Lake George Gem & Mineral Club

Club News

June, 2021

LGGM Club Memberships

The period for club membership applications (January 1 through March 31st) is now closed. Although both members and non-members are welcome to attend the presentations at our monthly club meetings, only members may attend club field trips.

LGGM Club Meetings & Programs:

At last, the LGGM Club will resume monthly meetings with the first one at 9:00 a.m. on Saturday, June 12! Our monthly meetings at this time will be held under the same conditions as they were before the Covid-19 pandemic began. While face masks and social distancing are not required, you are welcome to use them if you prefer. Meetings will be held on the second Saturday of each month. Meetings will begin at 9:00 a.m. from April through September, and at 10:00 from October through March. Programs at each meeting will begin as soon as the monthly business meeting is completed.

Program for June, 2021:

Rockhounding 101 by **John Rakowski**

Biography. John is a retired professional geologist with a career as a petroleum exploration and development geologist. He started his own company in 1984 providing consulting services in exploration, development and acquisitions of oil and gas properties. He has been an active mineral/fossil collector for more than 60 years with experience in the Lake George area since the early 1960's. In addition to being a long term member and having served as an officer of the LGGMC for many years, John is the President of the Pikes Peak Historical Society with the museum in Florissant.

Some of you have heard an abbreviated form of this presentation before your field trip to the LGGM Club mining claim at Wigwam Creek. This much more complete version will be an excellent introduction or new members who are just beginning rock collecting. It is also a good reminder for more experienced club members. And John's field collecting notes below may be helpful as well.

Field Collecting Notes

John Rakowski 4/2021

These notes have been printed in a past newsletter but should be useful to assist new members and serve as a reminder for the older members. I encourage our more experienced members to bring extra tools when possible to help supplement tools available to our newer members on field trips.

General:
Be sure you will be going to unclaimed public land or if not, that you have permission. If you're on a Club Field Trip pay attention to descriptions of the area where collecting is allowed and any safety information for that site that is provided. It's safest and more fun to be prospecting or collecting with at least one other person. Make sure you tell someone where you are going and when you expect to be

back. Use a map or GPS to keep track of where you're going and where you found specimens. Keep good notes of where your specimens were found and place copies in boxes with the specimens
Stay away from mine openings unless you're with specially trained and equipped people.

Safety and comfort:
Make careful mental note of landmarks and surroundings so you can find your way back.
Remember to bring the following:

- Safety glasses (polycarbonate) or safety goggles to protect your eyes,
- A comfortable back pack or 5 gallon size bucket to carry everything.
- Sturdy and safe hiking or work boots for the occasion; prefer steel toes if there are lots of loose big rocks such as Mt. Antero
- Sunscreen, insect spray, toilet paper (TP can be good wrapping for delicate specimens)
- Plenty of water, and food if you'll be gone most of the day
- Gloves -- quartz and other material can slice and dice your fingers quickly!
- Light raincoat (BUT beware of lightning storms!)
- Knee pads
- Safety orange color vest during hunting season or in coyote hunting areas
- Emergency blanket, Whistle, small first aid set with band aids and antibiotic ointment

Initial digging and search tools:

- Picks, small or medium. Estwing PaleoPick is good general tool.
- Shovels, small folding or large short handled
- Brush or whisk broom, magnifier and folding saw

For the initial reconnaissance tools, just take the Safety/Comfort items, small pick, folding GI shovel and brush. You can explore more area this way and when you find a zone of interest you can go back for more tools and packing materials.

Pocket or specimen recovery:

- Big pick and big shovel and big pry bar to clear the area around a pocket or zone of interest and to knock down and muck out dangerous overhangs.
- Quarter inch hardware cloth mesh screen for some areas like topaz sites
- Small pick and small pry bars
- 3 pound sledgehammer and cold chisels of various sizes (avoid mushroomed chisels)
- Small shovel, trowel, hoe, brushes
- Screwdrivers straight or bent, Bamboo skewer sticks and dental picks
- Egg cartons, newspaper, toilet paper, boxes, bags, Soda pop flats to protect your finds

Additional considerations:

- Marking your small tools with bright colored paint will make them easier to keep track of.
- When you find your "goodies" dig around them (not right on the edge of the specimen) to make it easier to recover unbroken specimens.
- Don't dig extended undercut areas – break and muck out overhangs (cover pocket with protective cloth or newspaper which will also alert you when you're digging out that you're at your pocket).
- Wrap specimens carefully-they will chip or break if not wrapped and protected.
- If you find a pocket save all pieces, take them home and clean everything since many times specimens can be repaired. After cleaning, work on your 3-D puzzle.

Not everybody will have all these tools described above but they're part of a suggested list. The most important items are the Safety/Comfort items and the material for protecting your finds.

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Upcoming LGGM Club Events

Although programs and presentations at the monthly meetings are cancelled until further notice, our Field Trip Coordinators are developing a full schedule of field trips.

SCHEDULE OF LGGM CLUB EVENTS			
Date(s)	**Event Title**	**Event Summary**	**Event Leader(s)**
Sa 6/12/21 9:00 a.m.	June Meeting Lake George Community Center	Rockhounding 101	Richard Kawamoto (Pres) Program - John Rakowski
Sa 6/26/21 8:45 a.m.	The Time Assassin Claim (Field Trip 1)	Collect amazonite, smoky quartz, fluorite, etc. near Lake George, CO	Taylor Harper (901) 652-6740 Dave Alexander (303) 641-5567
Su 6/27/21 8:45 a.m.	The Time Assassin Claim (Field Trip 2)	Collect amazonite, smoky quartz, fluorite, etc. near Lake George, CO	Taylor Harper (901) 652-6740 Dave Alexander (303) 641-5567
Sa 7/10/21 9:00 a.m.	July Meeting Lake George Community Center	Program TBA	Richard Kawamoto (Pres.) Program Speaker - TBA
Sa 7/17/21 9:30 a.m.	Houselog Creek Field Trip	Collect thundereggs & geodes	Dave Alexander (303) 641-5567
Sa 7/31/21 9:30 a.m.	Florissant Pioneer Days – Cut & Polish Event	Club Lapidary Event	Dave Alexander (303) 641-5567
Sa 8/14/21 9:00 a.m.	August Meeting Lake George Community Center	Program TBA	Richard Kawamoto (Pres.)
F 8/20/21 – Su 8/22/21 9 a.m-5 p.m.	LGGM Show Lake George, CO	Annual Gem, Mineral and Jewelry Show	Coordinator Carol Kinate
Sa 9/11/21	Meeting 9:00 a.m. Program 10:00 a.m.	Corral Bluffs – Rise of the Mammals	Bob Baker
Sa 9/18/21 9:00 a.m.	Calumet Mine Field Trip	Collect epidote, quartz, magnetite, etc.	NEED A LEADER (or trip will be cancelled)
F 9/24/21 9:00 a.m.	Sweet Home Mine Tour	Volunteer Appreciation Event (Tour only – no collecting)	Dave Alexander (303) 641-5567
Additional Presentations, Classes and Field Trips will be added after they are confirmed.			

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2021 Lake George Gem & Mineral Show

Our annual **Lake George Gem & Mineral Show** will be held Friday August 19 through Sunday, August 21 on the south side of Highway 24 between the Lake George Post Office and the Granite Canyon (formerly Starkey's) store. Enter from the Post Office parking lot (west side) and exit toward the Granite Canyon Store (east side of the show grounds.) The show is currently awaiting final approval documentation from Park County.

At the June club meeting, we will be looking for volunteers to:

- assist with layout of the show grounds after the meeting on August 13
- organize the sign-up and scheduling of parking attendants
- direct parking during the show (2 hour shifts)
- tend the LGGM Club booth
- assist with children's "rockhounding" activities

We also need donations of small rocks that children can dig for in boxes of sand.

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

The **Mines Museum of Earth Sciences** at the Colorado School of Mines in Golden, CO is returning to normal visiting hours as of May 31. There are new displays of minerals from the Pikes Peak pegmatites, Sweet Home mine, African minerals, the Bill Chirnside collection, and mining artifacts. The museum has a quarterly newsletter that is sent out to supporters. You can access the current issue and/or subscribe to future issues at geomuseum@mines.edu.

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The Ghosts of Gilman Encore Presentation
by Steven Veatch at the Western Museum of Mining and Industry

If you are a history buff and just enjoy poking around ghost towns, you'll have the time-of-your-life in this multimedia presentation. Steven Veatch will share photographs and videos of his onsite explorations of Gilman, an abandoned mining town in southeastern Eagle County, Colorado. You will feel a sense of astonishment and discovery as you tour this mining camp that turned into a company town. You will see the old hospital, general store, geology lab, miner's hall, and other town buildings. This presentation tells the story of Gilman's four phases: 1) Gilman as a 19th century boomtown; 2) Gilman as a model company town under the ownership of New Jersey Zinc; 3) how Gilman fueled a thriving mid-20th century American economy; and 4) Gilman as a toxic wasteland after 100 years of environmental degradation. In the presentation the town's significance is explored in the broader context of Colorado and Western American history. Today this is private property and off limits to the public. Do not miss this essential presentation that examines a compelling story of Colorado's mining past in Gilman. It is a story so bold, so big, that only the American West can hold it.

Date: June 8, 2021
Time: 4 pm
Location: Western Museum of Mining and Industry
Cost: $5. Members of WMMI are free.
Please call or email for more information and to reserve your space. 719-488-0880

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Meetings of Nearby Geology Clubs

- **Cañon City Geology Club** www.canoncitygeologyclub.com/ccgc-programs.html 2nd Monday of each month (June 14) at 6:00 p.m. (program following meeting at approximately 7:00) Program Speaker – Pat Hale, Subject: How to Find the Rocks You Want.
  Columbine Gem & Mineral https://rockaholics.org/about/ Meetings 2nd Thursday of every month at 6:30pm MT (location TBD).
- **Colorado Springs Mineralogical Society** http://www.csms1936.com/
  - General Assembly – 3rd Thursday 7pm,
  - Fossil Group - 1st Tuesday 7pm
  - Crystal Group and Faceting Group – 4th Thursday, 7pm

- **Pueblo Rockhounds** http://www.pueblorockhounds.org/ Cancelled until further notice.

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Online Events

- **Rocky Mountain Map Society** For further information see: http://rmmaps.org/
- **Western Interior Paleontological Society** (WIPS) See http://westernpaleo.org/ for more info.
- **Denver Region Exploration Geologists Society** (DREGS) www.dregs.org/index.html

The following are cancelled until further notice: check the following links for information on lecture series when they resume:

Friends of Mineralogy, Colorado Chapter http://friendsofmineralogycolorado.org/events/

Other Upcoming Gem & Mineral Shows

Aug 12-15 **Buena Vista Contin-Tail Rock, Gem & Mineral Show -- Tentative**
For more information, check https://bvrockshow.com/ .
Location: Buena Vista Rodeo Grounds (1 mile south of Buena Vista, CO)

Aug 18-21 **Woodland Park Rock, Gem & Jewelry Show** http://woodlandparkrockandgemshow.com/

Sept 10-18 **Colorado Mineral and Fossil Denver Fall Show**
Location: Crowne Plaza DIA Convention Center, 15500 E. 40th Ave., Denver 80239

Sept 10-19 **Denver Coliseum Mineral Fossil Gem Show**
Location: Denver Coliseum, Denver

Sept 10-19 **Denver Mineral, Fossil, Gem & Jewelry Show**
Hours: 10 a.m. -6 p.m. Location: National Western Complex

Sept 16-19 The 2021 **Denver Gem & Mineral Show** (formerly located at the Denver Merchandise Mart) will be held in conjunction with the Hardrock Summit, to be held at the Colorado Convention Center (located in downtown Denver at 700 14th Street). Visit hardrocksummit.com/ and denvershow.org/ for more details

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LGGM Club News:

Field Trips: Dave Alexander's Field Trip update

So far we've had an amazing season, and it's just beginning! We had a joint trip with Mile High RAMs and Littleton Gem & Mineral Club to the Thomas Range in Utah where everyone found topaz and some found red beryl. At the Solar Wind Mine many found amazing Bixbyite/Topaz combinations and lots of topaz were brought home. Baculite Mesa, Hartsel and Arroya Gulch were amazing trips. The very popular Rockhounding 101 trips at our club claims were tremendous fun! We so far have had 7 trips and have 7 more on the website (some need leaders), and I'm actively working on scheduling many more! If you have ideas for leading a trip somewhere, let us know ASAP! Keep an eye on the website and we'll have updates at club meetings.

We need volunteers! We are having a lapidary event with the Pikes Peak Historical Society Museum in Florissant on July 31st which is also the Pioneer Days town event! We will be pulling out the club's saws and polisher from storage. We need volunteer help to tune up these machines prior to the event and to provide demos and help to club members during the event. Please contact me if you can help—we need volunteers! There are a couple of field trip postings that we need leaders. Please consider leading trips; it's easy and fun! We have scheduled a tour of the world famous Sweet Home Mine in

September for a few lucky volunteer leaders to join me as an appreciation event. Unfortunately they have limited spots available on the tour, so we will be doing a lottery in early September to determine which field trip leader volunteers will be able to participate in this appreciation event.

Finally, the sad part of my update. We have had a really ugly amount of no-shows for trips thus far. For the trips to the club claims, for example, there were 21 no-shows who did not cancel their reservations, so none of the 50 people on the waiting lists were able to attend. We are taking some proactive actions to help the process, but we really do need your help! We also have to take some punitive actions to prevent unfairness to other club members.

PLEASE READ AND UNDERSTAND THE FOLLOWING GUIDELINES FOR FIELD TRIPS:

If you are registered for the trip as an individual member, and determine you can't go, please remove yourself from the registration ASAP on our website. You unregistering will automatically move someone on the wait list to registered status. **They thank you for the opportunity to join the event!** Even if find yourself unable to attend up to the day before the event, please unregister yourself. Folks on the wait list are ready and willing, even at the last minute! If for some reason you have plans change the morning of; you will not be able to update the website, but you can SMS/text message the field trip leader (their phone # is in the event listing) and let them know you can't make it…they appreciate knowing that you are safe, and that you are not being left behind when the group leaves the meeting place to go to the field trip site.

If you are registered for the trip as a family, and someone in your family can't make it; you unfortunately can't unregister individual family members yet without unregistering the whole family—don't try it as you will lose your place in line. We are working on this feature to unregister just an individual family member; in the meantime please reply to Dave and the field trip leader in an email letting us know the situation. We can then manually move someone from the wait list to fill that spot.

0If you are wait listed for the trip, be prepared for a last minute availability to join the trip! Check your email, and your junk mail, up until the night before the event. Last minute registration may not happen; however we've seen several day-before movement of registrations from the wait list on most trips. If there is a point in time where you don't want to deal with last minute scheduling, please REMOVE yourself from the wait list so others behind you get the opportunity.

Finally, the club leaders are working on consequences for no-shows to field trips. We are keeping track of no-shows and will start imposing an appropriate penalty for those that are inconsiderate of other clubs members by not showing up. Please unregister if you cannot go. We are sending reminder emails to ensure you remember you are signed up. Check your email (and junk mail) regularly if you've signed up for an event for updates.

Links to Interesting Gem, Mineral & Paleontology Articles Online:

Wayne Orlowski sent us several links this month:

Evolution of the eruption in Iceland Geldingadalir - SO FAR!
https://www.youtube.com/watch?v=uA_hWqFUP1U

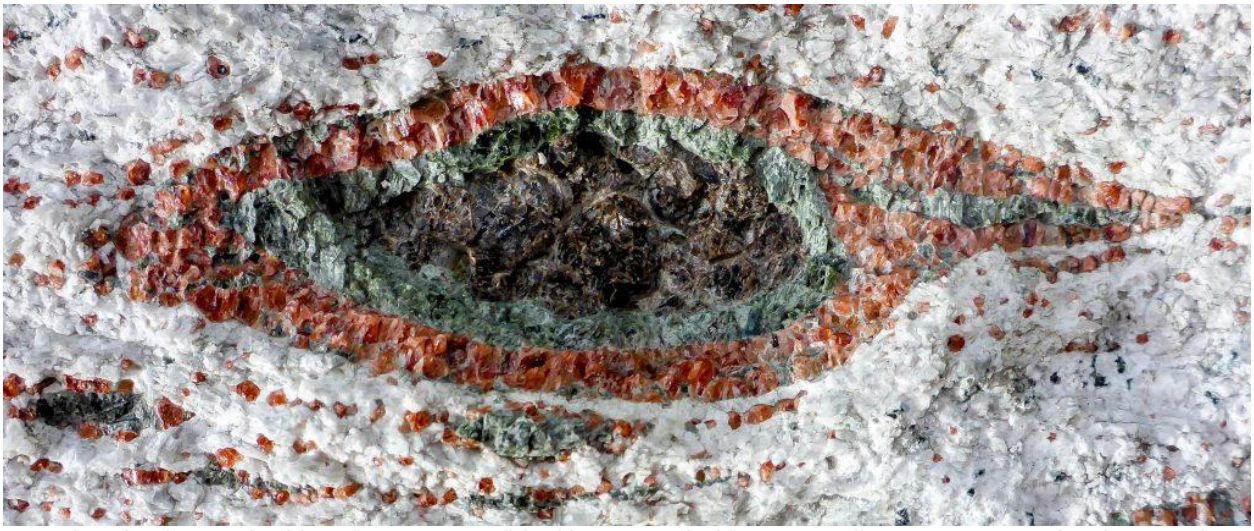
RVK Newscast #102: The Fire Geyser Now Reach 300 Metres
https://www.youtube.com/watch?v=ylRfrtk7yZE

A link about Helenite – a product of volcanic eruption of Mount St. Helens
https://www.geologyin.com/2016/12/worlds-most-amazing-gemstone-found-in.html?fbclid=IwAR2OHaTNNnMMZTGKTV2qKpUZwwV_5WDjzqpUNUs_--8sRppl0XrC-rlDGSo

Yooperlites – The Spectacular Science of the Grate Lakes' Glowing Rocks
https://www.atlasobscura.com/articles/rocks-that-glow?utm_source=Atlas+Obscura+Daily+Newsletter&utm_campaign=e406c40d06-EMAIL_CAMPAIGN_2021_05_21&utm_medium=email&utm_term=0_f36db9c480-e406c40d06-63289333&mc_cid=e406c40d06&mc_eid=4c09dd6067

Paleontology - When Trees Took Over the World – PBS
420 million years ago, the forest floor of what's now New York was covered with a plant that didn't look like a tree at all, except its roots were made of wood. Instead of looking up to learn about the evolution of trees, it turns out paleobotanists should've been looking down all along.
https://www.youtube.com/watch?v=UrwMUQbUR30

An impressive reaction rim (a border of secondary minerals formed at the margin of a primary grain in an igneous or metamorphic rock)
https://geologyistheway.com/metamorphic/reaction-rims/?fbclid=IwAR03lYJ4nYCS2OxG_ylIYgQHF69NWrF8jclNhNf1neCToNjyTVRec1Prsxg



Reaction rim (corona) with orthopyroxene (black) surrounded by green clinopyroxene, and red garnet in a matrix of white plagioclase. Meta-anorthosite from Holsnøy, Bergen Arcs, Norway. Photo by Chris Clark.

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The latest installments of **"Bench Tips" by Brad Smith**

Smart Solutions for Your Jewelry Making Problems
www.Amazon.com/author/bradfordsmith

SEPARATING DISCS

Separating discs (also called cutoff wheels) are inexpensive and do a great job cutting or shaping steel. You can use them to sharpen tool points, cut piano wire to length, make slots, and sharpen worn drills. Other uses include modifying pliers and making your own design stamps.

My preference is the one inch diameter size. Be sure to hold the wheel firmly so nothing moves to break the disc, and definitely wear your safety glasses. Those are little flakes of steel coming off the disk.

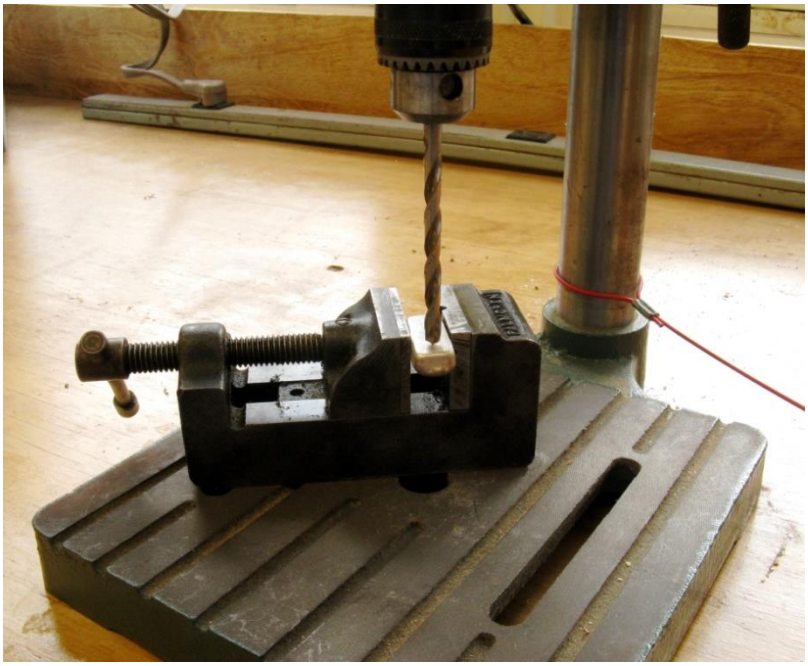
BTW - Separating discs are rather poor at soft metals like copper, silver and gold. Soft metals clog up the cutting edges.

DEBURRING JUMP RINGS

When cutting jump rings from large gauge wire for chain making, you'll notice the saw leaves a small burr. An easy way to remove these is to tumble the rings with some fine-cut pyramids. It's best not to tumble for a long period with the pyramids because it will remove the polished finish from the wire.

No tumbler, no problem. You don't actually need a tumbler. I just put a handful of pyramids in a wide mouth plastic jar and shake for a bit. You can find these pyramids in the tumble finishing section of most jewelry supply catalogs.

DRILL PRESS VISE



A drill press vise is a versatile tool to hold a workpiece securely and in precise alignment. It reduces the risks of working with high power motors, using larger drill bits, and dealing with heat generated in the operation. The vise can be clamped to the drill press table if needed, and is quite handy for use at the bench to hold things for sawing or riveting.

You can find them at stores that carry machine tool supplies. My feeling is that the best ones are made from steel. In particular, I like the ones with V grooves cut into the jaw plates. That lets me hold a punch straight upright or hold a rod horizontal. To find a supplier, search on "drill press vise" at sites like micromark.com mscdirect.com/enco smallparts.com grizzly.com

DENTAL GOLD

You might think that a couple pieces of dental gold would be valuable, but if you only have a small amount, it can be a problem. Sending it to a refiner is expensive for small lots.

I made the mistake of thinking I could melt it and roll out my own sheet. It turns out the trace metals in dental gold make it a good material in your mouth, but cause it to crack if you try to forge it or roll it out as a sheet. They ruined my whole ingot.

So what to do with a couple gold crowns? A reasonable alternative is to try incorporating the metal into your jewelry. If you have enough material to do a casting, that's probably the best use for dental gold.

If you're not into casting, try melting it on a solder pad and while molten, divide it into small pieces with your solder pick. Then re-flow each piece to make little gold balls for use for accents on your designs. The balls can also be planished a bit to make small discs or struck with a design stamp to add texture.

Happy hammering,

- Brad Smith
BradSmithJewelry@gmail.com

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Colorado Type Minerals: Natroalunite

by **Bob Carnein**

This article is the seventh in a series describing minerals first described from Colorado.

A few years ago, Lake George Club members Sue and Ed Bondzeleska came to a meeting with several samples of a mineral they picked up on a collecting trip to Arizona. The samples consist of an iron-oxide rich matrix with scattered vugs containing needle-like malachite crystals and lavender to light blue crusts of a mineral that, when magnified, shows a finely botryoidal habit (Figures 1-3). The Bondzeleskas found the material at the Planet mine, in La Paz County, Arizona, near Lake Havasu City. They noted that it turns into a white powder unless kept in a sealed container. They also told me

that they had shown it to several people, none of whom recognized it (Figure 4). I offered to take it home and try some tests.

Figures 1 and 2. Natroalunite in iron oxide with malachite, Planet mine, La Paz County, Arizona (Carnein collection and photos)

As expected, the mineral is relatively soft (H=3 1/2 - 4 on the Mohs scale). However, because it occurs as thin crusts, it's difficult to measure the true hardness. The samples I received from the Bondzeleskas are too small for an accurate specific gravity measurement, at least with the equipment I have available. The mineral doesn't react to dilute hydrochloric acid or dissolve in water.

My "go to" test method for otherwise difficult non-opaque minerals involves crushing a small sample, mounting the powder on a glass slide, and examining it immersed in oils of known index of refraction (a measure of how fast light travels through a substance). This examination is carried out using a special microscope (called a *petrographic microscope).* Suffice it to say that this is a fast and often definitive way to identify a mineral without expensive, complicated equipment. The immersion-oil test showed that the sample has the optical properties of natroalunite ("nay-troh-al'-you-night"), $NaAl_3(SO_4)_2(OH)_6$.

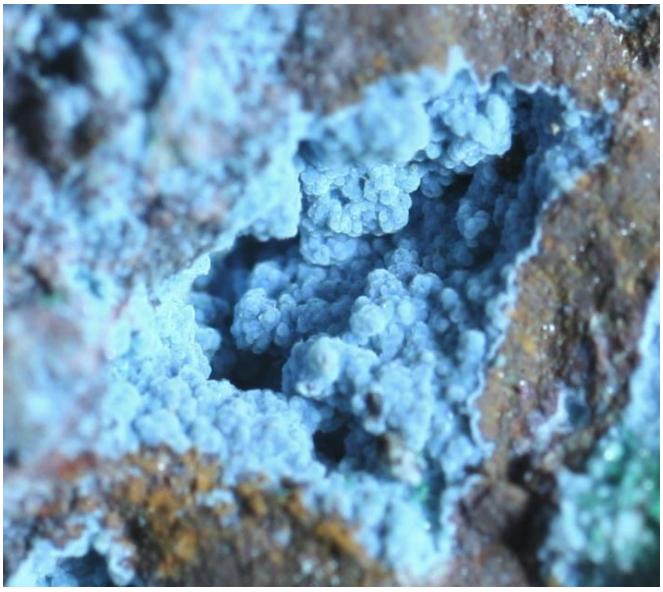
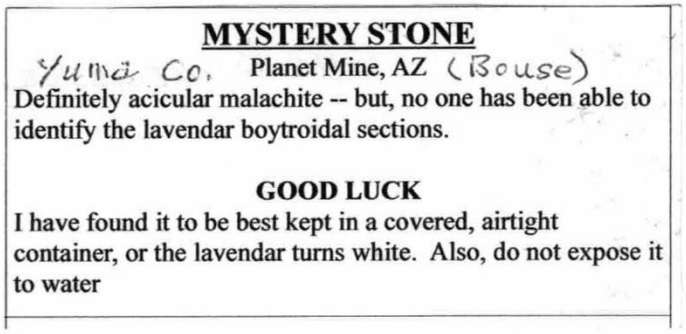


Figure 3. Cavity containing botryoidal natroalunite. Carnein collection (no. 1634A) and photo. Collected by Sue and Ed Bondzeleska at the Planet mine, La Paz Co., Arizona.

Natroalunite was a new mineral to me, so I looked it up on Mindat.org (accessed April 2021) and found a photo of a similar specimen from the same locality. I was surprised to find that the type locality is in Colorado—hence this article.

A member of the alunite group, natroalunite was first described by chemists and mineralogists W.F. Hillebrand (1853-1925) and S.L. Penfield (1856-1906) (Hillebrand and Penfield, 1902) from material collected in the Red Mountain mining district, Ouray County, Colorado.



MYSTERY STONE

Yuma Co. Planet Mine, AZ (Bouse)

Definitely acicular malachite -- but, no one has been able to identify the lavendar boytroidal sections.

GOOD LUCK

I have found it to be best kept in a covered, airtight container, or the lavendar turns white. Also, do not expose it to water

Figure 4. Label that accompanied the Bondzeleskas' unknown sample.

Alunite, $KAl_3(SO_4)_2(OH)_6$, is more common and is a source of alum, a somewhat complicated group of chemicals. A huge deposit of alunite is located south of Marysvale, Utah, a town now better known as an ATV destination than for mineral production. Today, most alum is synthetic, and it has numerous uses, in everything from deodorants to vaccines and food products.

The name *natroalunite* comes from *natrium,* the Latin word for sodium (hence the chemical symbol Na). It is a relatively uncommon but widespread mineral, described from over 140 world-wide localities (Mindat.org, accessed April, 2021). Included are 7 Colorado localities, two of which are in the Rosita mining district, in Custer County (see Eckel, 1997). Unfortunately, the Red Mountain mining district has dozens of mines, and I have not been able to discover the exact type locality.

Considering the difficulty involved in identifying this rather obscure mineral, I would guess that many more localities are lurking out there. It forms where sulfate-bearing hydrothermal solutions interact with clay, and from alteration of volcanic rocks. It's one of hundreds of minerals found around volcanic fumaroles (Balić-Žunić, *et al.*, 2016). It also occurs in caves formed where ground water contains sulfuric acid (Polyak, *et al.*, 2006). In addition, recent work suggests that natroalunite may be a major component of Martian regolith (McCollom, *et al.,* 2014)! It's another one of those weird minerals you might find if you look carefully and don't throw away the things you can't identify.

References cited

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Monthly Mineral Quiz Monthly Mineral Quiz

Last Month's Mineral: Beryl, $Be_3Al_2Si_6O_{18}$.

The specimen on the left shows a typical common beryl crystal of the kind you are likely to find in central Colorado pegmatites (e.g., the Devils Hole mine or the Eight Mile Park district, in Fremont County). The Devils Hole once produced crystals more than 2 feet across. Beryl producers in the Eight Mile Park district included the Mica Lode, Myers, and School Section mines. However, Colorado's biggest beryl deposit includes veins, pipes and pods of altered beryl in greisen, a rock formed by high temperature metasomatism (alteration and mineralization of a host rock by water rich solutions). Located west of Lake George, the Badger Flats district was once America's most important beryllium deposit. Most Colorado beryl is the common variety, but a few locations produce gem varieties. The most famous is Mt. Antero/Mt. White, where aquamarine crystals up to 7 or 8 cm long occur in pegmatite pockets that also include other beryllium minerals, including phenakite and bertrandite. Other gem varieties of beryl include heliodore (yellow), morganite (pink to pinkish orange), emerald, and bixbite (raspberry-red). All occur as simple hexagonal crystals with flat (pinacoidal) terminations, but more complex terminations are also common.

Monthly Mineral for June (Carnein photos and collection).

June's mineral is one that you should watch out for in foliated metamorphic rocks (especially schist or phyllite). Although single crystals are sometimes abundant, it's well known as twinned crystals like those in the center and right photos above. Good specimens occur at a number of Colorado localities. Often partially replaced by fine grained muscovite, only fresh specimens show the high hardness (7 to 7 ½), subvitreous luster, and translucency seen at a few locations. The high hardness makes it a fair to good gem material, and orange, blue, or green specimens are sometimes faceted or cut *en cabochon*. What is this relatively common mineral?

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, geography 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 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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