



Denver Gem & Mineral Guild Founded March 1964

1420 S. Reed Street
Lakewood, Colorado, 80232

AFMS Silver Medal Club 2016



June 2022

TIPS & CHIPS

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[HTTP://WWW.DENVERGEM.ORG](http://www.denvergem.org) OR
[HTTP://DENVERGEM.ORG](http://denvergem.org) AND FACEBOOK!!!
EMAIL = [MINERALGUILD@GMAIL.COM](mailto:mineralguild@gmail.com)

JUNE DGMG (and other) events-

June 10-12—Pikes Peak Gem, Mineral, and Jewelry Show, Colorado Springs (poster child barite specimen from new DGMG member Marge Regel's collection)

June 11—DGMG Field trip to Nederland Tungsten Museum and Nevadaville for magnetite (See page 6 for itinerary).



June 17-19 Victor Gem & Mineral Show, historic downtown Victor 9-5

Nederland Mining Museum



58th Annual
Pikes Peak Gem, Mineral, and Jewelry Show

June 10, 11, 12, 2022



Colorado Springs Mineralogical Society
P.O. Box 2
Colorado Springs, CO 80901

Pikes Peak Gem, Mineral, and Jewelry Show

Fri., June 10, 12:00 pm - 7:00 pm
Sat., June 11, 10:00 am - 5:00 pm
Sun., June 12, 10:00 am - 4:00 pm

Adults \$5.00 / Multi-Day \$8.00
12 & Under FREE

NORRIS-PENROSE EVENT CENTER
1045 Lower Gold Camp Rd
Colorado Springs, CO
NorrisPenrose.com

PikesPeakGemShow.com ppgmjshow@gmail.com

2023 DGMG CLUB CALENDAR—

It's time already!!!

Please submit your photos to the Dropbox folder that Bob Johnson created. He will send an invite to all who participated in the 2022 calendar—any member who wants to submit photos can send an email to mineralguild@gmail.com and Bob will send you an invitation to the folder. All proceeds of this one-of-a-kind project go to the DGMG CSM Scholarship Fund.



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59 years of DGMG Kudos, Celebrations, & Events

2022 DGMG Officers & Chairmen

President:: Joe Walkowich
Vice President: Pete Modreski
Secretary: **OPEN PRO-TEM:** Marj Becker
Treasurer: Deb Baldwin;
Treasurer Ass'ts: Joe Walkowich, Beth Simmons
Hospitality: **EVERYONE!**
Ways & Means:
 Dave Sanchez, Gideon Breithaupt, Sandra Lucero
Membership: Joe Walkowich **Ass't:**
Claims Manager: Fred Ceconi
Editor: Beth Simmons; **Ass't:** Marj Becker
Historian/Librarian: Kathy Honda
Webmaster: Bob Johnson; **Ass't..** Joe Walkowich
Show Chairman: Beth Simmons
Dealer Chairman: Linda Burns
Field Trips: Committee
Grab Bags: Kathy Honda, Susanne Peach
Merchandise: Sandra Lucero
Council Rep: Sandra Lucero; **Alt.** Linda Burns
Denver Show Rep: Kathy Honda
Sunshine: Sandra Lucero
Party planning: Deb Baldwin, Marj Becker
RMFMS Rep: Kathy Honda
Outreach: Susanne Peach; Bob Johnson
Inventory manager: Committee

An "Assistant" is the officer's backup in case of illness or other reason they can't do their job.
 Every officer needs an "Assistant"!
 Join up! Say YES when asked!

Quote of the month:

Despite rumors to the contrary,
LEARNING
 does **NOT** kill brain cells.

June Sunshine Spotlight

CONTACT **SANDRA LUCERO** 303-726-3829
[gardengal001\(@\)yahoo.com](mailto:gardengal001(@)yahoo.com)

TO
 INFORM HER OF SUNSHINE REQUESTS

Glad to see Ken Ray up and about after his hip replacement!

Congrats to Linda Burns on moving back to her family
 homestead in Florissant, CO.

WELCOME NEW MEMBERS!!!

We hope you enjoy our offerings!

Ben Breno
Kayle Gagre
Aiden Trurgen - Junior member
Daniel Cresconzo
Daryl Dunagan
Cindy Hoaglund
Jesse Sansevere

Welcome

VESTS ARE IN!!!

Retrievable at the club picnic on July 24th.

Call **Sandra Lucero** or email her to
 reserve yours! \$37 each!

THE DENVER GEM AND MINERAL GUILD—59 Years old!



Founded in 1964, the Denver Gem and Mineral Guild pursues exploration, experimentation, and education in the earth sciences; the discovery, development and preservation of minerals and mineral deposits; and the advancement, encouragement and utilization of the principles of art and craftsmanship as applied to gems and minerals.

The Guild meets on the second Friday of the month at 7:00 pm at the Wheat Ridge United Methodist Church, 38th & Wadsworth, Wheat Ridge, except for June, July, August, and December. Picnics, field trips, and parties replace regular meetings those months.

Deadline for article submission for the Tips & Chips is the 20th of each month. Email photos and articles to editor Beth Simmons at mineralguild@gmail.com. Exchange with other newsletters is invited, and reprinting of material from this newsletter with proper attribution is encouraged.

2022 DGMG CALENDAR OF EXCITING EVENTS

A persistent page—watch monthly for additions! PUT THIS ON YOUR FRIDGE!!!

Preliminary announcements:

July 24th, Sunday, DGMG picnic, Skunk Hollow Picnic shelter, Bear Creek Lake Park—10-???? - grab bag stuffing, rubber ducky races (weather and water cooperating). \$5 park admission will be reimbursed. Bring potluck breakfast/lunch dishes.

August 11-14 Buena Vista Contin-Tail Gem, Mineral & Fossil Show, 9-6, rodeo grounds

August 19-21 Lake George Gem & Mineral Show, Lake George, CO

Sept. 8-11 DGMS at the Convention Center

Oct... Saturday—Wigwam Creek Claims with Lake George Club for remediation

Pete's Mineralogy Class

Monday evenings, 6:00 pm, ZOOM for June

Stay tuned for updates and additional lessons!

PRESIDENTIAL MESSAGE

Hopefully, the snow has finally ended (I thought it was over in Mid-May but was proven wrong) and we are all ready to head out on our collecting expeditions.

Just a reminder, before you go, to be a kind collector and make sure you have permission for the property where you are searching. The following is the link to our club's code of ethics, in case anyone is new to collecting or needs to be reminded:

<https://denvergem.org/wp-content/uploads/2020/12/Code-of-Ethics.pdf>

And don't forget to check your tires, and the air in your spare, before heading down rough roads. Cell phone coverage can be spotty in some collecting areas and no one likes the long walk back to a main road.

Stay safe in your travels!

Joe Walkowich

(Ed. Note—the hardest working bee at the DGMG show!)

DGMG 2022 President



REPEAT:

The Guild is now contributing to the international mineral community! At the April meeting, the members voted to “sponsor” a mineral on mindat.org. And it just so happened that the amazonite (a Colorado special) page was still unclaimed. So **someone** arranged for our name to appear in the listing! The specimen on the left is from Joe Dorris’ Smoky Hawk claim which many members have visited. Maybe you even have a specimen from there!

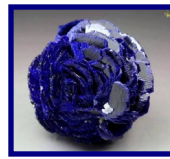
(Notice that the namer was August Breithaupt, who may be one of **Gideon's** ancestors!)

Bob Johnson has added the information about the sponsorship to our DGMG website and used one of **Linda Burns'** specimens from the Smoky Hawk as a prime example. **GO SEE!**

denvergem.org

DGMG's Bloomin' Rock Garden Display for 2023

After she wrote her poem about the spring “rock garden,” **Marj Becker** suggested we create a display of rocks that are either named for flowers (like “barite roses”) or minerals and rocks that look like flowers for our show next year. So we’ve begun to collect such specimens. A trip to the Spring Show at the Crowne Plaza yielded metallic roses (copper, hematite, pyrite) and non-metallic chalcedony roses, gypsum desert roses, and of course, a BIG beautiful barite rose. Plus chrysanthemum stones from China. And some “cactus amethyst”! We picked the selenite rose in the lower left corner up at the FM auction and ordered 3 carved rose quartz roses (it just makes sense to include the only mineral really named for a flower!). So we are on the lookout for any more specimens that fit this category.... If you have any and would like to loan them to the club for inclusion in the exhibit, let us know.



DENVER GEM AND MINERAL GUILD
MINUTES, MAY 13, 2022
IN PERSON - ZOOM MEETING

**BOARD MEETING**

Attendance: Six members attended

Call to Order: President **Joe Walkowich** called the meeting to order

Webmaster **Bob Johnson** presented the following policy questions regarding the Facebook page.

1. Advertising: What do we want our advertising policy to be? Our existing Facebook Group Rules state that, "Commercial posts to sell items will only be accepted from active, dues-paid, DGMG Club members and/or vendors from our February show." **Consensus:** only DGMG members should be allowed to place ads.
2. How tightly / consistently do we want to enforce this policy? **Consensus:** If a non-member places an ad, it should be taken down and a notification sent to that person stating that they need to become a DGMG member to gain this privilege.
3. What qualifies as an ad? **Consensus:** An ad is anything that offers goods or services for sale

There not being a quorum, no votes were taken. There being no further business, the meeting was adjourned.

General Meeting Minutes Hybrid (ZOOM/In-Person) Meeting

The meeting was called to order by President **Joe Walkowich** at 7:00 pm. Twenty-five members attended in-person. One person attended on ZOOM.

Members provided introductions of themselves.

Jim Klein suggested that additional handles be added to display case packing boxes. This would allow easier movement of the cases. Because these boxes belong to the Council, **Joe Walkowich** will present the suggestion to the Show Committee at the next meeting.

Secretary's minutes were not brought up nor voted on; Treasurer's Report: No report this month; Chair reports were not given.

Presentation: Vice-President **Pete Modreski** presented a rock and mineral quiz consisting of 26 questions; he used the Kahoot.com online application.

Field Trip: A field trip for June is currently being planned.

Summer Picnic: A space at Skunk Hollow at Bear Creek Lake Park has been reserved for our picnic on **July 24**.

2023 DGMG Show: The contract with the Jefferson County Fairgrounds has been signed by **Beth Simmons**.

There being no further business, the meeting was adjourned at 8:45 pm.

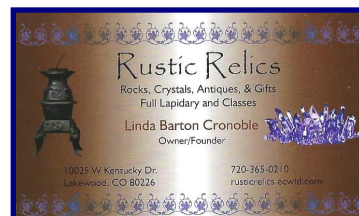
Joe Walkowich and **Beth Simmons**, Contributors to these minutes.'

(Your temporary secretary thanks **Joe** and **Beth** for their recording of the minutes from both meetings.)
Respectfully submitted,

Marj Becker, Temporary Secretary

Congrats to **Linda Cronoble on the opening of her new site for her shop, Rustic Relics, July 1st, at**
10025 W. Kentucky Dr., Lakewood

(First building west of Kipling on the north side)
Facebook@rusticrelics
Instagram@rusticrelicsshop



DENVER GEM AND MINERAL GUILD Field trip Saturday June 11
Nederland to the Tungsten Mining Museum and to Nevadaville to collect Magnetite

FIELD TRIP TO NEDERLAND and NEVADAVILLE (and points between and beyond)....
 PRINT THIS PAGE.



SATURDAY JUNE 11th.

Meet at the Wheat Ridge U. Methodist church parking lot (38th and Vance) at **10:00 AM**. Car pool from there. Park at the far end of the lot. Bring a magnet on a stick (as I call it) that roofers use. I will have two, so if you don't have one, fear not. And maybe a plastic bag or two to put specimens in.

Road log:

Wadsworth north to Broomfield and Boulder tumpike (US 36). Bear right and around circle onto 36.

36 into Boulder (becomes 28th Ave.) to Canyon Blvd. Turn west on Canyon Blvd (Rt. 119).

119 to Nederland through Boulder Canyon to Nederland. Nederland Mining Museum will be on the right at the main intersection with 72. Parking lot behind the building.

Tour museum. Walk to Nature's Own rock shop for fun

Leave Nederland. Drive south on Peak-to-Peak highway (Route 119/72) to Black Hawk, past intersection with Route 46 (Golden Gate Canyon Road).

Turn right on Gregory Street in Black Hawk.

Proceed to Red Dolly Casino for lunch (on the left). Everything from prime rib to hamburgers.

Continue up Gregory Street to Lawrence Street into Central City. Turn left on Spring Street, then bear right onto Nevada Street.

Drive up Nevada Street to Nevadaville Rd. Turn right.

Proceed uphill to second turnout on the right. DO NOT DRIVE THROUGH THE LOWSPOT! It was a mine shaft!

Park in circle at top of the hill. Get out your magnet and walk down the "street" and see if your magnet picks up anything.

After collecting, and a brief tour of Nevadaville, return to Central City/Black Hawk. Turn left on 119.

Go back up the hill to the intersection with Route 46 (Golden Gate Canyon Road)

Turn right. Drive down GG Canyon Road to Robinson Hill Road. Turn right. Park along road.

Search in roadcut for tourmaline and other pegmatitic minerals.

Resume journey east on Golden Gate Canyon Road to Route 93.

Turn Right on 93.

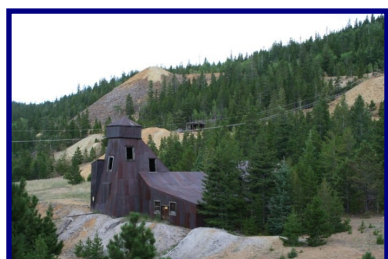
Drive to intersection with Route 58. Turn left. Take 58 east to I-70.

I-70 to Wadsworth. Wadsworth south to 38th. Left, Right on Vance into parking lot.

THANKS FOR COMING! Minimal walking, interesting exhibits, and a few minerals to discuss. Reimburse your driver for gasoline expenses.



Ferberite specimens from Boulder County, CO (John Betts Minerals)



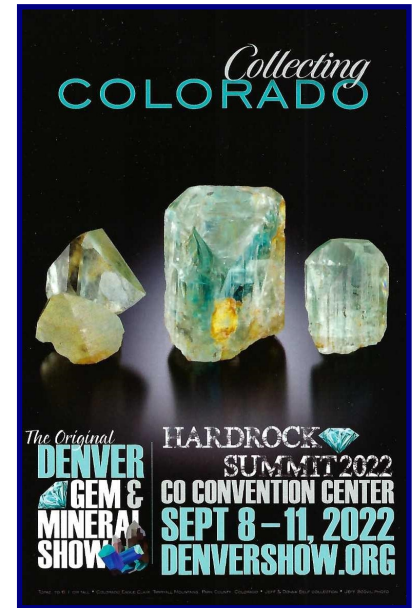
Nevadaville photos

Invitation to Exhibit at the
2022 Denver Gem & Mineral Show
Dates - September 8, 9, 10 and 11, 2022

Location – The Colorado Convention Center
700 14th Street, Denver

Dear Club Member,

Your participation as a volunteer is the life's blood of a successful show. Another outlet for your support would be to enter an exhibit in the show for the enjoyment of our visitors. For over 50 years, these displays have set us apart as unique from the rest of the area shows. We hope that this year's theme will be especially appealing to club members and the general visitor.



The 2022 Theme – **COLLECTING COLORADO**

We encourage exhibits that feature Colorado minerals, fossils, agates, meteorites, notable collecting area history, mining history or ephemera like mining memorabilia, equipment, documents, etc. As always, though, you are invited to enter a case that plays to your strengths, interests and special aspects of our hobby. Exhibited material *need NOT* be self-collected.

In addition, we are offering the following **competitive exhibit** options:

Both Adult and Junior Prospector Competitions. Because of the pandemic, the collecting period for eligible specimens will extend from the end of the 2019 show to the beginning of the 2022 show.

The Species Competition – Entries are Colorado mineral specimens (one per category) in the following categories: thumbnail, toenail, miniature, cabinet, oversize cabinet, self-collected, best of Colorado and lapidary/jewelry. You may enter one, some, or all the categories.

The Best of Fossil Competition – Up to three specimens that need not be Colorado in origin.

For full information and entry forms contact Larry Havens at lwrnchavens@comcast.net or 303-757-6577. Links below for the forms and information. We will provide display cases and liners (if requested).

Larry Havens, Exhibits Chair

<https://denvergem.org/wp-content/uploads/2022/03/2022-Information-for-Non-Competitive-Exhibits-.pdf>

https://denvergem.org/wp-content/uploads/2022/03/2-26-revision-2022_COMPETITIVE_EXHIBITORS_ENTRY_FORMS_PACKET.pdf

Geologists discover bacteria that concentrates gold!

From [Geologists Discover Bacteria That Turns Small Bits of Gold Into Solid Nuggets \(geologyin.com\)](https://www.geologyin.com)

On a patch of earth in regional Queensland geochemists have finally isolated the bacteria that takes natural traces of gold and turns them into nuggets.

Special ‘nugget-producing’ bacteria may hold the key to more efficient processing of gold ore, mine tailings and recycled electronics, as well as aid in exploration for new deposits, University of Adelaide research has shown.



For more than 10 years, University of Adelaide researchers have been investigating the role of microorganisms in gold transformation. In the Earth’s surface, gold can be dissolved, dispersed and reconcentrated into nuggets. This epic ‘journey’ is called the biogeochemical cycle of gold.

Now they have shown for the first time, just **how long** this biogeochemical cycle takes and they hope to make to it even faster in the future.

“Primary gold is produced under high pressures and temperatures deep below the Earth’s surface and is mined, nowadays, from very large primary deposits, such as at the Superpit in Kalgoorlie,” says Dr Frank Reith, Australian Research Council Future Fellow in the University of Adelaide’s School of Biological Sciences, and Visiting Fellow at CSIRO Land and Water at Waite.

“In the natural environment, primary gold makes its way into soils, sediments and waterways through biogeochemical weathering and eventually ends up in the ocean. On the way bacteria can dissolve and re-concentrate gold – a process which removes most of the silver and forms gold nuggets.

“We’ve known that this process takes place, but for the first time we’ve been able to show that this transformation takes place in just **years to decades** – that’s a blink of an eye in terms of geological time.

“These results have surprised us, and lead the way for many interesting applications such as optimizing the processes for gold extraction from ore and re-processing old tailings or recycled electronics, which isn’t currently economically viable.”

Working with John and Johno Parsons (Prophet Gold Mine, Queensland), Professor Gordon Southam (University of Queensland) and Dr Geert Cornelis (formerly of the CSIRO), Dr Reith and postdoctoral researcher Dr Jeremiah Shuster analyzed numerous gold grains collected from West Coast Creek using high-resolution electron-microscopy.

Published in the journal Chemical Geology, they showed that five ‘episodes’ of gold biogeochemical cycling had occurred on each gold grain. Each episode was estimated to take between **3.5 and 11.7 years** – a total of **under 18 to almost 60 years** to form the secondary gold.

“Understanding this gold biogeochemical cycle could help mineral exploration by finding undiscovered gold deposits or developing innovative processing techniques,” says Dr Shuster, University of Adelaide. “If we can make this process faster, then the potential for re-processing tailings and improving ore-processing would be game-changing. Initial attempts to speed up these reactions are looking promising.”

The researchers say that this new understanding of the gold biogeochemical process and transformation may also help verify the authenticity of archaeological gold artifacts and distinguish them from fraudulent copies.

Alexandrite —June's other birthstone (may be simulated!)

By **Beth Simmons**

Round 7mm simulated alexandrite screw back stud earrings, only \$300
Alexandrite "mystic topaz" in white gold ring, only \$700, both at Walmart.

Lab-created alexandrites are all over the jewelry internet. But how can they imitate the color change of natural alexandrite, a gem variety of chrysoberyl (BeAl_2O_4) that appears green in sunlight and red in lamp light (emerald by day, ruby by night). Discovered in Russia's Ural Mountains in 1830, it was named for Czar Alexander II. In today's world natural exceptionally rare alexandrite also comes from Sri Lanka, East Africa and Brazil. An orthorhombic mineral, its refractive index is 1.746 to 1.756, very high, as we learned in Pete's mineral class. Its specific gravity is 3.73 and its hardness, 8.5, is higher than beryl.

Sri Lankan (Indian) gems tend to be yellowish green and brownish red rather than purplish red. Brazilian gems rival the Russian, but production has decreased. Rutile inclusions (TiO_2) aligned parallel to each other can cause a cat's eye effect called chatoyancy. Titanium, chromium, and vanadium are the typical color-causing impurities.

Most synthetic alexandrite is grown by the melt Czochralski method, also known as "pulling" developed in 1916. Czochralski or "pulled" alexandrite is very "clean." Curved striations visible with magnification are a give-away. Some pulled stones have been seen to change color from blue to red – similar to natural alexandrite from Brazil, Madagascar, and India. Seiko synthetic alexandrites show a swirled internal structure characteristic of the floating zone method of

synthesis. They have "tadpole" inclusions (with long tails) and spherical bubbles. The name *allexite* has been used for synthetic alexandrite manufactured by the Diamonair Corporation who maintains that its product is Czochralski-grown. The boules formed range up to 50 mm in diameter and up to a meter long!

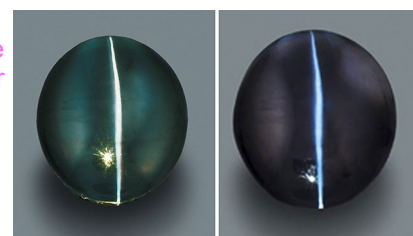
Another method of producing synthetic alexandrite is a "floating zone," developed in 1964 by Khachatur Saakovich Bagdasarov, of the Russian (former Soviet) Institute of Crystallography, Moscow. Bagdasarov's floating zone method was widely used to manufacture white YAG for spacecraft and submarine lighting before the process found its way into jewelry production. Alexandrite crystals grown by floating zone method tend to have less intensity in color than crystals grown by the pulled method. In this process, alexandrite grew about two mm/hour!

Tom Chatham developed the flux process in the United States when he produced artificial emeralds. Flux-grown alexandrites are more difficult to spot because of their convincing colors, and because they are not "clean." Their inclusions of undissolved flux can look like inclusions in natural chrysoberyl. However, layers of dust-like particles parallel to the seed plate, and strong banding or growth lines may also be apparent. Flux-grown alexandrite stones, expensive to make, are grown in platinum crucibles for almost a year. Crystals of platinum may still be evident in the cut stones. Alexandrite grown by the flux-melt process will contain particles of flux, resembling liquid "feathers" with a refractive index and specific gravity near that of natural alexandrite. Some stones contain parallel groups of negative crystals. Due to the high cost of the flux-melt process, it is no longer used commercially.

Inamori Created Alexandrites, produced in Japan by Kyocera, had a cat's eye variety which showed a distinct color change. The eye was broad and of moderate intensity. Specimens were a dark greyish-green with slightly purple overtones under fluorescent lighting. The eye was slightly greenish-bluish-white and the stones were dull and oily. They appeared to be inclusion-free and under a strong incandescent light in the long direction, asterism could be seen with two rays weaker than the eye. This has not been reported in natural alexandrite. Under magnification, parallel striations could be seen along the length of the cabochon and the striations were undulating rather than straight, again not a feature of natural alexandrite.

Today, Tairus is the largest producer of jewelry quality lab-grown alexandrite. Their production ranges up to about 100 kg/year, much of which is used in lasers for etching, drilling, marking metals, metal coating, ceramics, treating kidney stones, and hair removal.

References: [Alexandrite Gemstone | Natural Alexandrite Stone - GIA](#); [Synthetic alexandrite - Wikipedia](#); [Methods of Producing Synthetic Alexandrite](#) ; [AGL Certified Untreated 2.81 cts. Alexandrite Oval \(gemsny.com\)](#)



Cat's Eye Alexandrites



2.81 carat
NATURAL Indian
alexandrite, very
slightly
included, only
\$70,000!

Pyritic Snail found in the Hot Vents of the Indian Ocean

By **Beth Simmons**

On the ocean floor are hot vents where volcanic fields along rift zones spew hot gases. Using remotely operated vehicles, research institutions have sampled the complex array of species that live in this seemingly inhospitable environment. In three “fields” in the eastern Indian Ocean, they found “scaly-foot gastropods” (*Chrysomallon squamiferum*) living with 35 species of other snails, sea anemones, crustaceans (crabs), clams, limpets, and worms. The scaly-foot gastropod, commonly called the “volcano snail” is unique in that it concentrates iron sulfide (which you know as *pyrite*, FeS_2 , plus a different form, *greigite*, $\text{Fe}^{2+}\text{Fe}^{3+}_2\text{S}_4$, named in 1964 for Joseph W. Greig, mineralogist at Penn State, who was emeritus when Pete was there, but Pete knew) The volcano snail is the **only** living animal known to use iron sulfide in any part of its skeleton, where it deposits the minerals in the outer layer of the shell and in its sclerites, scales which armor the foot.

The ROV Jason operating from the US research vessel RV Knorr discovered the species in 2001 living on the bases of black smokers in the Kairei hydrothermal vent field on the Central Indian Ridge.

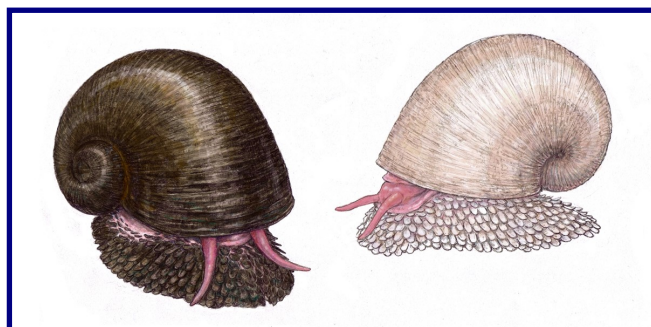
The depth of the field varies from 2,415-2,460m (7,923-8,071'); the rocks the snails live on are a basic intrusive olivine-rich anorthosite called troctolite and a basalt. The snails live in low-temperature (2-10°C) diffuse fluids of chimneys where there are high concentrations of hydrogen sulfide and low levels of oxygen. The snails weren't collected until 2009 by the Japanese vessel, RV Yokosuka and its ROV Shinkai 6500. In 2011, the British Royal Research Ship RRS James Cook and its ROV, Kiel 6000, sampled the Longqi vent field and designated that as the type locality for the unique species which wasn't officially named until 2016. The three localities only amount to an area the size of 1/5 of a football field!

The snails are small; they range from 9.8-40 mm (.39-1.58”) in width and 45 mm (1.79”) in length with the height of the aperture 6.38-27.29 mm (.255-1.07”). Their shell consists of three layers; the outer layer about 30µm thick, made of iron sulfides containing *greigite*. The middle layer about 150µm thick is thick and brown, equivalent to the organic periostracum (thin organic coating) of other snails. That layer appears to absorb mechanical strain and energy generated by a squeezing attack (perhaps from a crab) and also dissipates heat. The innermost layer is composed of aragonite, calcium carbonate, like that found in most shelled creatures, about 250µm thick. The snails live symbiotically with bacteria which produces food for the snail.

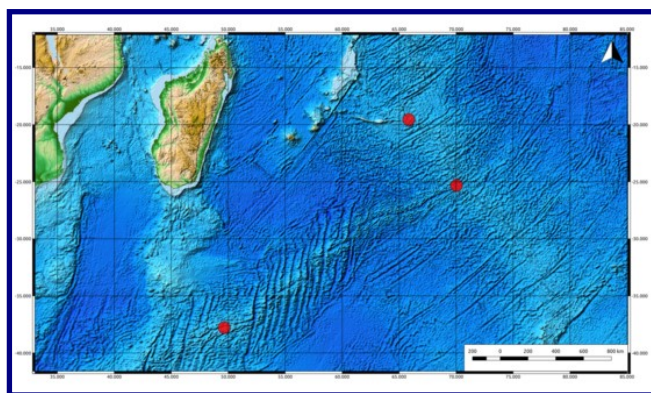
Certainly, their existence leads us to wonder whether fossil pyritic snails (and other shellfish) lived in the past and were preserved!

[Scaly-foot gastropod - Wikipedia](#) - this link should take you to a fascinating video of the hot vent community.

Read more at [Wikipedia.org](#) and at [Mindat.org](#) (of course)



Two varieties of Scaly-foot gastropod—dark and white



Red dots show occurrences of hot vent communities where the scaly-foot gastropods live.

MINERALS you've never heard of—

Spherochalcite on quartz from Morocco associated with *chalcocyanite* (orange-brown)

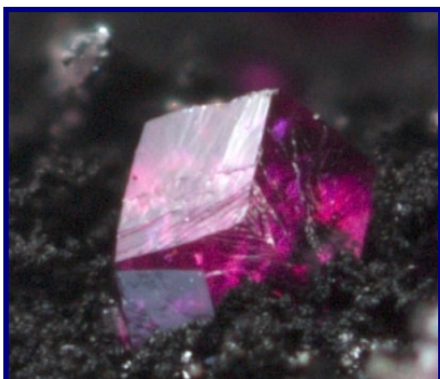
CoCO_3 = *Spherochalcite* (Cobaltic carbonate)

Trigonal, dark magenta red, sometimes brownish red, greyish red or velvet-black, vitreous, sub-vitreous, waxy, hardness 3-4, member of calcite group, Specific gravity 4.13, streak magenta, red, "peach blossom red," tenacity, brittle, poor cleavage, named by Albin Wiesbach in 1877, type locality: Saxony, Germany, in cobalt-nickel veins

$\text{CaCo}_2(\text{AsO}_4)_2 \cdot 2(\text{H}_2\text{O})$ = *Chalcocyanite* (Cobaltic Arsenate)

Monoclinic, light brown to reddish, hardness 4.5, cobalt may be replaced by minor Fe^{+3} member of the Tsumcorite group; named for Julius Lothar Meyer (1830-1895) in 1999, type locality Saxony, Germany.

Pictured magnificent specimen from J.P. Barral's collection; photo by him: specimen from Agoudal Centre Quarry, Agoudal, Bou Azer District (Bou Azzer District), Tazenakht, Ouarzazate Province, Drâa-Tafilalet Region, Morocco



Left

Spherochalcite

Right

Chalcocyanite

Both images from Mindat.org



References:

Mindat.org (of course); Geologyin.com through Front Range Science Connection on Facebook, [Spectacular Spherochalcite on Quartz From Morocco \(geologyin.com\)](https://www.geologyin.com) (yes, that's the way quartz is spelled, even on Mindat!)

Greek Alphabet

By **Marj Becker**

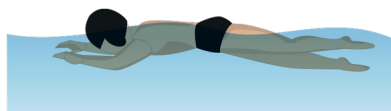
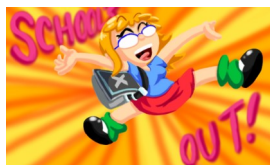
June is here
Again
It seems that
It comes around
Once every year



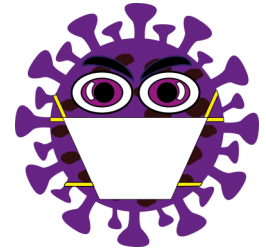
Our lives repeat
Once a year
Over and over
Bringing memories
Warm and old



May bedding plants
Start to bloom
School is out
Swimming is in
Temperatures go up



Coming into view
The alphabet soup
Of COVID-19 variants
They come out into the open
GRA - BA.2, .4, .5



New variants with
Greek alphabet names

Epsilon **E ε**

Zeta **Z ζ**

Eta **H η**

Theta **Θ θ**

Iota **I ι**

Kappa **K κ**

Lambda **Λ λ**

Mu **M μ**

Omicron **O o**

Will this always
Repeat and repeat?
Will it morph and morph
And morph!
Will it ever stop?



Web and Computer Resources for Rockhounds by **Bob Johnson**

Call me if you have trouble getting logged in—720-514-0266

DGMG on Facebook – by Bob Johnson

The DGMG has two Facebook pages. The first is a “private” group that was first established by former DGMG President Brenda Smith, who has since moved to Florida - but she still checks in on us regularly. <https://www.facebook.com/groups/712900222148230/> and serves as administrator.



DENVER GEM AND MINERAL GUILD

Private group · 229 members



Joined

+ Invite

About Discussion Topics Members Events Media

This group is for members and “prospective members” of the DGMG. Only those who have requested to join, and have been approved by the group moderator (me or Brenda) can see the content of the page or make posts there. In accepting members of that Group, I look for existing membership in the DGMG, or friends of members, or “prospective members” who obviously have an interest in rocks and live in the area. I specifically exclude mineral dealers from other countries who are unlikely to ever be active participants in our club and are only looking for places to advertise. The group rules (which they must agree to when they apply to join) state that only dues paid members of the DGMG (and our Show dealers) are allowed to post things for sale in our Facebook group. One local dealer has recently had their ads removed from the page because they did not meet either of those requirements. Our Facebook group has been growing and now has over 220 members.

I advertise our club meetings there and hopefully someday we will see visitors/new members to our club from that group.



(con't. next page)



Web and Computer Resources for Rockhounds by **Bob Johnson**

Call me if you have trouble getting logged in—720-514-0266

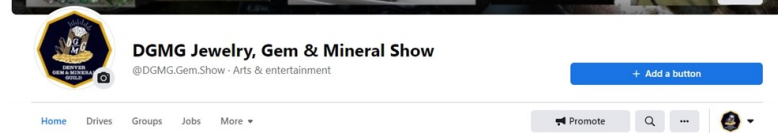
The second (public) group is specifically to advertise our show - but I also advertise our meetings there.
<https://www.facebook.com/DGMG.Gem.Show/>

This page had a “reach” of over 2500 viewers in the month of February 2022. You are encouraged to visit and participate in these DGMG FB groups regularly!



NOTE! – Because the Private group is “Private” you can not share posts from that group to your own FB page, but you CAN share posts from the Show FB page – and most of (my) posts are on *both* pages.

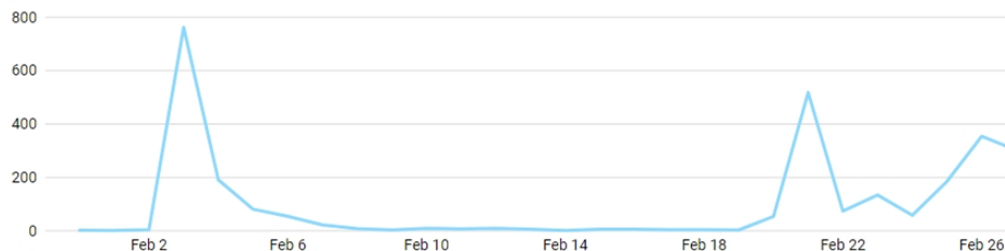
(Ed. Note: And the record-breaking show attendance reflected those postings!)



Facebook Page Reach ⓘ

2,528

↑ 1.4K%



IT'S TIME TO PAY UP! New members from JeffCO, please make sure you sign and send in the liability waiver!

DENVER GEM AND MINERAL GUILD MEMBERSHIP 2022

☐ Renewal

☐ New Membership

Annual Dues:

- Individual=\$15.00

☐ Family=\$25.00 (Family is one or two adults, living at the address, and your children, under 18)

Primary member _____ Birthday _____
Name Month Year

Phone number _____ Email address _____

Spouse/Partner _____ Birthday _____
Name Month Year

	Name	Month	Year
Phone number	Email address		

Anniversary Month _____

Junior Member _____ Birthday _____
Name Month Year

Junior Member _____ Birthday _____
 Name _____ Month _____ Year _____

Junior Member _____ Birthday _____
 Name _____ Month _____ Year _____

Address _____

City _____ State _____ Zip Code _____

☐ Check this box if you DO NOT want your name, phone number and email address included in the Members Only section of the DGMG website.

interests and Skills (check all that apply)

- Fossils
- Lapidary
- Faceting
- Jewelry
- Have a collection
- Display at shows
- Attend mineral shows
- Willing to volunteer at shows
- Field trips

○ Mineral collector: (list favorites)

☐ Willing to share special skills with others:

Signed: _____ Date: _____

Return membership form, liability form for each person, and payment to Membership Chairman at a monthly meeting or mail to: DGMG

Membership Chairman
1420 S. Reed Street
Lakewood, CO 80232

DENVER GEM AND MINERAL GUILD**RELEASE OF LIABILITY**

By signing below, I acknowledge that all activities sponsored or conducted by the Denver Gem and Mineral Guild (DGMG), a non-profit organization, may be hazardous and may result in loss, damage, or death.

With full knowledge of these dangers, and in consideration for my acceptance as a member of the DGMG and participant in any and all field trips **and activities** sponsored by the DGMG, and the services and amenities to be provided by the DGMG in connection therewith, I confirm that I have read the foregoing and voluntarily assume all risks of such damages and hazards occurring in connection with the **activity**. I hereby agree for myself, all of my family, and heirs to **RELEASE** the DGMG and any of its trip leaders, club officers, club members, **hosting property owners** and claim owners, instructors, guides, or representatives from liability, claims, demands, or any causes of action.

I UNDERSTAND THAT THIS IS A LEGAL DOCUMENT AND BY SIGNING IT, I AM GIVING UP MY RIGHT TO SUE OR OTHERWISE MAKE ANY CLAIM against DGMG or any of its trip leaders, club officers, club members, **hosting land owners and claim owners**, instructors, guides, or representatives which may arise during my participation in any and all activities of the DGMG **or activities I conduct as an individual on DGMG owned or leased properties**.

I intend this RELEASE OF LIABILITY to be effective whether or not any loss, damage, injury, or death RESULTS FROM NEGLIGENCE of the DGMG or any of its trip leaders, club officers, club members, hosting land owners, and claim owners, instructors, guides or representatives. I understand that negligence means failure to do an act which a reasonably careful person would do, or the doing of an act which a reasonably careful person would not do, under the same or similar circumstances to protect himself, herself, or others from injury or death.

I agree to be solely responsible for my own safety and to take every precaution to provide for my own safety and well being while participating in the activities of the DGMG. Also, I understand that on DGMG trips, there may not be rescue or medical facilities or expertise, which may be necessary to deal with potential injuries to which I may be exposed. I understand that these risks exist and notwithstanding them, I wish to participate in DGMG activities.

I HAVE READ THIS RELEASE AGREEMENT AND HAVE FULLY INFORMED MYSELF OF ITS CONTENTS BEFORE I HAVE SIGNED IT. ALSO, I PLEDGE TO UPHOLD THE CODE OF ETHICS ATTACHED TO THIS RELEASE.

Printed Name (Please print legibly): _____

Signature: _____ Date: _____

IF UNDER 18 YEARS OF AGE, PARENT OR GUARDIAN MUST READ AND SIGN BELOW

I am the legal guardian of the above minor and have read the above RELEASE. I hereby consent to the terms of the RELEASE on behalf of the named minor, and give my consent to the participation of the above named minor in all activities of the DGMG on the terms stated.

Signature: _____

Date: _____

