Lake George Gem & Mineral Club

Club News,

July, 2022

The July meeting of the LGGMClub, which will be held at 9:00AM July 9 in the gym of the Lake George Charter School. The school is located about ½ mile east of Lake George, just south of US 24 (watch for the sign). Our program will be offered by:

Steve Woje

"Luminescent Minerals: The Colorado Connection"

This year's Tucson Gem & Mineral Show focused on luminescent minerals—those that fluoresce and do other things in UV light. Steve Woje is a long-time fluorescent-mineral collector who builds his own lamps and has a large display in his home. His talk will focus on luminescent minerals from Colorado—bring your samples to check out before the talk. This will be a great introduction before the field trip to Steve Gorman's Gold City Claims. We may even have a few luminescent specimens to bid on in the silent auction! Here's a brief bio:

Steve is a retired communications network designer/corporate instructor now living the Florissant, CO area by way of Chicago, Tucson, Denver, Ohio, and finally back to Colorado. His first fluorescent collection, which he still has, was purchased at the age of 16 via mail order from the long gone Eckert Mineral Research Company at 1244 East Colfax Ave in Denver. After a long hiatus from the hobby while doing life, a trip to the Colorado School of Mines fluorescent display about 10 years ago reintroduced him to this fascinating hobby.

His fluorescent collection of about 600 specimens represents many areas of the world, including the US, Australia, Africa, China, Europe, South America and even Tajikistan. About 25% of the collection is self collected from locations such as the famous Franklin and Sterling, NJ mines, the Blanchard mine in New Mexico, the Nellie James mine in southern Arizona, Helvetia, AZ, and several places in Colorado including, Fremont County, Trout Creek Pass, the Calumet Mine, the Camp Bird Mine, as well as the Sweet Home mine area. An avid DIYer, many of the lamps that are used in his home display, as well as field collecting lamps, are home-made. Steve also collects "regular" minerals and specializes in the
Bisbee, AZ mines.

One of the most satisfying aspects of this hobby to Steve, is the look of unbelief on the speechless faces of visitors who had no idea that some rocks respond to ultraviolet light as they do. And better yet are those who start collections of their own.

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Scheduled Programs at Club Meetings:

The Club currently has no program coordinator. If this is a job that appeals to you, please consider volunteering to do this.

- **August 13: Preparation work for our annual show; come and give a hand!**
- **Sept. 10: Bob Carnein, "Where do Geodes Come From?"** Bring an unopened geode for **Richard Kawamoto** to crack with his pipe cutter. If you don't have an unopened geode, contact Bob (ccarnein@gmail.com) to buy one, or bring one you've already opened for "show and tell".
- **Oct. 8: Mark Jacobson, "The Crystal Peak Amazonite-Smoky Quartz Locality, Teller and Park Counties, Colorado (1873-1986)" Mark** is working on a major book about the history of mineral collecting in this area. You won't want to miss his talk!

- Come to the meeting and bid on some special items at the **silent auction**! (There have been some really good buys this spring!) If you have extra mineral/fossil samples that could be used as "giveaways" at the show or for future silent auctions, please bring them.

- **Election of officers** has been postponed. Please contact one of the current officers (listed at the end of this newsletter) if you would consider running for a 2023 office.
- We're still hoping for a talk about the famous Corral Bluffs fossil-mammal discoveries near Colorado Springs, to be followed by a field trip.

- **Carol Kinate needs your help at the 2022 LGGMC Mineral & Gem Show:**

SAVE THE DATE – AUGUST 19-21, 2022 (LGGMC Annual Show)

AGAIN a word from your Show Chair – I am reaching out to all members and I'm still looking for additional help with this year's Annual Show. I am listing the current positions needed to be filled to make our show a success. My contact information is listed below.
 Show Volunteer Coordinator --Show **shift assignments** – 2-hour shifts,
Field setup/takedown assignment --August 13 after our monthly meeting and August 22nd (morning),
Kids activities --shift assignments – 2-hour shifts.
 Signage--installation/takedown of signage on JULY 30th and immediately after show ends - currently 7 locations
 EXTRA ROCKS that you are willing to part with for "Kids Activities"
~ **Signup forms** for shift assignments will be available at our July monthly meeting or you can call/text me and I can write in your name on signup sheets.
~ **Postcards** advertising our show available for distribution at our July meeting.
~ **Flyers from Rock & Gem Magazine** available for distribution at our July/August meeting and also at our show.
Thank you for your time and consideration. Please contact me with any questions whatsoever. Looking forward to a GREAT show!
Carol Kinate, Show Chair
kinatec@aol.com
719-648-9015 (call/text)

- **Dave Alexander sent this info about upcoming field trips:**

We have volunteer opportunities available for the following, contact me dave@davealex.com or

303.641.5567:
1) June 30. Florissant Rough to Gem Event. Bring your lapidary skills to share with the public and socialize the club. We'll start about 9am and finish by 1pm or so.

2) Field Trip Leaders. If you are interested in leading trips, now is a great time; we will pair you up with an experienced leader on a trip you'd like to go on. It's really simple, and necessary to support the health of the club!

3) Field Trip Event Coordinators. We need several more people that would be interested in coordinating field trips (you can choose to lead them too, or find another leader if that doesn't interest you). This includes working with the coordinator team to ensure we have access (talking to claim owner, mine owner, and sometimes prospecting) and setting up the events on our field trip site. This role is important to keep our robust events schedule healthy for all club members!

If you have a site you'd like to visit, let me know the details.

Thanks!
--Dave

- Dave also asked me to include this about field trips:
  The field trip website sends out automatic email notifications from a Google email address. Can you ensure you keep our domain in your safe senders list? Lggmcfieldtrips.com

Buena Vista Contin-Tail Gem, Mineral, & Fossil Show

Buena Vista Rodeo Grounds, Gregg Dr., Buena Vista, Colorado, August 11-14, 9AM-6PM

ADDITIONAL COMING EVENTS OUTSIDE THE LGGM CLUB: (Nearby gem, mineral, fossil, and geology events that you may enjoy.)

- **Cañon City Geology Club**, meets on the 2nd Monday of the month at 6PM in the United Methodist Church, Cañon City
- **Columbine Gem & Mineral Society**, meets on the 2nd Thursday of each month, 6:30PM in the meeting room, Mt. Shavano Manor, 525 W. 16th (at J St.), Salida
- **Colorado Springs Mineralogical Society**, meets on the 3rd Thursday of each month at 7PM in the Mt. Carmel Veteran's Service Center, 530 Communication Circle, Colorado Springs;

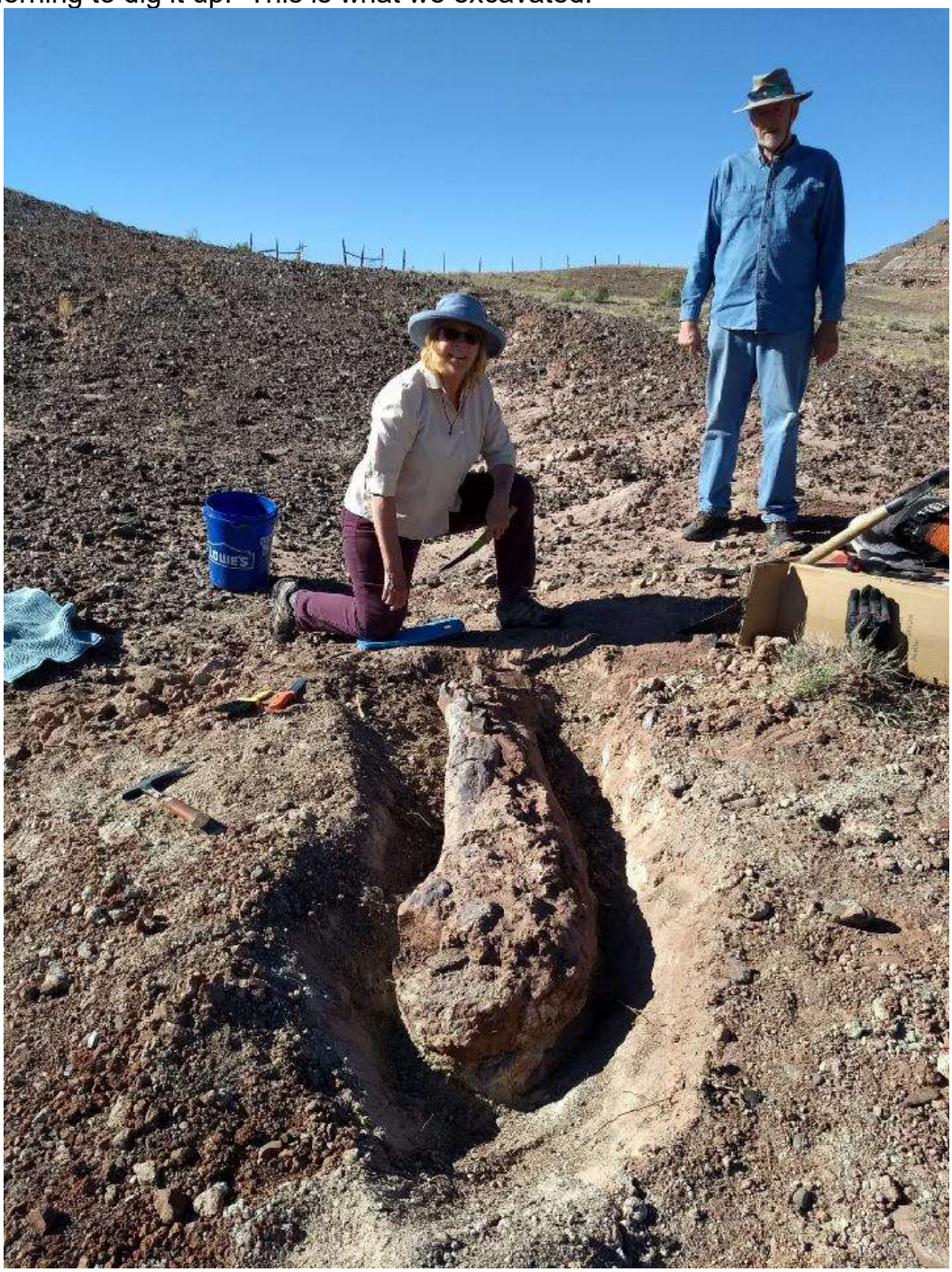
- **Pueblo Rockhounds**, meets on the 3rd Thursday of each month at 6:30PM in the Westminster Presbyterian Church, 10 University Circle, Pueblo.

Robert Baker sent this report of an exciting (!) field trip to Utah:

UTAH ADVENTURE

By Bob Baker

Leesa and I joined 2 friends in Utah for several days of rock collecting, sightseeing, and good food in the outdoors. We had found an area that had lots of nice jasper and agate suitable for tumbling and polishing. It also had some petrified wood that we were especially interested in finding. Leesa found a piece of petrified wood imbedded in the ground, and we decided to wait until the morning to dig it up. This is what we excavated:



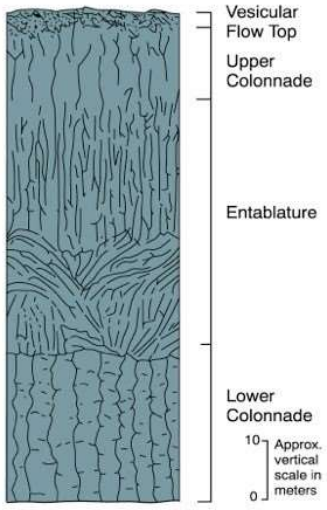
This is a 5-ft leg bone of a sauropod dinosaur informally called “Leesasaurus”. We contacted the BLM Field Office, and 2 officers came to our location to log the site and request that a paleontologist excavate the site for other bones. The BLM officers will keep us updated on future developments and we will pass them along

Wayne Orlowski is at this moment rafting the Grand Canyon. He sent the following interesting links about geology and mineralogy:

- Do you wonder about what jade is? Here’s a link to an explanation: https://www.geologypage.com/2017/09/nephrite-jade-sources.html?fbclid=IwAR3rl-guvAR6_kQMSs20aONXmJHNFjPy3ieJC8n9RwSTSSPrGrQjq4LuwTc
- What is Petoskey stone and where is it found? https://www.geologypage.com/2019/05/petoskey-stone-what-is-petoskey-stone-where-is-petoskey-stone-found.html?fbclid=IwAR02LEkDVP0XJRQZ2Rw4U1Ot7qdpwg_mUNW6dHcs_r5gmB9QHuXDmdxnF-I#
- Follow the link to see massive tunnels dug by a giant sloth that lived in South America 10,000 years ago. LOOK AT THOSE CLAW MARKS. They dug tunnels that are a whopping 2,000 feet long, six feet tall and up to five feet wide! Big enough to be comfortably used by humans.

  More on the story and images/info: https://cutt.ly/yJMl2bw
- Columnar jointing is a common feature of lava flows.

  https://www.geologyin.com/2014/11/columns-basalt.html?fbclid=IwAR1B8BwK4067lo0VnSg4eiQVSnxJreTRpTIT80OwPmr-qGP3evG-40c5n1s



Lava flows display a variety of columns, often with a stratigraphic pattern. Colonnade is a coarser, more regular pattern often found at the base of the flow. Entablature is more irregular, and often found near the top. Sometimes there is a sandwich Colonnade-entablature-colonnade structure like this one (Long & Wood, 1986).

- Here is the latest installment of **"Bench Tips" by Brad Smith:** (www.BradSmithJewelry.com)

HOMEMADE WAX TOOLS

Save your used X-Acto or scalpel blades for utility work on the bench. They're wonderful for delicate wax work. Use a cutoff wheel or other type of grinding wheel to shape the blades to what you need. For instance, you can carve away excess metal on the spine to make yourself some narrow carving knives that do a great job of detailing small pierced areas of your waxes.

REMOVING A STONE FROM A BEZEL

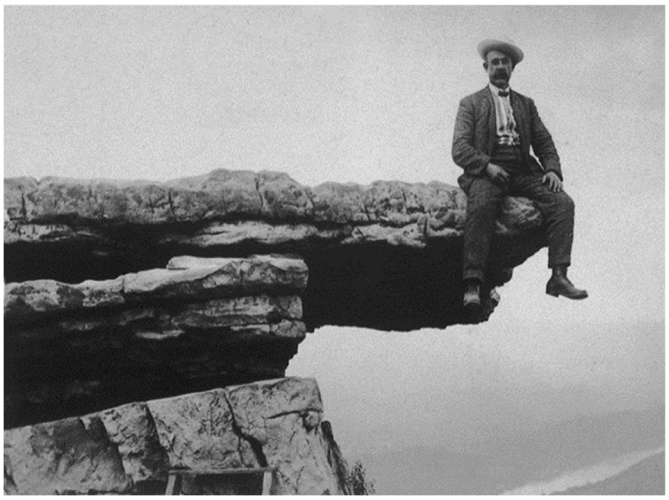
If you've forgotten to use dental floss and got your stone caught in a bezel, there's one thing you can try before starting to pry.

Find some sticky wax or beeswax. Roll it into a pencil-sized cylinder and stick the end onto the top of the stone. Mold it on well and yank.

But if the stone is really stuck, there are two other tricks - but each with risks and consequences. The first is to pry open the bezel with a sharp knife blade being very careful not to wrinkle or tear the l

The last solution is to drill a small hole into the bezel setting from the back side so that you can push the stone out. Note that this does leave a hole, but in some cases, you can use it to saw out a design under the stone.

More smart solutions for your jewelry making problems can be found in my metal arts books on Amazon at http://amazon.com/author/bradfordsmith



Notes from the Editor

Bob Carnein

Newsletter Editor

ccarnein@gmail.com

If you were at the June meeting, you saw a lot of rhodochrosite from the Sweet Home mine, in Park Co. However, you may not be aware that this famous Colorado locality produced some other interesting minerals. Here's a short article about some of those in your editor's collection. The information came from the references at the end of the article.

"Other" Minerals of the Sweet Home and Detroit City Mines

by Bob Carnein

Nearly every mineral collector is familiar with the spectacular rhodochrosites from Colorado's Sweet Home mine. At last month's meeting, LGGMC members saw a fascinating summary of the history and geology of this old silver mine that was reopened and repurposed by a group of investors, led by Bryan and Kathryn Lees, in the early 1990s through the early 2000s. This group gambled that a combination of smart use of resources and smart geologic thinking might produce a decent return on their investments of time and money. Although the project often appeared to be doomed to failure, it eventually produced thousands of superb mineral specimens worth millions of dollars.

Starting in 1873, the Sweet Home was one of hundreds of minor Colorado silver mines whose survival depended, in large part, on the on-again, off-again price supports of the Federal government. In nearly a century of erratic operations, the mine produced only about $215,000 (in then-current silver prices) through its demise as a silver mine in 1967. Coincidentally, the discovery of the “Alma Queen” rhodochrosite specimen in 1965, considered by some to be the finest mineral specimen ever found anywhere, led to fitful attempts to convert the mine to a specimen operation. Several people produced rhodos for the specimen market, but, like most mines, this one ate money faster than it made it. (The Alma Queen, which is now in the Houston Museum of Natural Science, sold for a ”mere” $2500 in 1967.) But the occasional discovery of a nice pocket and improving prices for mineral specimens fed the dreams of some people who thought it had a future.

In 1991, the Leeses and their partners, under the name “Sweet Home Rhodo, Inc.”, leased the mine from its owner, Leonard Beach. In 1998, they bought out the other investors and purchased the mine outright. By the time the mine closed and the portal was sealed in 2004, it is thought to have produced about **$100,000,000** worth of specimens (collectorsedge.com, accessed June, 2022).

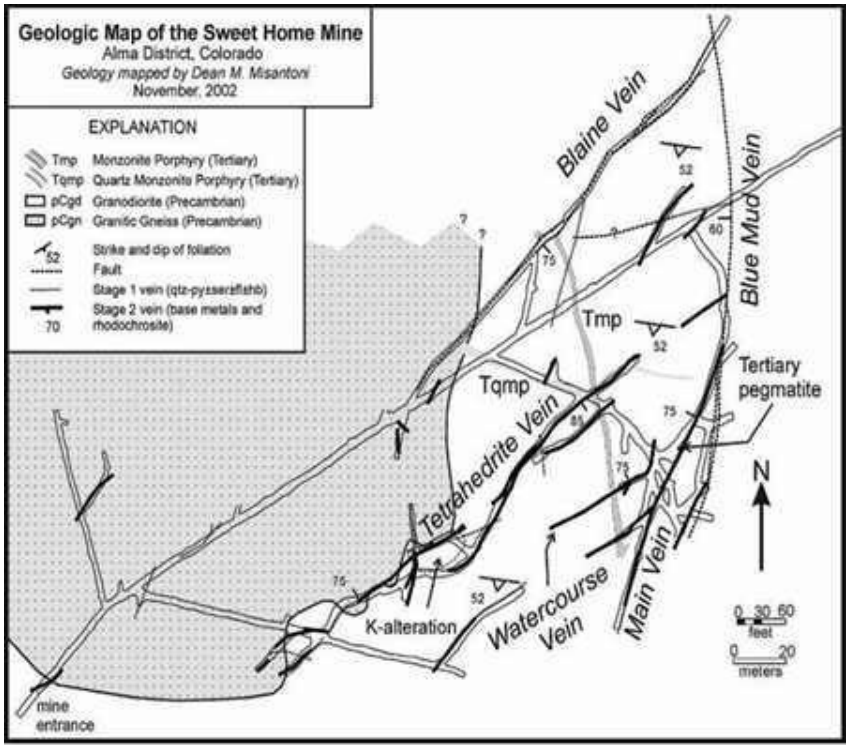


Figure 1. Geologic map of the Sweet Home mine, showing major veins and passageways. (Mindat.org, accessed June, 2022)

Unfortunately for many of us, the fantastic “combo” plates of rhodochrosite, quartz, and fluorite for which the mines are famous are a bit beyond our means. If we’re lucky, we probably have to be happy with a nice “thumbnail”-sized piece that isn’t dinged up or massive. However, what some collectors don’t realize is that the Sweet Home (and, now, the Detroit City) produced some really nice specimens of other minerals that are much more affordable than the rhodos. Mindat.org (accessed June, 2022) lists 50 valid mineral species. If you want a thorough introduction to the history, geology, and minerals (as of the late 1990s), see Moore, *et al.*, 1998.

About 60 m vertically above the Sweet Home mine, the Detroit City mine was opened by Collectors Edge Minerals in 2016. Mineral-specimen production began in 2018, with fine examples of rhodochrosite, fluorite, and other minerals reaching collectors through the owners’ outlet in Golden and sales at major mineral shows. Although the two mines are separate, they are geologically connected and contain similar mineralization. Mindat.org (accessed June, 2022) lists 19 valid species from the Detroit City mine.

Here are a few photos of “other” Sweet Home and Detroit City minerals from my personal collection.

Fluorapatite occurs as attractive, translucent to transparent, doubly terminated, sometimes bi-colored crystals associated with quartz, fluorite, rhodochrosite, and dickite (a white clay mineral). Crystals are generally less than 1 cm long. They exhibit an attractive fluorescence in both LW and SW UV (see Fig. 2, 3).

Figure 2. Pale green fluorapatite crystals with fluorite, sphalerite, and quartz, Sweet Home mine.

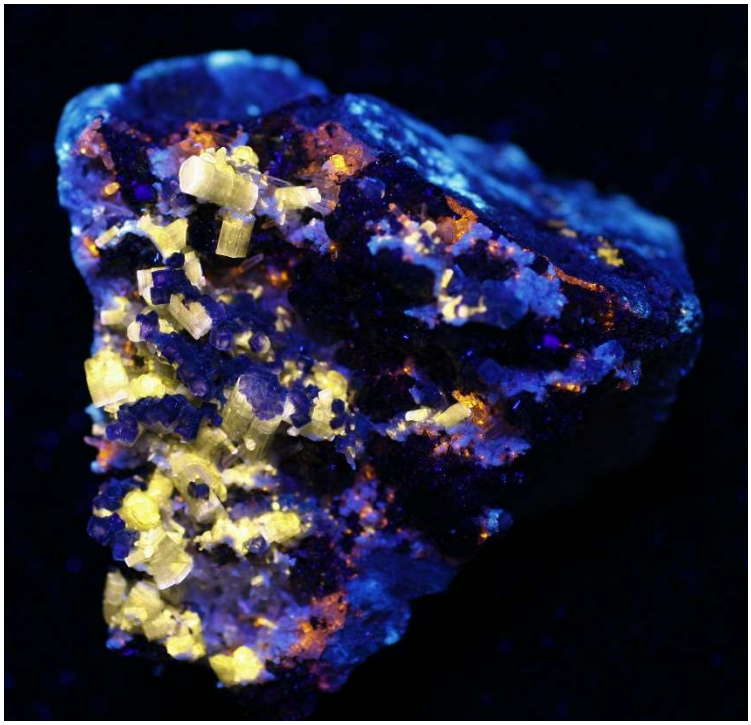


Figure 3. Same as Figure 2, in SW UV, showing fluorescence of fluorapatite (yellow) and sphalerite (orange).

Fluorite is common in the mineralized veins of both the Sweet Home and the Detroit City mines. It occurs as cubic crystals and cubes modified by dodecahedra from less than a mm to several cm across. The crystals are generally purple in color, although yellow, blue, green and brown also occur

and the crystals may be zoned. The purple crystals commonly fluoresce some shade of blue (see Fig. 4, 5).

Figure 4. Fluorite with quartz and sphalerite from the Sweet Home mine. Note zoning and crystal habit of fluorite (cubes with dodecahedral edges).

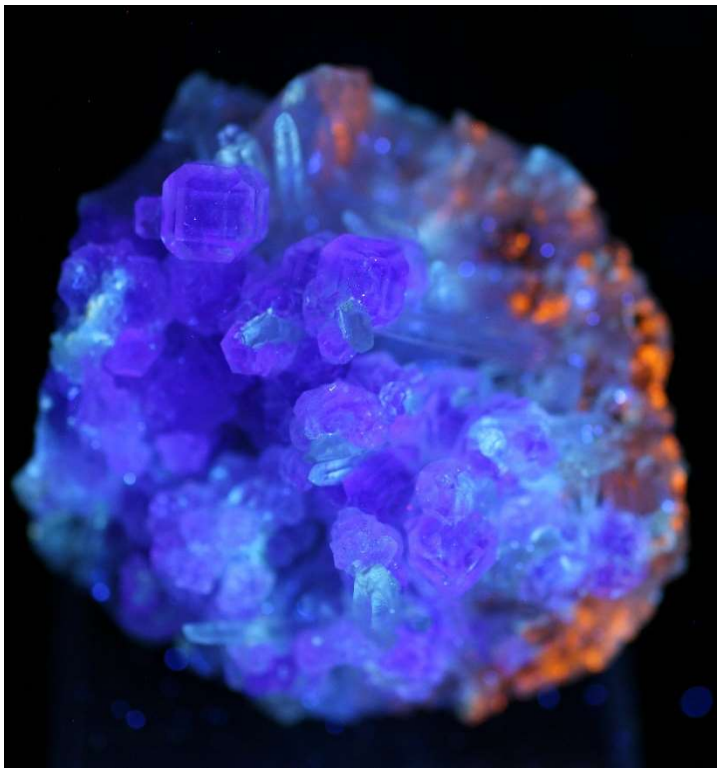


Figure 5. Same as Figure 4, in SW UV. Fluorite fluoresces blue; sphalerite fluoresces orange.

Galena (Figure 6) generally occurs as very small (less than 1 cm) cubic or octahedral crystals associated with other sulfides and quartz. Although early writers thought that galena was the main source of silver production at the Sweet Home mine, analyses show that most galena has little or no silver (Weinrich and Aumente-Modreski, 1998).

Figure 6. Octahedral galena crystal with cubic corners, associated with rhodochrosite, quartz, and sphalerite, from the Sweet Home mine.

Hübnerite is the manganese end member of the wolframite group—a solid-solution series whose composition varies from $MnWO_4$ (hübnerite) to $FeWO_4$ (ferberite). At one time, hübnerite concentrates were shipped out of the Sweet Home mine as a source of tungsten (W). Fine reddish-brown bladed crystals were associated with rhodochrosite, sulfides, fluorite, and quartz (Figure 7, 8).

Figure 7. Hübnerite (black, bladed crystals) with quartz and sphalerite. Sweet Home mine.

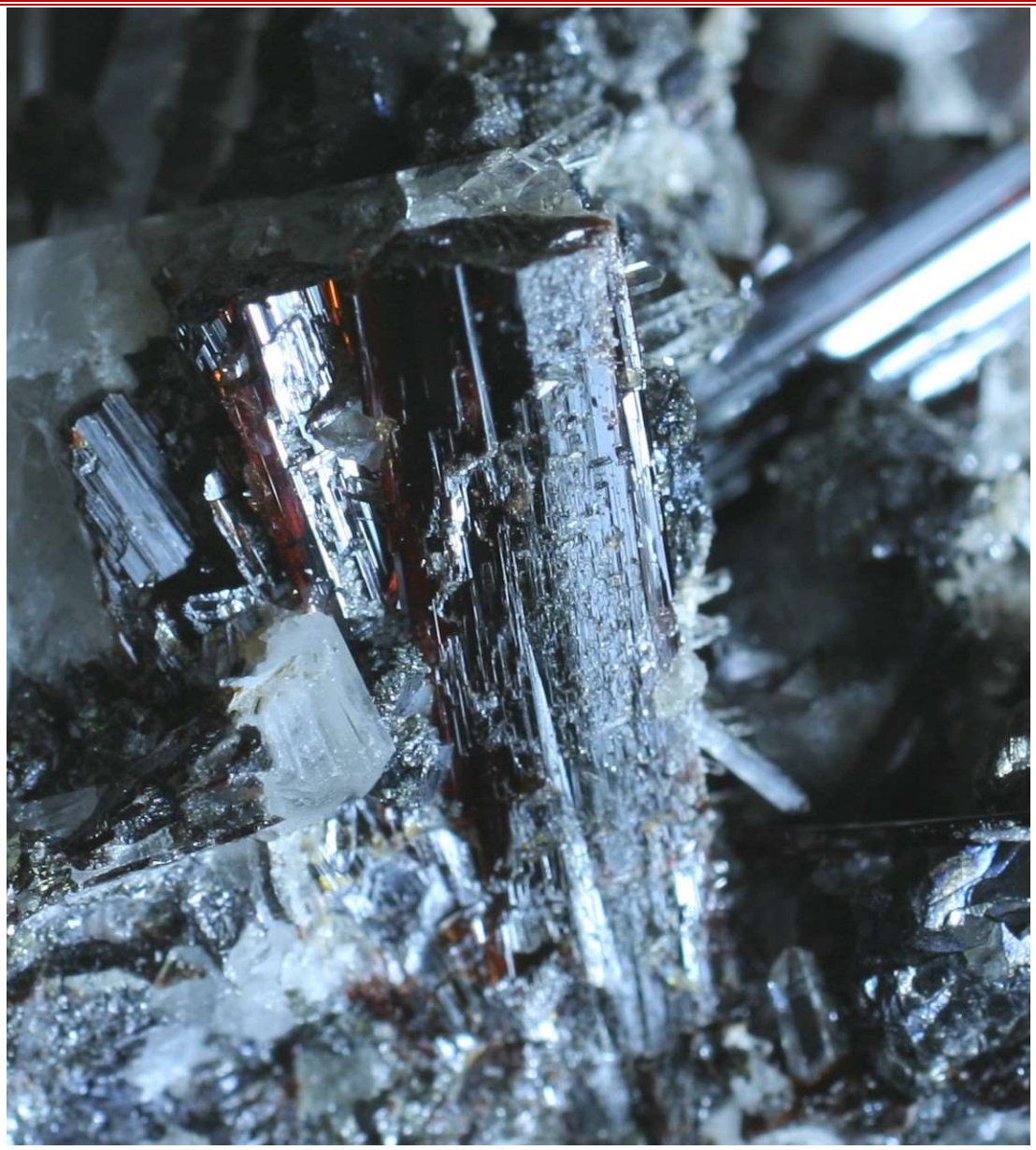


Figure 8. Hübnerite crystals (note brownish translucency) with quartz. Sweet Home mine.

Svanbergite is a relatively rare strontium phosphate-sulfate that was rarely reported from the Sweet Home mine but apparently is more common at the Detroit City mine. At that locality, it occurs as orange, sub-millimeter-sized crystals in veins containing quartz, fluorite, sphalerite, and rhodochrosite, among others (Figure 9).

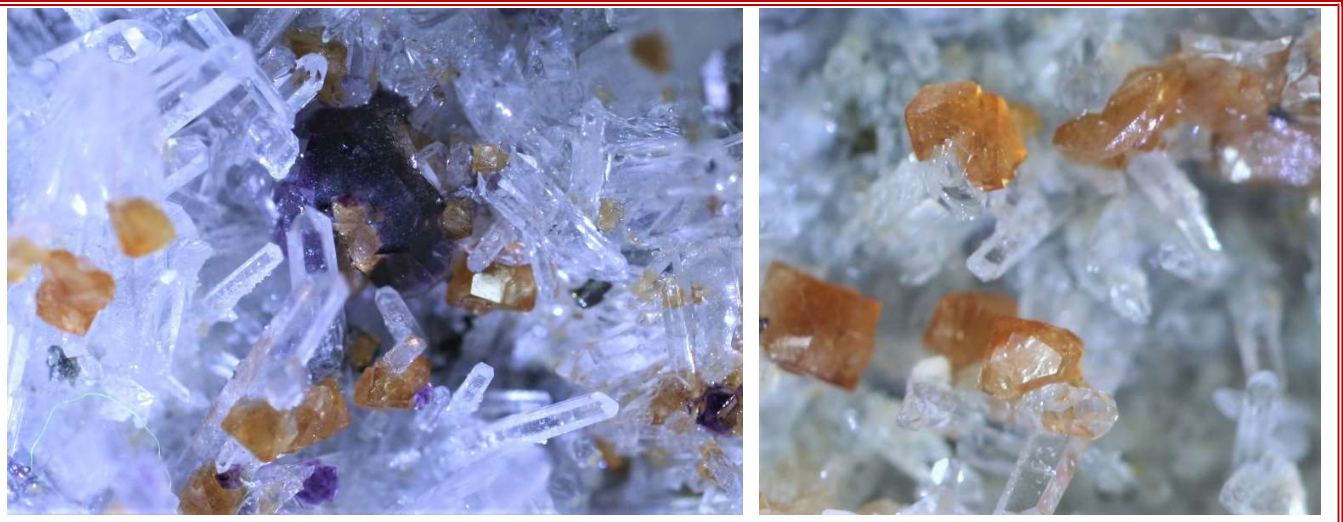


Figure 9. Svanbergite (orange) crystals with fluorite and quartz. Detroit City mine.

Zinc-Tetrahedrite/Tennantite is common in the vein systems, where it can occur as large crystals (up to several cm). Where well developed, these have a characteristic tetrahedral shape (habit). Their gray color and submetallic luster help to distinguish zinc-tetrahedrite/tennantite from other sulfides such as sphalerite and galena (Figure 10, 11). It occurs with those sulfides, along with pyrite, rhodochrosite, fluorite, and quartz. Analyses by Aumente-Modreski indicate that zincian tetrahedrite was probably the main source of silver in the Sweet Home ores (Weinrich and Aumente-Modreski, 1998), where silver content as high as 1.8% was reported.

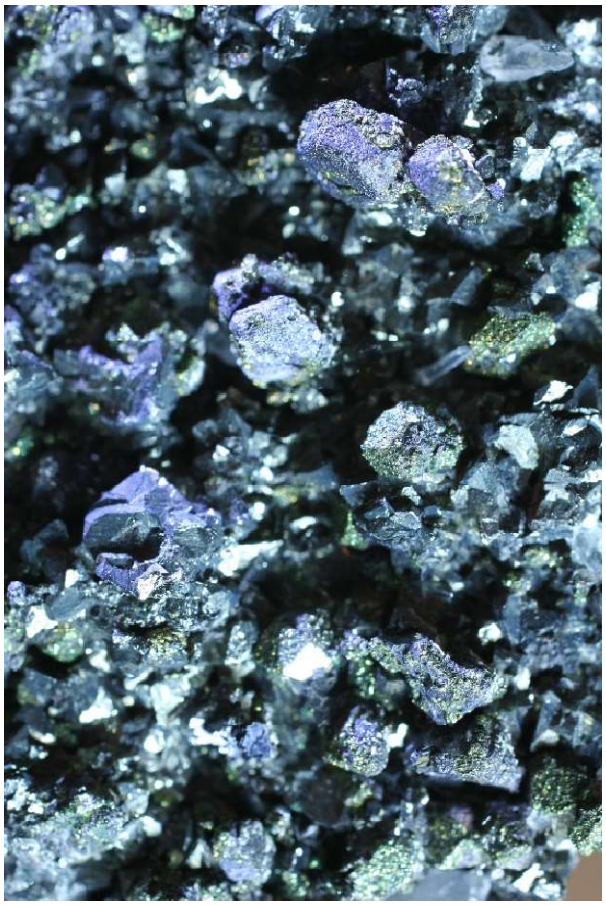


Figure 10. Zinc-Tetrahedrite/Tennantite from the Sweet Home mine. Sphalerite and pyrite are also present.

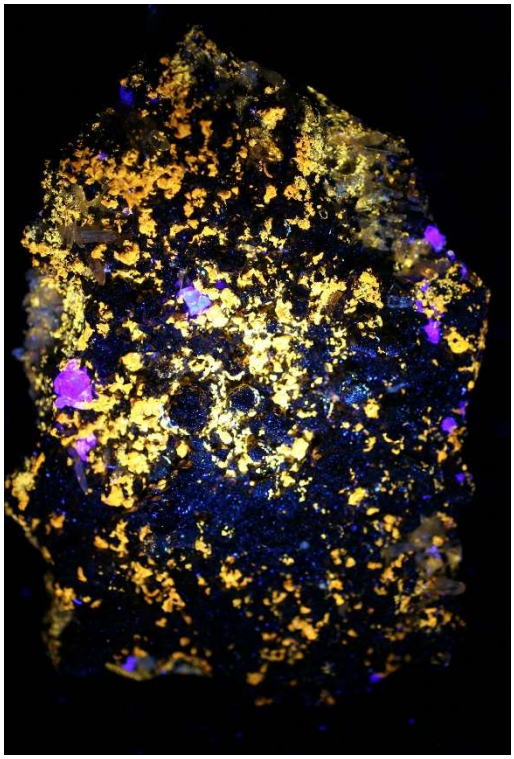


Figure 11. Sphalerite fluorescence in LWUV. Same specimen as Figure 9. The purple spots are fluorite, which actually fluoresces blue (see Fig. 5). My camera sometimes can't capture the ordinary blue fluorescence of fluorite.

References cited:

Moore, T.P., *et al.*, 1998, The Sweet Home Mine: Mineralogical Record, vol. 29, no. 4, p. 1-153.

Weinrich, K.J., and R. Aumente-Modreski, 1998, Crystal chemistry of minerals of the Sweet Home mine: Mineralogical Record, vol. 29, no. 4, p. 132-144.

Monthly Mineral Quiz

The Monthly Mineral for July (Carnein photos and collection)

The mineral for July is one you can easily collect in central Colorado. Specimens, however, are usually not obvious. This mineral rarely forms attractive crystals but instead occurs mainly as whitish, fibrous aggregates with a silky luster in metamorphic rocks (such as gneiss or schist of the Idaho Springs Fm.). It's important to geologists, who use it as an indicator of temperature and pressure of metamorphism. You probably won't even notice it unless you use a hand lens and already suspect its presence. Because of its fibrous nature and intergrowth with other minerals, many of its properties aren't easily measured. However, note the cracks running across the lengths of the fibers and its common occurrence in metamorphic rocks. What is this common mineral?

Last Month's Mineral: Baryte, $BaSO_4$.

Baryte is a common mineral that occurs in a variety of geologic associations, including sedimentary deposits and hydrothermal veins. It is abundant in Colorado, occurring in hundreds of localities, mostly as nondescript platy aggregates and masses. However, fine crystals can still be collected at several famous locations, including Hartsel (left photo), the Book Cliffs, near Grand Junction (right photo), and even the pegmatites near Lake George. Because of its high density (SG about 4.5) and abundance, baryte is an important mineral used in drilling muds by the oil and gas industry.

Eckel, E.B., 1997, *Minerals of Colorado, Updated and Revised by R.R. Cobban, et al.*: Golden, Colorado, Fulcrum Publishing.

The Lake George Gem and Mineral Club is a group of people interested in rocks and minerals, fossils, geology and history of the Pikes Peak/South Park area, Indian artifacts, and the great outdoors. The Club's informational programs and field trips provide opportunities to learn about Earth science, rocks and minerals, lapidary work and jewelry making, and to share information and experiences with other members. Guests are welcome to attend, to see what we are about!

The Club is geared primarily to amateur collectors and artisans, with programs of interest both to beginners and serious amateurs. The Club normally meets on the second Saturday of each month at the Lake George Community Center, located on the north side of US Highway 24 on the east edge of town, sharing a building with the county highway shops. **In the winter, we meet at 10:00AM. From April through October, we meet at 9:00AM, to allow more time for our field trips.**

Our organization is incorporated under Colorado law as a nonprofit educational organization, and is a member of the Colorado, Rocky Mountain, and American Federations of Mineralogical Societies. We also sponsor an annual Gem and Mineral Show at Lake George, where collectors and others may purchase or sell rocks, minerals, fossils, gems, or jewelry. Annual membership dues (Jan. 1 through Dec. 31) are $15.00 for an individual (18 and over), and $25.00 for a family (parents plus dependents under age 18). New memberships and renewals are only accepted Jan 1 through March 31 each year.

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