragging Rights

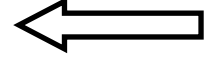
The February Bragging Rights Theme was "Something FUN".



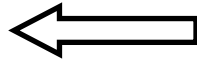
1: Fire Opal -  
**Simon G.**



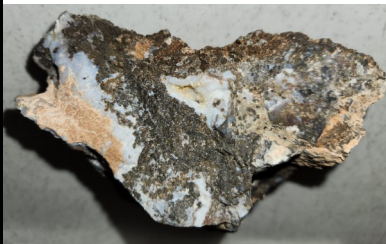
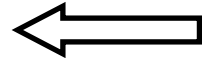
5: Art Techo  
Animoid - **Deb  
Runyan**



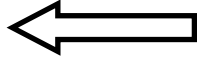
2: Polish  
Gypsum - ?



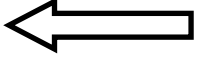
6: Lunar  
Landscape Rock  
- **Jim Fox**



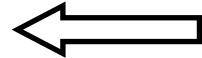
3: Phosphor-  
escent -  
**Bruce  
Poehlman**



4: Nokia Fossil  
- ?



7: Quartz Vein -  
**Brian Picard**



The winner is **Simon G.**

March's Bragging Rights theme is "Something Green".

# March Birthstones: Aquamarine and Bloodstone

## Aquamarine in Folklore

It was believed that aquamarine would protect sailors and guarantee a safe voyage; its serene blue color would invoke calming properties of the sea, help to cool tempers and allow the wearer to remain calm and levelheaded. People in the Middle Ages believed that wearing aquamarine would prevent them from being poisoned. Ancient medicines were made from aquamarine powder to help cure a variety of infections, eye ailments, and allergic reactions.

Aquamarine was a popular stone with healers, mystics, shamans, and prophets; people believed it enhanced their paranormal abilities and aided in the occurrence of epiphanies.

## Aquamarine Overview

The serenely colored aquamarine invokes the tranquility of its namesake, the sea. In fact, the name “aquamarine” is derived from the Latin word aqua, meaning water, and marina, meaning the sea.

Aquamarine is most often light in tone and ranges from greenish blue to blue-green. The color is usually more intense in larger stones, and darker blue stones are very valuable. This gemstone is mined mainly in Brazil, but it is also found in Nigeria, Madagascar, Zambia, Pakistan, and Mozambique.

Like emeralds, this gemstone is a variety of a mineral called beryl. Large gemstones have been found all over the world, including one gemstone found in Brazil that weighed over 240 pounds. Aquamarine grows in large, six-sided crystals that can be up to a foot long. This makes it a great gemstone to be cut and polished in larger carats for bold statement jewelry pieces.



[https://www.etsy.com/  
listing/1502504580/raw-  
aquamarine-inner-peace-  
healing-grade](https://www.etsy.com/listing/1502504580/raw-aquamarine-inner-peace-healing-grade)

[https://www.etsy.com/  
listing/1846169800/  
aquamarine-tumble-w-silver-  
sheen-glitter](https://www.etsy.com/listing/1846169800/aquamarine-tumble-w-silver-sheen-glitter)



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## Bloodstone in Folklore

Many ancient cultures believed bloodstone gems had magical powers, with some references to its ability to heal dating back to 5000 BC.

The Babylonians used bloodstone in their divination, and the Egyptians prized bloodstone because they believed it helped them to defeat their enemies. They also believed it increased their strength or made them invisible.

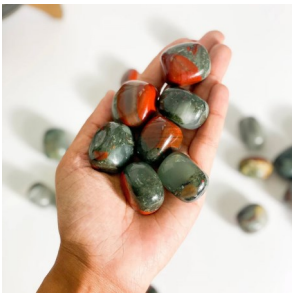
## Bloodstone Overview

In ancient times, bloodstone was called heliotrope, which roughly translates from Greek to “sun-turning”. It was named as such because it turned blood red in the setting sun. It was believed that the first bloodstone was formed when Christ’s blood dripped at the foot of the cross, staining jasper that turned into bloodstone.

Another version of bloodstone is called plasma. Compared to the heliotrope version, it is an opaque, deep green with little to no red.

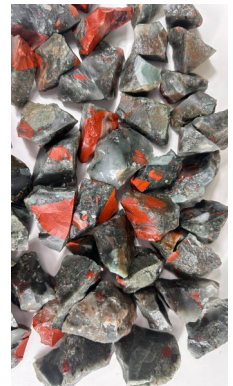
Bloodstone is a type of chalcedony. The amount of chlorite particles affects how green the stone is. The red spots—which resemble blood—come from iron oxide. Gemstones can have a luster that is glassy or waxy.

This stone can be found around the world, the United States, Germany, Australia, and more.



<https://www.etsy.com/listing/1228360414/tumbled-african-bloodstone-protection>

<https://www.etsy.com/listing/1686479608/raw-african-bloodstone-purification>



### Links:

<https://www.americangemsociety.org/birthstones-in-folklore/>

<https://www.americangemsociety.org/aquamarine-folklore/>

<https://www.americangemsociety.org/birthstones/march-birthstones/>

<https://www.americangemsociety.org/bloodstone-folklore/>

# Apatite

By Philip R. Kesten, Ph.D.

Coming in at five on the Mohs hardness scale is apatite. This hardness scale was devised by the German chemist and mineralogist Carl Friedrich Christian Mohs in the early part of the nineteenth century, as a way to help him identify minerals. Mohs constructed this scale by observing that some minerals are more resistant to being scratched than others. After studying many minerals, he selected ten to serve as marker posts on a ten-point hardness scale. From a hardness of one—soft—to a hardness of ten—hard—Mohs selected talc, gypsum, calcite, fluorite, apatite, orthoclase feldspar, quartz, topaz, corundum, and diamond. You can remember these stones and this order using the handy-dandy mnemonic “The girls can flirt and other queer things can do.” In this mnemonic, the first, bolder letters represent talc up through diamond. And yes, there in the fifth spot is “and,” in which the “a” represents apatite.

If you are like me, you likely have a number of specimens of apatite in your collection. You might also have, perhaps, a few specimens of varieties of apatite that you did not *know* were apatite. Some varieties of this mineral, varieties such as chlorapatite and fluorapatite, include “apatite” in the name, and that might tip you off. But others, for example, collophane and staffelite, do not... yet they are, nevertheless, also varieties of apatite. (If you want to add a specimen of collophane or staffelite to your collection, they are both a bit rare, hard to find, and somewhat expensive to buy. But as an aide, if you do intend to acquire some staffelite, these days, this mineral is more commonly referred to as “carbonate–fluorapatite”.)

At their heart, all varieties of apatite have some number of calcium atoms (Ca) bonded to some number of phosphate molecules. (A phosphate molecule is an atom of phosphorus (P) bonded to four oxygen (O) atoms, which makes the molecule  $\text{PO}_4$ .) Together, calcium atoms bonded to phosphate molecules make a molecular component called “calcium phosphate.” So for example, in fluorapatite, a fluorine atom (F) is bonded to the central calcium phosphate part of the molecule:  $\text{Ca}_5(\text{PO}_4)_3\text{F}$ . In chlorapatite, a chlorine atom (Cl) is attached in the same way:  $\text{Ca}_5(\text{PO}_4)_3\text{Cl}$ . The particular atomic element which is bonded to the calcium phosphate determines the specific shape of the crystal and also the color of the crystal.

Apatite crystals are most commonly hexagonal in shape. They are almost always terminated in a six-sided point, but doubly terminated crystals of apatite –apatite crystals with a point on both ends – are not uncommon. Also, while most varieties of apatite exhibit an overall hexagonal habit, the bonding of the molecules in an apatite crystal can result in a number of variations, some subtle and some spectacularly not subtle (!), on the overall hexagonal shape. Sketches of a few of these variations are shown in Fig. 1. And for completeness, some varieties of apatite do *not* form as hexagonal crystals... indeed, some can even be non-crystalline. And staffelite, that is, carbonate–fluorapatite, is botryoidal. A mineral which forms as a botryoidal mass looks somewhat like a bunch of grapes. An image of a botryoidal cluster of grape agate, a variety of amethyst, is shown in Fig. 2. (Hungry, anyone?!)

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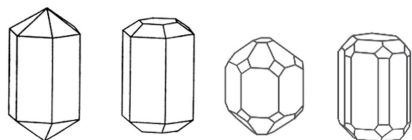


Fig. 1: Some variations of a hexagonal crystal habit.  
Fig. 1. made by prk



Fig. 2. A cluster of aptly named grape agate crystals.

Fig. 2. [https://crystalrockology.com/cdn/shop/products/20210725\\_194207426\\_iOS\\_700x.jpg](https://crystalrockology.com/cdn/shop/products/20210725_194207426_iOS_700x.jpg)

The most common color of apatite is light green, this variety of apatite is known as fluorapatite. (A specimen of fluorapatite is shown in Fig. 3a.) But varieties of apatite are found in a wide range of colors, from colorless to blue to yellow to brown. Apatite can even be pink and also purple. (A colorless crystal of apatite is seen sticking up from a piece of orthoclase feldspar in Fig. 3b. Fig. 3c., Fig. 3d., Fig. 3e., Fig. 3f., and Fig. 3g. show, respectively, crystals of apatite that are blue, yellow, brown, pink, and purple.)

Fig. 3a



Fig. 3b



Fig 3c

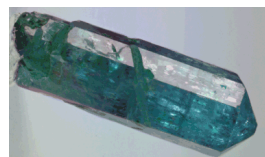


Fig. 3d



Fig. 3e



Fig. 3f



Fig 3g



Fig. 3a: A crystal of light green fluorapatite.

Fig. 3b: A crystal of colorless apatite.

Fig. 3c: A crystal of blue apatite.

Fig. 3d: A crystal of yellow apatite.

Fig. 3e: A crystal of brown apatite, in matrix.

Fig. 3f: A crystal of pink apatite.

Fig. 3g: A crystal of purple apatite.

Fig. 3a. [https://crystalrockology.com/cdn/shop/products/20210725\\_194207426\\_iOS\\_700x.jpg](https://crystalrockology.com/cdn/shop/products/20210725_194207426_iOS_700x.jpg)

Fig. 3b. <https://www.mindat.org/imagecache/c5/4d/07296140014960887378640.jpg>

Fig. 3c. [https://crystalvaults.com/wp-content/uploads/2013/04/blue\\_apatite\\_header.gif](https://crystalvaults.com/wp-content/uploads/2013/04/blue_apatite_header.gif)

Fig. 3d. [https://www.mineralmike.com/cdn/shop/products/Yellow-Apatite-Mexico-3\\_5000x.jpg](https://www.mineralmike.com/cdn/shop/products/Yellow-Apatite-Mexico-3_5000x.jpg)

Fig. 3e. <https://www.mindat.org/imagecache/99/a4/00610940017070287807349.jpg>

Fig. 3f. [https://www.wellarrangedmolecules.com/mineral\\_images/CQ3\\_9532.jpg](https://www.wellarrangedmolecules.com/mineral_images/CQ3_9532.jpg)

Fig. 3g. <https://cdn.irocks.com/storage/media/10034/conversions/dtn15a-large.jpg>

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Apatite... hexagonal, but with a number of variations. And not all varieties of apatite are hexagonal crystals. Apatite... light green, but not always. Apatite can be blue, say, or pink. Confusing? Yes - different varieties of apatite do not look the same. And crystals of some minerals *other than* apatite might *look like* apatite. Apatite can be, well, *deceptive*.

Perhaps delightfully, this deceptive quality of apatite is what led to its name. When the German geologist Abraham Gottlob Werner first recognized the mineral in the late 1700s, he realized that the crystal he had identified could be easily mistaken for olivine, peridot, tourmaline or even beryl. For that reason, Werner took the name for this newly identified mineral from the ancient Greek *απατάω* (apatáō), meaning “to mislead” or “to deceive”.

Although *you* do not have to be deceived by the similarities between apatite and beryl, olivine, peridot, and tourmaline. You can, for example, use the Mohs hardness scale as a test. At the low end of the scale, an object with a Mohs hardness of one is soft and easy to scratch. At the top end of the hardness scale, at ten, is diamond... diamond is very hard to scratch! Apatite sits right in the middle, at five. But the Mohs hardness of both olivine and peridot is between six and a half and seven, the Mohs hardness of tourmaline is between seven and seven and a half, and the Mohs hardness of beryl is between seven and a half and eight. So all four of these stones, which, again, have a look at least similar to apatite, are measurably harder, measurably more difficult to scratch. So a simple scratch test will avoid confusing apatite with beryl, olivine, peridot, or tourmaline. Hooray for the Mohs hardness scale!

If you have specimens of apatite in your collection, you likely have one or a few pieces of apatite in matrix. And if you do, that matrix is, as likely as not, calcite. (Green-hued apatite crystals in a calcite matrix are shown in Fig. 4.) Calcite is composed of calcium, carbon, and oxygen atoms ( $\text{CaCO}_3$ ); you can likely tell from these constituents that calcite is a close relative of apatite. It is not surprising, then, that these two minerals have often formed, and are therefore often found together.



Fig. 4: Green-hued apatite crystals in a calcite matrix.

Fig. 4. [https://i.etsystatic.com/22714545/r/il/b9bd19/3480450847/il\\_1140xN.3480450847\\_1w8b.jpg](https://i.etsystatic.com/22714545/r/il/b9bd19/3480450847/il_1140xN.3480450847_1w8b.jpg)

Pyromorphite, turquoise, and plumbogummite are often found together with apatite. In pyromorphite, lead (Pb) atoms and chlorine (Cl) atoms are bonded to phosphates, to make  $\text{Pb}_5(\text{PO}_4)_4\text{Cl}$ . (Recall that a phosphate the  $\text{PO}_4$ . part of this molecule.) In turquoise, copper (Cu) atoms, aluminum (Al) atoms, oxygen (O) atoms, and hydrogen (H) atoms bond with phosphates to form  $(\text{CuAl})_6(\text{PO}_4)_4(\text{OH})_6$ . And plumbogummite –  $\text{PbAl}_3(\text{PO}_4)(\text{PO}_3\text{OH})(\text{OH})_6$  – is a mixture of these two components.

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Some of these other minerals also readily form pseudomorphs from apatite. A pseudomorph is a crystal in which one mineral has replaced another, while leaving the overall crystal habit of the original mineral intact. Take a glance, for example, at the image of a crystal of limonite in Fig. 5. It looks like pyrite, not limonite: this is an image of a pseudomorph, specifically limonite after pyrite. This is a crystal that formed as pyrite, but over time, molecules of limonite replaced the molecules of pyrite. (The molecules in pyrite are an iron atom bonded to two sulfur atoms, and the molecules of limonite are iron atoms bonded to hydrogen atoms and oxygen atoms. The pseudomorph “limonite after pyrite” formed when the sulfur in pyrite was replaced by oxygen and hydrogen.) Turquoise after apatite (see Fig. 5b.) is another common pseudomorph. A specimen of turquoise after apatite formed as apatite, but over time, the calcium atoms in apatite were replaced by copper, aluminum, oxygen, and hydrogen atoms, which turned the apatite into turquoise. Turquoise after apatite pseudomorphs are relatively easily found in the ground, for example in mines in Mexico. And turquoise after apatite pseudomorphs are also relatively easily found for purchase at rock and gem shows.



Fig. 5a: A crystal of limonite after pyrite. In this pseudomorph, the iron sulfide molecules in a crystal of pyrite were replaced by the molecules that make up limonite.

Fig. 5a. <http://www.johnbetts-fineminerals.com/jhbnyc/mineralmuseum/43706.jpg>



Fig. 5b. A turquoise after apatite pseudomorph.

Fig. 5b. <https://cdn.irocks.com/storage/media/7282/den07-25a.jpg>

One last interesting tidbit concerning apatite. An analysis of the Moon rocks collected by astronauts during six NASA Apollo missions, as well as rocks collected by three unmanned Soviet spacecraft, revealed trace amounts of varieties of apatite on the Moon. Apatite, on the *Moon*—that is pretty exciting! A study of the apatite found in the crust of the Moon is one bit of evidence that there was once water on the Moon.

Water on the Moon? One rather curious variety of apatite was found on the Moon. This is hydroxyapatite, which contains a “hydroxyl” molecule fragment—OH—connected to calcium phosphate. (Hold your angry letters, please... yes, “hydroxyapatite” is sometimes referred to as “hydroxylapatite.”) And, oh my gosh, that hydroxyl fragment is rather similar to H<sub>2</sub>O, and H<sub>2</sub>O... that is water! The root “hydro” in “hydroxyl,” a root also found, for example, in “hydroelectric power” – power generated by *flowing water* – is the giveaway. This root comes to us from the ancient Greek word ὑδωρ (húdōr), meaning “water.” So the formation of

(Continued on page 14)

(Continued from page 13)

hydroxyapatite is, perhaps, related to the presence of water. Oh my (!), a variety of apatite found on the Moon may have formed due to the presence of water. Water on the Moon!

But wait a moment. Was there really once water on the surface of the Moon? Oh my, yes! And is there, perhaps, *still* water on the Moon? Oh my, yes, again! The first evidence for water on the Moon came in the early 2000s. And indisputable evidence of water on the Moon, even on the sunlit surfaces of the Moon, was confirmed in 2020. Although, okay, there is a rather small amount of water on the surface of the Moon: according to a recent NASA press release, the amount of water found in one of the largest craters on the Moon (a crater found by the Stratospheric Observatory for Infrared Astronomy, sent to the Moon by NASA) is “roughly equivalent to a 12-ounce bottle of water trapped in a cubic meter of soil spread across the lunar surface”. There is *one hundred times more water* in the sands of the Sahara Desert than on the Moon. Yes, it is dry—really, really dry—on the Moon. Still, the fact that there is any water at all on the Moon... that is very exciting!

And finally, no, the name “apatite” and the word “appetite”—a desire for something, often a desire for food—are not related. Although you might be amused (as I am), to know that calcium phosphate, the  $\text{Ca}_5(\text{PO}_4)_3$  molecule at the heart of the mineral apatite, is also one of the primary constituents of our teeth. So you could, at least in some sense, satisfy your appetite with apatite!

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

## [2025 Camp Paradise](#)

By Jill Atkins, Earth Science Studies Co-Chair

Camp Paradise registration opens March 15, 2025 and I, for one, am looking forward to another camp of learning, experiencing new jewelry and lapidary techniques and of course shenanigans. Camp dates this year are August 17-23 & August 24-30; \$550 per person, per week. You can find everything at [CFMSinc.org](https://cfmsinc.org). Scroll down to Camp Paradise and click on it. Thanks to Diane Cook registration will be online and payment will be online as well.

Speaking of new lapidary techniques, this year we will have a new intarsia program with some brand-new intarsia machines! Our instructor just returned from Tampa Bay, FL. Where she learned about a technique called Cobblestone Inlay, taught by Caitlin Albritton. (I don't have a clue either but am eager to learn.) She will also teach introductory intarsia but is working toward developing some advanced options.

CFMS – 2025 Camp Paradise Registration (Fillable)(<https://cfmsinc.org/wp-content/uploads/2025/02/CFMS-2025-Camp-Paradise-Registration-Fillable.pdf>)

Checks will be accepted. Print out and send the form (link above) with your check.

## 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](http://www.amlands.org)

**BLM 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/>

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

**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>

## Membership Dues for 2025 Are Due

SCVGMS membership dues are due for the year 2025. 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 Gem and Mineral Society, Box 54, San Jose, CA 95103-0054, or to Frank Mullaney, 5705 Begonia Drive, San Jose, CA 95124

Thank you.

## Information on Shows

### March 7–9, 2025 - Stoddard Wells, CA

Victor Valley Gem and Mineral Club  
I-15 toward Barstow. Exit #157, stay on  
Stoddard Wells Road. Follow the signs 7  
miles to tailgate

Contact: [831-406-0214](tel:831-406-0214),  
[president@vvgmc.org](mailto:president@vvgmc.org)

Website: [vvgmc.org/](http://vvgmc.org/)

### March 8–9, 2025 - Turlock, CA

Mother Lode Mineral Society  
Turlock Fairgrounds, 900 N. Broadway  
Hours: 10–5

Contact: [209-499-0533](tel:209-499-0533),  
[skitish1112@hotmail.com](mailto:skitish1112@hotmail.com)

Website: [www.turlockgemshow.com](http://www.turlockgemshow.com)

### March 15–16, 2025 - San Jose, CA

Santa Clara Valley Gem & Mineral  
Society  
Santa Clara County Fairgrounds  
344 Tully Rd.

Hours: 10–5

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

### March 21–23, 2025 – Clovis, CA

Fresno Gem and Mineral Society  
Clovis Rodeo Grounds, 748 Rodeo Dr.  
Hours: Fri & Sat 1–5, Sun 10–4

Contact: [708-821-7575](tel:708-821-7575)

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

### March 22, 2025 - Redwood City, CA

Private showing and sale of the collection  
of John P. Dabney.

Community Activities Bldg.

1400 Roosevelt Avenue

Hours: 10–7

Required RSVP: [fgrandi@hotmail.com](mailto:fgrandi@hotmail.com)

### March 22–23, 2025 - Angels Camp, CA

Calaveras Gem and Mineral Society  
Calaveras County Fairgrounds,  
2465 Gun Club Rd.

Hours: Sat 10–5, Sun 10–4

Contact: [209-736-4892](tel:209-736-4892),

[annachristiansen7132@comcast.net](mailto:annachristiansen7132@comcast.net)

Website: [https://  
calaverasgemandmineral.net/show.html](https://calaverasgemandmineral.net/show.html)

### March 22–23, 2025 - Torrance, CA

South Bay Lapidary & Mineral Society  
Ken Miller Recreation Center  
3341 Torrance Blvd.

Hours: Sat 10–5, Sun 10–4

Contact: [213-283-3448](tel:213-283-3448),  
[edwhitefire@gmail.com](mailto:edwhitefire@gmail.com)

Website: [https://  
southbaylapidaryandmineralsociety.com/](https://southbaylapidaryandmineralsociety.com/)

### April 12–13, 2025 - Mariposa CA

Mariposa Gem and Mineral Club  
Mariposa County Fairgrounds  
5007 Fairgrounds Rd.

Hours: Sat 10–5, Sun 10–4

Contact: [mcmc@sti.net](mailto:mcmc@sti.net)

Website: <https://mariposagemclub.org>



**April 12–13, 2025 - Newbury Park, CA**

Conejo Gem and Mineral Club

Borchard Community Center

190 N. Reino Road

Hours: Sat 10–5, Sun 10–4

Website: <https://CGAMC.org>

**April 12–13, 2025 - Placerville, CA**

El Dorado County Mineral & Gem Society

El Dorado County Fairgrounds

Hours: Sat & Sun 10–5

Contact: 530-676-2472

Website: <https://edcmgs.org>

**April 26–27, 2025 – Anaheim, CA**

Searchers Gem and Mineral Society

Brookhurst Community Center

2271 W. Crescent Ave.

Hours: Sat 10–5, Sun 10–4:30

Contact: [anaheimsearchers@gmail.com](mailto:anaheimsearchers@gmail.com)

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

**May 2–4, 2025 - Santa Ana, CA**

West Coast Gem & Mineral Show

Holiday Inn-Orange County Airport

2726 South Grand Avenue

Hours: Fri & Sat 10–6, Sun 10–5

Contact: [mineralshowsld@gmail.com](mailto:mineralshowsld@gmail.com)

Website: <https://www.mineralshowsld.com/>

**May 10–11, 2025 - Lancaster, CA**

CFMS Convention

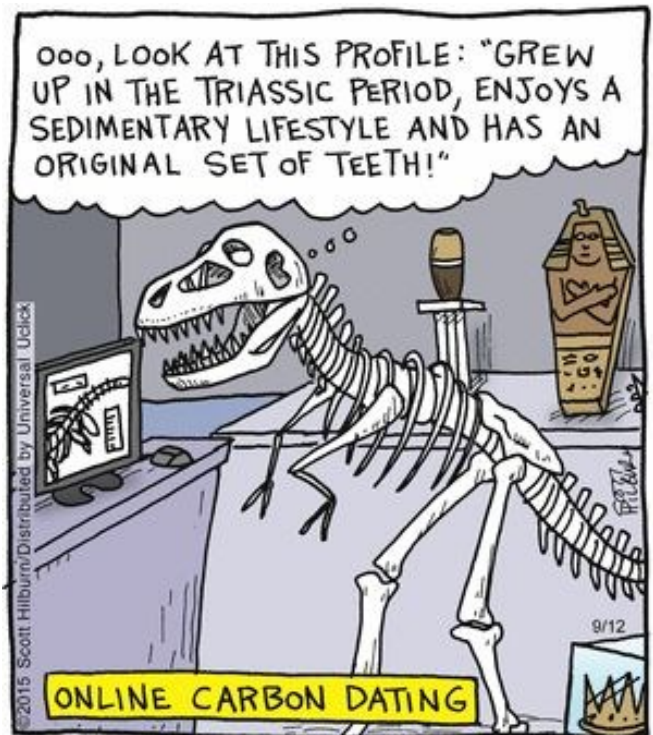
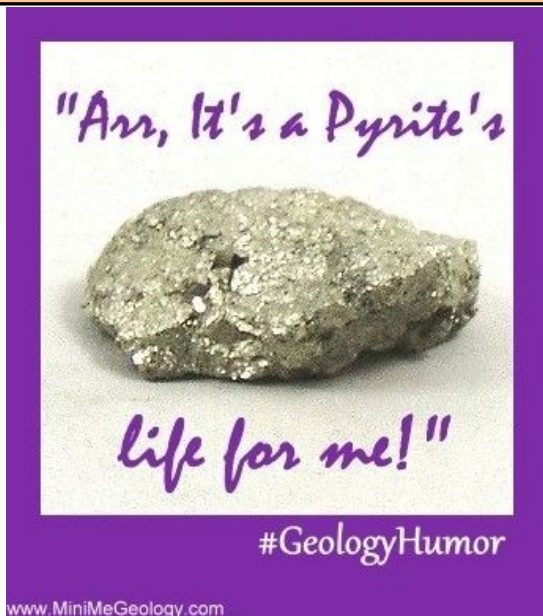
Antelope Valley Gem and Mineral Club

Antelope Valley Fairgrounds

2551 W. Ave H

Hours: Sat 9–5, Sun 9–4

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



## Rockhound Holidays

With permission from <https://www.rockngem.com/2023-rockhound-holidays/>

### National Jewel Day – March 13

This day is for appreciating precious stones and jewelry. From the earliest examples of stone, bone, and shell jewelry, to the most lavish and intricate designs of today, National Jewel Day is meant to recognize them all.

### Geologists Day – April 6

This day is dedicated to those folks who make it their life's work to explore, research and disseminate their knowledge of rocks and Earth's history. It is also the time to appreciate all of those things in our lives that we have or know because of geologists.

## Puns

People at parties will not get rockhound jokes. That's okay because igneous is bliss.

What happened to the rockhound who went to Las Vegas?  
He lost his chert.

What do you get when you drop a piano down a mine shaft?  
A flat miner.

Don't expect perfection from a geologist. They all have their faults.

What do you call small rocks?  
Mini-rals.

Who is a rock hound's favorite band?  
The Rolling Stones.

You: I hate geology puns.  
Me: My sediments exactly.

## 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

## Board Members at Large

Jo Borucki, 408-245-2881  
Jim Fox, 408-356-7711  
Missy Fox, 408-356-7711  
Cathy May, 408-248-3993  
Michele Smith, 408-374-1897  
Stephen May, 408-306-6782 (Federation Director)  
Paul Kidman, 408-356-4995 (Alternate Federation Director)

## SCVGMS COMMITTEE HEADS

Bragging Rights Chair: Cesar Nuñez  
Donation Receiving Committee Chair: Michele Smith  
Editor: Deb Runyan  
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 Chairman: Jim Herbold  
Founder's Day Raffle: TBD  
Hospitality: TBD  
Installation Dinner: TBD  
Librarian: Deb Runyan  
Member Displays: TBD  
Refreshments: TBD  
Show Chairpersons 2025: TBD  
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](http://www.scvgms.org)

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

Phone Number [408-265-1422](tel: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](mailto:editor@scvgms.org) and by phone at 408-628-7789. The Breccia is proofread by **Pat Speece** and **Sonia Dyer**.

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