

# Rock Writings

April, 2023

Newsletter of the Nevada County Gem & Mineral Society

Vol. 56, #4

## Calling all NCGMS Members! Bring your fake, dyed, coated, or other “enhanced” minerals, fossils, and related material to the April meeting



Due to snow and rough weather the March meeting program will be in April. NCGMS member Blaze Baker will give a PowerPoint presentation about fakes and enhanced minerals and gems. Enhancements vary from industry-accepted practices such as heating sapphires, to deceptive practices of making fake fossils, and dyed or coated minerals. Items commonly sold at rock shows, online, and even at wholesalers will be presented.

After the presentation, there will be time for members to show and describe enhanced or fake items they brought. Many have been deceived by these items, or maybe knew it was enhanced, and just liked it anyway. This is a way for all of us to learn from each other and be more educated buyers!

## Why do Animals Eat Rocks?

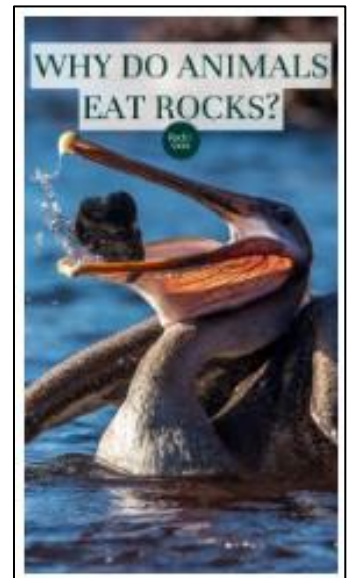
*From Rock & Gem March 6, 2023*

Why do animals eat rocks? While doing no favors to our teeth, eating rocks actually helps some animals to survive. Many animals need to do this for reasons for this: to help digest food or to aid in mobility. Those animals have two different stomachs; one for stones and one for food.

The rocks that animals consume are called gastroliths which literally translates to “stomach stones.” Gastroliths can be found in a range of animals including birds, reptiles, fish, insects, and even some mammals. Any type of stone can become a gastrolith; it just has to have been swallowed to join that club.

### Why Herbivores Eat Rocks

Birds are the most common group of animals that eat rocks. These rocks aid in their digestion. Folks who raise birds are familiar with this as many supplement their feathered friends’ diets with grit, which are very small stones with uneven, blunt edges.





Birds don't have teeth, or stomachs like mammals, instead, have a gizzard which is a muscular mass attached to their version of a stomach. The gizzard is where their food is ground up and mashed with the aid of the stones that they have swallowed.

Most avian consumers of stones are ground-dwelling or flightless birds. Chickens, turkeys, ostriches, and even penguins routinely swallow jagged little rocks while they are out and about foraging for food to help their digestion. Research has found that in ostriches, between one-fifth and one-half of their stomach contents are gastroliths.

These account for about one percent of the bird's total body mass. It is speculated that the ratios and percentages are similar for other birds too (at least the ones that eat rocks). There are some flying birds though that have been documented to be stone-eaters.

Crows and parrots are known to eat small rocks to aid their digestion. Some swimming and flying birds like ducks are also known to eat small grit-stones to help them break up their swallowed food. It is very likely that all birds swallow stones in some capacity to help break down their food.

### **Why Reptiles & Amphibians Eat Rocks**

The need for birds to swallow rocks is pretty well understood. The same cannot be said though for reptiles. The prevailing theory for decades was that for swimming reptiles like crocodiles, swallowing rocks helped with their buoyancy. Given that they like to hover just below the water's surface, this might be a plausible reason. A bellyful of rocks could help weigh themselves down enough so they don't float all the way up to where they can be easily seen by their prey.

Much recent research, however, has suggested other hypotheses for this behavior in reptiles. Scientists have found that gastroliths make up less than two percent of the body mass of reptiles. They calculate that for the gastroliths to have the previously-believed effect of achieving buoyancy, that number should be more than six percent of the animal's body mass. The act of breathing, filling, and emptying their lungs with air, has more of an effect on buoyancy than the two percent of their body weight comprised of stones.



Current speculation is that the swallowed rocks do help to stabilize the reptiles' bodies in the water, reducing the tendency to roll from side to side. Though not reptiles, frogs eat rocks too.

Like birds though, the hypothesis is it helps them break up the insects they eat to get more nutrients from them. Earthworms are another animal that consumes rocks. Their internal digestive muscles, along with teethlike structures known as "grinders" break up plant material so that nutrients can be extracted from them.

### **Why Sea Life Consumes Rocks**

A variety of sea life eats rocks. Fish, clams, seals, and even whales are known to eat rocks, though in some cases it is believed to be inadvertent. Like crocodiles, it was once thought that sea lions, seals, walruses, and whales swallowed rocks to make diving easier.



Like other hypotheses that have arisen in recent years, the thinking for these sea creatures is that since many find their food on the ocean floor, they inadvertently scoop up rocks while scooping in on their food. This is seemingly more probable than swallowing rocks to help them dive.

The problem with the rocks as a diving aid hypothesis is that they would have to swallow huge rocks to make a difference. There is no evidence that they seek out and swallow big, heavy rocks.

Several species of bottom-feeding fish are also known to eat rocks, though again, it is not entirely known if this is intentional to aid in digestion, or accidental consumption while grabbing food off the seafloor. Other possibilities have arisen to explain this phenomenon in swimming mammals.

It is possible that some of these, and possibly other animals that eat rocks, do so to help alleviate hunger. Taking up space in their stomachs could potentially make them feel more full. Another conjecture is that they, like birds with their gizzards, swallow rocks to help their digestion (sans gizzard) and to break down the wide range of items that they may accidentally swallow.

One of the more unusual sea-dwelling rock eaters is a type of clam found in the Philippines, *Lithoredo abatanica*. The name roughly translates to “rock shipworm from the Abatan River.” Many would not recognize this animal as a clam.

It is fattened, worm-like, translucent, at least four inches (10 cm) long, with a shell complete with shovel-like projections. It is not akin in either appearance or bloodline to the familiar Quahog or Atlantic type of clam, but instead is a member of the shipworm family. These clams eat wood, but the newly discovered *Lithoredo abatanica* eats limestone, not wood. It burrows into rock and excretes sand. It is not yet known if these creatures actually derive any nutrition from these rocks.

The consumption of gastroliths by animals is a more common practice than most people would realize. Whether it be for digestion (with or without a gizzard), buoyancy, diving, deriving minerals, or feeling full, it is a widely practiced behavior in the wild animal kingdom. The next time you see a small, unassuming, round stone on the ground, it may well have been on quite a journey inside of any number of animals before finding itself at your feet.



Gastroliths from Jurassic strata near Starr Springs, Utah.

## Welcome to our new members!

Mike and Cathie Field in Nevada City and are avid rock collectors (heard of us from a neighbor) and Katie Andreiu who has a rock collection and met the club at the last Show!



El Dorado County Mineral & Gem  
Presents Our 36<sup>th</sup> Annual  
**ROCK & GEM SHOW**  
April 15 & 16, 2023  
10:00 a.m. - 4:00 p.m. *See You There!*  
El Dorado County Fairgrounds—Placerville, CA  
ADMISSION: Adults - \$7.00 Seniors (60+) or Military - \$6.00  
Kids 12 & Under Free with Paid Admission  
Fairground Parking Extra  
*TREASURES IN THE ROUGH*  
www.EDCMGS.org

## Membership Renewal time

Last call! It is Time to Renew Your NCG&MS Membership for 2023.

Your membership dues pay for a number of things, including dues to the AMFS, the CFMS, Insurance for field trips and other club activities, rental for our meeting hall, and help to produce (and mail) the newsletter. We all get a lot for such a small amount!

Please fill out the form below, and along with a check please send to our Post Office Box:

Nevada County Gem and Mineral Society

Membership Chair

P.O Box 1686

Grass Valley, CA 95945-1686

Or give to Membership Chair (Charles) or Treasurer (Sheila) at a meeting.

Dues are due by March 1, 2023.

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Nevada County Gem and Mineral Society (NCGMS) 2023 Membership Renewal Form

Please provide Name, and the following information if anything has changed:

Name(s): \_\_\_\_\_

Address (Street, City, ZIP): \_\_\_\_\_

Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

(Note: Email Address will be part of the club roster unless omission is requested).

Type of Membership (check one):

Adult 18 Years or Older: \$25.00 per year.

Family (one address): \$30.00 per year.

If you wish to receive newsletter by Email only, deduct \$5.00 from normal membership dues.

I wish to receive my newsletter by email and have entered an Email address.

Nevada County Gem and Mineral Society (NCGMS) is a not-for-profit corporation under the statutes of the State of California and is recognized as tax-exempt under Section 501(c)(4) of the Internal Revenue Code and Section 23701f of the California Revenue and Taxation Code. Contributions made to NCGMS are NOT deductible for tax purposes.

## NCGMS 2023 Field Trips (*please double check before the trip to ensure it is still planned*):

All of the trips listed in the March newsletter were cancelled due to significant snowfall and are being redcheduled when snow-free. You just can't rockhound through snow!

Other members are considering putting on additional local trips this summer, and possible long range multi-day fall trips, stay tuned. . . .



Trip	Host
April 8-9 Paradise/Sawmill Peak - Rhodonite	John Dolman
Reschedule TBD - NW Nevada - Tuledad Agate, Petrified Wood, Obsidian	John Dolman
Reschedule TBD - Wonderstone, Agate, Apache Tears, and maybe Turquoise	John Dolman

### Field Trip to Paradise, CA/Sawmill Peak for Rhodonite: April 8-9, 2023

TRIP LOCATION: Sawmill Peak (Paradise, CA)

TRIP DIFFICULTY/RATING SCALE: Vehicle access/parking: 8. Collection or viewing site: 6

WHEN: April 8-9, 2023

SPONSOR CLUB: Paradise, Eldorado, Nevada County Clubs

LEADER CONTACT INFO: John Dolman

COLLECTION MATERIAL: Limonite, Rhodonite

PROPOSED SCHEDULE: Meet at 8:00 am in Paradise at VFW parking lot (upper), corner of Skyview Hwy.191 & Elliot Rd. North east of Chico CA.

DIRECTIONS TO MEETING SITE: Take US-50 to Sacramento, to I - 5 north, to 99 north to Marysville, take Hwy. 70 north NB, To Wicks Corner go 191/Skyview, to Elliot Rd. Paradise, CA.

VEHICLE REQs: 4X4; carpooling

CAMP/FACILITIES- Motels in Paradise

TOOLS: Shovel, rock hammer, pry bar, 10 lb. sledge or more, bucket/bag, gloves, eyewear knee pads, a face shield is best, long pants, long-sleeved shirt.

### Field Trip to NW Nevada for Tuledad Agate, Petrified Wood, Obsidian, and more: Reschedule TBD

COLLECTION MATERIAL: Tuledad Agate, Petrified Wood, Chalcedony, types of Obsidian, yard rocks

TRIP LOCATION: Duck Lake, NV

TRIP DIFFICULTY RATING SCALE: Vehicle Access; Parking - 5, 2-wheel drive, parking on the dirt access road. Collection or View site - 6, 1/4 to 1/2 mile with trails on hillsides, or through brush and creek beds

WHEN: TBD, 2023

SPONSOR: El Dorado/Nevada County/Paradise Clubs

MEMBERS GUESTS: Allowed

LEADER CONTACT INFO: contact by ?? DATE, 2023, John Dolman

MEET: Duck lake loop road campsite is five miles off Highway 447. A Left turn-off of County road# 447.

DIRECTIONS TO CAMPSITE: I-80 east of Sparks NV, exit goes northbound from Wadsworth, NV, on county road# 447- Then turn left. On, Duck Lake road, which is about 130 miles north of Wadsworth, NV, look for the orange plate at the turn for Duck lake road.

VEHICLE REQ: Most 2-wheel drive

FACILITIES: Nearest motel to the site is in Cedarville-35 miles. Dry camping near the site.

TOOLS: Safety glasses, rock pick, shovel, hammer, pry bar, buckets, bags

SAFETY CONCERNS: Snakes, high desert critters, with no facilities

CLIMATE / WEATHER: warm, windy, showers, cool-cold

OTHER REMARKS: Lots of possibilities in this area-Davis creek, Cedarville, Black rock desert, Lost Creek area, Virgin Valley.

PROPOSED SCHEDULE: From campsite departure time 8 am each day.

## **Field Trip to Central Nevada for Wonderstone Agate, Apache tears, and maybe Turquoise: Reschedule TBD**

SPONSORING SOCIETY: El Dorado and Nevada County Clubs

FIELD TRIP LEADER INFO: John Dolman

PROPOSED SCHEDULE: On ?? DATE, at 9:00 am., Day one meet the leader on US Route 95-south 2.4 mi. north of Goldfield, NV. 9:00 am. On May 23, Day 2 meet the leader at Millers rest area- which is 12 mi. northwest of Tonopah, and east of Coaldale Jct. on US route 6 / 95.

DIRECTIONS: From Placerville, CA. Take US-50 eastbound, in Carson NV., take 395 south to 208 EB- take US-95 ALT South to US-95 south through Hawthorne, NV, Mina, NV-at Jct with US-6 go left to Tonopah. Gemfield is to the south of there.

VEHICLE REQUIREMENTS: 4 X 4 is best

CAMP/FACILITIES: North of Tonopah take US-6 east to state route 376 to BLM free campsite. Motels in Tonopah, book early, like a month or two. Jim Butler Inn is great.

TOOLS: Hard rock, screens, buckets, bags

OTHER: Bring water, lunch, and snacks for each day

REMARKS: If you plan to attend, you must contact the field trip leader, John Dolman, prior to March 19, 2021. The wonder stone agate is a FEE dig. = \$35.00 for each 5-gal bucket.

SAFETY CONCERNS: Encountering rattlesnakes is real, Personal falls are more likely



**2023 CFMS Shows**

<p><b>April 8-9, 2023 – Mariposa, CA</b>                  Mariposa Gem and Mineral Show                  Mariposa County Fairgrounds, 5007 Fairgrounds Rd.,                  Mariposa, CA                  Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM                  Contact: mgmc@sti.net                  Website: <a href="http://mariposagemclub.org">http://mariposagemclub.org</a></p>	<p><b>April 15-16, 2023 – Placerville, CA</b>                  El Dorado County Mineral and Gem Society                  El Dorado County Fairgrounds, 100 Placerville Dr.,                  Placerville, CA                  Hours: Saturday and Sunday 10 AM – 4 PM                  Treasures in the Rough                  Contact: office@edcmgs                  Website: <a href="http://edcmgs.org">http://edcmgs.org</a></p>
<p><b>April 22-23, 2023 – Thousand Oaks, CA</b>                  Conejo Gem &amp; Mineral Club                  Borchard Park, 190 N. Reino Rd., Thousand Oaks, CA                  Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM                  46th Pageant of a Thousand Gems                  Jewelry, Gems, Minerals, Fossils, Rocks, Hobby                  Supplies, Exhibits, Demonstrations, Door Prizes, Silent                  Auction, Plant Sales and Youth Activities                  Free Admission and Free Parking                  Contact: conejogemandmineral@gmail.com,                  mrmikerh@gmail.com                  Website: <a href="https://cgamc.org">https://cgamc.org</a></p>	<p><b>April 29-30, 2023 – Anaheim, CA</b>                  Anaheim Searchers Gem &amp; Mineral Society                  Brookhurst Community Center, 2271 W. Crescent Ave.,                  Anaheim CA                  Contact: Nancybird68@gmail.com                  Website: <a href="https://www.searchersrocks.org/">https://www.searchersrocks.org/</a></p>
<p><b>April 29-30, 2023 – Santa Cruz, CA</b>                  Santa Cruz Mineral and Gem Society                  Santa Cruz Civic Auditorium, 307 Church Street, Santa                  Cruz, CA 95060                  Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM                  The show features displays, fun activities, and loads of                  rocks, minerals, crystals, gems, jewelry, and lapidary                  arts for sale. Browse the bargains and pick up some                  great gifts. That's April 29th and 30th at the Civic in                  downtown Santa Cruz.                  Contact: scruzmgms@gmail.com                  Website: <a href="http://www.scrockngem.org">http://www.scrockngem.org</a></p>	<p><b>May 5-6, 2023 – Yucaipa</b>                  Yucaipa Valley Gem and Mineral Society                  Yucaipa Blvd at Adams Street, Yucaipa, CA 92399                  Hours: Friday 6 PM – 10 PM, Saturday Noon to 10 PM                  Our annual show will have 15 dealers, kids activities, geode                  cracker, club store, and great raffle. Held in conjunction                  with city's Yucaipa Music and Arts Festival which will                  include artisan and other vendors, kids rides, music, food                  and beer/wine garden. Attendance and parking are free.                  Festival and show is held along Yucaipa Blvd. This is a                  great event for everyone in the family.                  Contact: grandpasgems@gmail.com                  Website: <a href="https://www.yvgms.org/">https://www.yvgms.org/</a></p>
<p><b>May 6-7, 2023 – Lancaster, CA</b>                  Antelope Valley Gem and Mineral Club                  Antelope Valley Fairgrounds, 2551 West Ave. H,                  Lancaster, CA 93536                  Hours: Saturday &amp; Sunday 10 AM – 5 PM                  Admission and Parking are free. Please note that dogs                  are only allowed if they are Service Animals.                  Contact: marylandoriole@gmail.com                  Website: <a href="http://avgem.weebly.com">http://avgem.weebly.com</a>                  flyer: antelopeshow</p>	<p><b>June 3-4, 2023 – Jackson, CA</b>                  Amador County Gem &amp; Mineral Society Gem and Craft                  Show at Kennedy Mine, 12594 Kennedy Mine Rd.,                  Jackson, VA 95642                  Hours: 10 AM -4 PM                  Contact: (916) 698-9853, mountaingirl@volcano.net                  Website: <a href="http://amadorgemandmineral.org">http://amadorgemandmineral.org</a></p>
<p><b>June 10-11, 2023 – Escondido, CA</b>                  Palomar Gem and Mineral Club                  The Convention Center at the California Center for the                  Arts – 340 North Escondido Blvd, Escondido CA                  Hours: Saturday 10 AM – 5 PM, 10 AM – 4 PM</p>	<p><b>June 17, 2023 – Bellflower, CA</b>                  Delvers Gem &amp; Mineral Society                  DELVERS PARKING LOT SALE, 14515 Blaine Ave.,                  Bellflower, CA 90706                  Hours: 10 AM – 4 PM                  Website: <a href="https://delversgemclub.wordpress.com/">https://delversgemclub.wordpress.com/</a></p>



<p>9000 sq ft selling handmade silver, gold, beaded and fabricated jewelry, vintage jewelry, commercial quality gold &amp; silver faceted stone jewelry, specialty cabochons, mineral specimens, gem trees.  Contact: tonifloyd41615@gmail.com  Website: <a href="http://palomargem.org">http://palomargem.org</a></p>	
<p><b>July 8-9, 2023 – Culver City, CA</b>  Hours: Saturday 10 AM – 6 PM, Sunday 10 AM – 5 PM  Culver City Gem and Mineral Society  Culver City Veteran’s Memorial Auditorium, 4117 Overland Ave., Culver City, CA 90203  60th Annual Fiesta of Gems – 2023 Theme: Druzy  Free Admission – Free Parking – Free Hourly Drawings  35 Vendors Featuring Minerals, Gems, Jewelry, Fossils, Lapidary &amp; Jewelry making supplies, Books, Etc.  Free Exhibits of Minerals, Gems, Fossils, Crystals, Handcrafted Jewelry, Meteorites, Etc.  Free Demonstrations of Jewelry Making and Earth Sciences  Free Mineral Specimen for the Kids plus Rock Games &amp; Earth Science Education Displays  Grand Prize Raffle drawing on Sunday  Contact: <a href="mailto:lexyhunter@aol.com">lexyhunter@aol.com</a>  Website: <a href="http://culvercityrocks.org/fiesta/">http://culvercityrocks.org/fiesta/</a></p>	<p><b>August 4, 5 &amp; 6, 2023 – Nipomo, CA</b>  Orcutt Mineral Society  525 N. Thompson Ave., Nipomo, CA 93444  Hours: Aug 4 &amp; 5 – 10 AM – 5 PM, Aug 6 – 10 AM – 4 PM  The 55th Annual Rockhound Tailgating Rock &amp; Gem Festival  Contact: <a href="mailto:nipomocowgirl55@yahoo.com">nipomocowgirl55@yahoo.com</a>  Website: <a href="http://www.omsinc.org">http://www.omsinc.org</a></p>
<p><b>August 5-6, 2023 – Roseville, CA</b>  Roseville Rock Rollers Gem and Mineral Society  Roebbelen Event Center, @the Grounds – Roseville, 700 Event Center Dr., Roseville, CA 95678  Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM  61st Roseville Gem, Jewelry, Mineral and Fossil Show  Over 60 vendors, inside and out, featuring Crystals, Fossils, Minerals from around the world, Opal, Amethyst, Beads, Gemstones, Meteorites, Gold, and for Kids – “Education Station”, Gold Nuggets, Prospecting equipment, detectors and supplies, Petrified Wood, Stone carvings. Watch Demonstrations in the Lapidary Arts and bid on Silent Rock Auctions. Free – Scientific Mineral and Gem ID! Bring your Rocks, Gems, Minerals, Meteorites and treasures, for a no-cost Scientific Identification. General Admission \$8, Seniors 60+ \$7, Kids – 12 and under Free. Parking \$10.  Discount coupon.  Contact: <a href="mailto:gloriarosevillerockrollers@gmail.com">gloriarosevillerockrollers@gmail.com</a>  Website: <a href="https://www.rockrollers.com/index.html">https://www.rockrollers.com/index.html</a></p>	<p><b>August 19-20, 2023 – Tehachapi, CA</b>  Tehachapi Valley Gem and Mineral Society  Annual Tehachapi Valley Gem and Mineral Show  500 East “F” Street, Tehachapi, CA 93561  Hours: 9 AM – 5 PM  Gems and minerals, jewelry, activities for kids and much more. Free admission.  Contact: (661) 972-1117, <a href="mailto:travis462@outlook.com">travis462@outlook.com</a>  Website: <a href="https://www.tvgms.rocks">https://www.tvgms.rocks</a></p>
<p><b>August 26-27, 2023 – Arcadia, CA</b>  Pasadena Lapidary Society Arcadia Masonic Lodge, 50 W. Duarte Rd., Arcadia CA 91007  Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM  Contact: (626) 260-7239  Website: <a href="https://pasadenalapidary.org">https://pasadenalapidary.org</a></p>	<p><b>September 16-17, 2023 – Monterey, CA</b>  Carmel Valley Gem &amp; Mineral Society  Monterey Fairgrounds, Monterey, CA  Hours: 10 AM – 5 PM  Contact: (831) 801-5887, <a href="mailto:susieharlow@gmail.com">susieharlow@gmail.com</a>  Website: <a href="http://cvgms.rocks">http://cvgms.rocks</a></p>



**October 14-15, 2023 – Redwood City, CA**  
 Peninsula Gem and Geology Society AND Sequoia  
 Gem and Mineral Society  
 Redwood City Community Activities Building, 1400  
 Roosevelt Ave., Redwood City, CA 94061  
 Hours: 10 AM – 5 PM  
 Contact: (650) 575-3144, cci@pacbell.net  
 Website: <http://sequoiagemandmineralsociety.org>

**October TBD – Grass Valley, CA -- OUR SHOW!!**  
  
 Details coming, show not listed on CFMS site yet. . . . .

Check websites or call to ensure shows and field trips are still planned during the pandemic (cancelled shows have been removed or not listed here – also, watch the CFMS listings closely).  
  
 Also, “Google” the words “oregon gem and mineral society shows”: many shows (closer than the SoCal shows – and no state tax) show up. Nationally: [http://www.amfed.org/fed\\_shows.htm](http://www.amfed.org/fed_shows.htm)

**NEVADA COUNTY GEM & MINERAL SOCIETY**

**Board/Club Minutes: No minutes for March – meeting canceled due to weather**

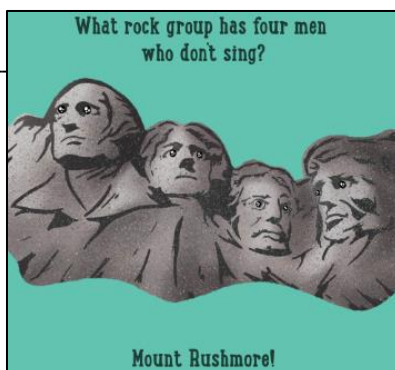
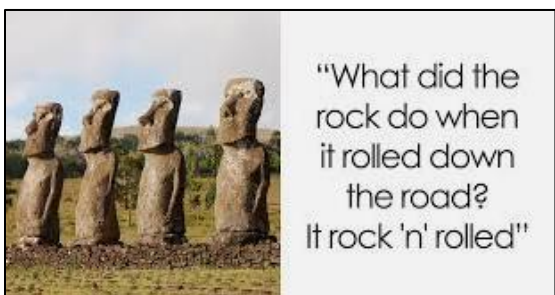
Respectfully submitted (Acting Secretary): Sheila Baker

**Bezel Problems**

When bezel setting a cab that has ever had problems pushing the common problem often causing a grimace on your face. In order for a top edge of the bezel must be to lay down onto the stone. With a happens as you push and burnish stone with corners, the tendency is down first. No compression occurs metal is left at the corners. difficult. Often the only way to corner is to make a saw cut and fold want a smooth bezel all around the set the corners of the bezel first. sides. In this way the necessary the length of all sides and not forced corners set first, the top edge of the along the sides.



rather sharp corners, have you metal down at the corners? It's a wrinkle in your bezel and a bezel to capture the stone, the compressed and become shorter round or oval stone this naturally the bezel. But when setting a to push the long sides of the bezel along the sides, and all excess Compressing everything there is remove the extra metal at the the two sides in to touch. If you corners, the simple solution is to Then push in and burnish the compression is distributed along to occur at the corners. With the bezel can easily be compressed



## Mineral Encyclopedia

### Euclase

Euclase is a rare beryllium aluminum hydroxide silicate mineral that crystallizes in the monoclinic system. It has a chemical composition of  $\text{BeAlSiO}_4(\text{OH})$ . Euclase crystals are usually found in granitic pegmatites and low temperature hydrothermal deposits. Massive to fibrous euclase is usually found in schists and phyllites. It is safe to say that most geologists have never knowingly encountered euclase in the field. It is a rare mineral, they are not expecting to see it, it is usually present in small quantities, and because most euclase is colorless to white it is easily overlooked.

### Euclase for Gem and Mineral Collectors

Euclase is best known for its prismatic crystals with prominent striations and a beautiful blue color with a light tone. Excellent crystal specimens are prized by mineral collectors. Specimens with excellent blue color and high clarity are often faceted into gems for mineral collectors. Euclase has a hardness of 7.5, which would make it an excellent gem. However, it also breaks easily along planes of perfect cleavage, and that reduces its usefulness as a gem used in jewelry. The name "euclase" is derived from the Greek words eu and klasis, which together mean "good fracture".



### Geographic Occurrence

Euclase was first reported from the Orenburg district of Russia's Ural Mountains where it occurs with other gem materials and gold in stream gravels. The most important source of gem- and specimen quality euclase today is from Ouro Preto, in the Minas Gerais area of Brazil.

Other noteworthy euclase occurrences include: Australia, Austria, China, Colombia, Colorado (USA), Germany, Russia, and Zimbabwe.

<https://geology.com/minerals/>

## The Rockhound's Display Dilemma

Story and Photos by Kathleen Fink/Rock & Gem Magazine

With so many rocks finding their way into our homes, it is not surprising that many collectors face the dilemma of what to do with them all. The good news is that finding solutions can be a very rewarding aspect of the hobby. Just as a garden reflects the personality and desires of its creator, what we do with the rocks we collect is a highly personal matter.

Throughout history, people have gathered rocks for practical and spiritual uses and for their aesthetic appeal. Specimens have bestowed status and have been acquired as



*When I placed my Fairburn agates in an old, wooden bowl, I got an immediate impression of sensuality, warmth, and vibrant energy.*

investments. Those with scientific knowledge regarding their composition and genesis tend to find all the more reason to appreciate them.

While a child may be happy to keep finds in a cardboard egg carton, serious collectors have been known to commission beautiful, carved stands or to line entire rooms with lighted display cabinets. When aesthetic effect is a primary motivation, collectors may display these natural sculptures prominently on various surfaces in their homes. Carefully organized collections find their way into bookcases, cabinets, and many types of display cases. Add labels indicating type and other information, and a collection can move in the direction of becoming a private museum.

Collectors have found any number of creative ways to display their rocks: beneath glass tabletops, wire wrapped into rain chains, sewn into tapestries, and secured to various backings, including fireplace surrounds. Natural pebbles and carved rocks are used as playing pieces in games all around the world. Artists stack rocks into spectacular configurations or carve them into pleasing shapes. Burbling “rock music” results when stones are placed in fountains.

Slabs are placed in windows as suncatchers, incorporated into stained glass-type windows and lampshades, and hung on wind chimes and mobiles. Slabs and cabochons are framed and hung on walls, while shadow boxes accommodate thicker specimens. When not being worn, jewelry containing special stones may be displayed in a variety of ways, including on elaborate custom stands.

Overflow rock specimens can be moved outdoors, placed along foundations, in planters, and in piles on decks and patios. When truly abundant, rocks are sometimes stored in crates lined up out back or are locked into wooden sheds.

Of course, some rocks are intended for the outdoors in the first place. They find homes in rock gardens—traditional or eccentric—walls and paths. They are important elements in many Asian gardens. Placing beautiful rocks in our yards and even on balconies can provide much lasting pleasure.

Photos can stand in for space-consuming and often valuable rocks that are stored out of the way and taken out from time to time, as desired. The visual appreciation developed in building a rock collection is directly applicable to taking rock portraits. Even beginners can achieve good results outdoors in natural light.

While photos do not convey the tactile qualities of rocks, they can be excellent, clear, and close-up visual representations. The photographer’s ability to perfectly position and light a rock influences our ability to appreciate it, and details are more visible and striking in enlargements. A well-respected rock photographer told me that his clients often say they prefer the photo to the rock itself. Digital super-macro technology now allows us to produce spectacular close-ups. A camera with this capability provides a whole new way to explore a collection that can produce surprises, as well as many artful images.

Photos, of course, are excellent for sharing. Calendars, cards, and other items with rock portraits make inspiring gifts. Enlargements and close-ups may be hung on walls. Booklets bound in inexpensive report covers serve as a way to share field trip stories and finds. A growing number of online forums with international audiences provide communities for sharing images and comments. For experts who write about their collections, crisp, high-resolution images are a must. Everyone wants to see prime examples, whether on a website or in a blog, book, or Rock & Gem article.

Professional photographers who specialize in taking photos of others’ specimens make their “collection” the whole world of beautiful and interesting rocks. It is important to respect their talents, as well as their often considerable investment in training, time and equipment, by obtaining permission before using their images for any purpose.



*These morrisonite (left) and New Zealand jade (right) pendants are too interesting to keep hidden away in a jewelry box.*



*The early evening sun streams through this Laguna agate slab, which was intentionally positioned for this to happen.*

Organized collectors use photos to help document their collections so that important information is not lost. Having a photo, together with such information as the date acquired, mineral type, dimensions, location of origin (if known), features of note, and the seller's name and purchase price (if applicable), can prove invaluable for any number of purposes.

More than a few successful businesses started when collectors found a need to cull less desirable rocks from their growing collections. Those in the business of selling rocks may or may not have large collections of their own. After all, they get to enjoy a steady stream of desirable rocks passing through their hands, and in most cases they keep photographic records of their ever-changing inventory.

In my experience, a collection and the way it is displayed tend to evolve over time. As a child, I liked picking up natural rocks and playing with them in my room. My formal collecting began many years ago when my brother gave me a chunk of multicolor tourmaline.

I found a shop that carried tourmaline near where my family camped during the summers, in the White Mountains of New Hampshire. As I came to desire better crystals, and as tourmaline prices in general rose, my collecting slowed considerably. I found a wooden spice rack with clean lines that holds my specimens to this day, with the exception of one larger specimen with blue and pink crystals penetrating quartz.

My rock collecting really took off when I discovered the world of agate and jasper. I remember doing an internet search on the word "agate" just to see what would come up. Living in New England, I was not familiar with their diversity and amazing colors, and I was immediately entranced. I studied websites, read books and articles, and reached out to experts with questions.

As I began to make friends in the business, I was invited to visit locations where some of the types I loved were found. My vacations also began to include shows and special agate symposia. Of course, I always brought back a few souvenirs. Happily addicted, I had acquired incredible friendships, as well as a growing collection of agates and jasper.

By luck, I happened to purchase a stack of large, old wooden bowls. I thought they were all the more beautiful for having been knocked about a bit and having survived a fire. When I bought the bowls, I had no specific plans for their use. It did not take long for me to realize, however, that they would be a good size to hold the various types of agate I collect, reducing visual clutter at the same time.

When I tried placing my Fairburn agates in one of the bowls, the immediate impression was one of sensuality, warmth, and vibrant energy. I could better sense the spirit of Fairburn agates by taking in at one glance all the contrasts and similarities before me. I also sensed things going on that are difficult to put into words, but I was aware that stones related to their neighbors in interesting ways. I knew I was also seeing a reflection of my particular tastes and the forces that combined to allow me to collect those particular examples.

Arranging agates to my liking in those bowls turned out to be a time-consuming process of trial and error. I would prop individual agates against each other with their preferred faces up, while simultaneously balancing size, shape, pattern and color. I found this totally absorbing and quite satisfying, but I understand that others might find it a frustrating waste



*Rock collectors' gardens may have a few rare and interesting ringers hidden in plain sight among the more expected natural rocks.*

of time. Of course, there is no reason not to let rocks fall where they may into a bowl, an approach I used for tumble-polished jasper pebbles, with good results.

For some reason, my cat preferred the bowl of Fairburn agates. I would sometimes catch her with an intent look on her face, reaching in a paw to pull one out. I do not think she was simply dropping them to get my attention, as she seemed genuinely fascinated. Golda was careful not to disturb the remaining stones when she removed one, but woe betide the person who reaches carelessly into one of my painstaking arrangements.

I started to collect agate and jasper cabochons when I became aware of how well they frame delightful images without taking up much space. They often have distinctive personalities that I attribute in part to the lapidary artist's choices. At one time, I had many of them mingling at a "cab convention" on my computer table. I have mixed feelings about exiling most of these cabochons to storage, but I am happier without their constant squabbling with one another for attention.

At the same time as I was engaged with the lively agates and jasper, my appreciation for ordinary rocks, especially those with beautiful weathered shapes, found a focus outdoors. The house we purchased has an exposed granite mound resembling a large turtle in the backyard. The bedrock that makes up much of the vicinity has collected our neighbors and us more than we have collected it, but I certainly appreciate the sense of deep time it conveys with its glacial scrape marks and coating of lichens. As soon as I saw the view through the large kitchen window, I recognized the potential for a garden with a Japanese flavor. All that was needed by way of additional rockwork was a stepping stone path and a few small, ancillary rocks. When we replaced a retaining wall out front, I had an excuse to gather natural rocks and gravel for a rock garden. Some pieces of jasper rough made their way out to that garden, where it seemed to settle in quite well.

I saw what looked like a natural, hut-shaped stone on a stand in a business' window, and suspected my chances of finding one for sale were not good. Again, I turned to the internet, read books, and became friends with an expert. I had discovered the world of viewing stones. These natural stones are collected in a number of categories by shape; they may resemble animals or natural features like mountains and waterfalls, or have beautiful abstract shapes. They have a long tradition in China and Japan, where they are often displayed on beautifully carved wooden stands or in ceramic trays filled with sand or water. A growing group of enthusiasts in many countries find suitable stones in their own streams and mountains.



*Unlike biodegradable sushi, these and the other rocks in my collection will outlast us all.*

Although evocative viewing stones can be incredibly diverse as well as remarkably beautiful, I found that I was satisfied with a limited number. I find they have a large impact for their size, which can range from an inch to over 5 feet tall in the case of those found in Chinese gardens and in front of the Boston Museum of Fine Arts. Mine reside indoors on windowsills, on a wall shelf above my computer monitor, and even on top of the refrigerator. Two wooden stands with asymmetrically arranged shelves hold small ones, including some agate and jasper examples.

Over the years, I have been fortunate to visit collectors and see a wide variety of display approaches, from the resolutely functional to the highly creative. Regardless of the strategy used, rocks repay the attention and care taken with their display, as well as with the photos that represent them. As natural objects, there is always a freshness about rocks. They have the power to take our focus away from day to day irritations with their enduring mystery and beauty.

The rocks themselves, as well as the relationships and learning that go hand in hand with collecting, can add great richness to life. It is now my great pleasure to inspire others to collect rocks and to find their own ways to display and share them. I recently gave a framed poster of agates to a young boy, knowing that this might start him down the road to this rewarding hobby. As he left, the boy's father told me his son had asked how soon they could go to the beach so he could get some rocks.

## Member Items for Sale

Member Don Russel has some items for sale. I stopped by his house recently, and he has some really nice materials for sale as he is downsizing. Contact him at 530-559-9480 or [naturesart88@gmail.com](mailto:naturesart88@gmail.com).

27" Vi-Bro-Lap made by Highland Park, unused aluminum sanding plate, new cost for plate \$900, new cost for Vi-Bro-Lap \$2,495 + crating/shipping/tax: Asking \$700.

Home-made 16" lap: steel plate, 15 5/8" diameter, 5/16" thick, mounted into an antique Walker electric dish washer cabinet (21"X21"X32" high), top load door. Needs motor and finishing up conversion. \$375

Three rubber barrels, two steel barrels for rock tumbler 12T 9" from Covington.

100lbs Tripoli \$165/new cost; 50lbs \$145, 80lbs of 60/90 \$80; 210lbs 120/220 \$208 plus tax - make offers.

Colla petrified wood from Zile, Turkey (1) 20lb piece, (1) 10lb piece, (1) 2.4lb piece, (2) 1/4" slabs 5"X6"

Fossilized Coral from Florida 30 million years old from private river property

AZ petrified wood log sections

Tufa rock formation from private ranch in Nevada formed 30,000 years ago

Mookaite from Australia – 20lbs

Polished petrified wood 18"X18"X48" tall

Other material such as jade rough



# Nevada County Gem & Mineral Society

P.O. Box 1686, Grass Valley, CA 95945-1686

## 2023 Officers

<b>PRESIDENT</b>	Dennis Geare
<b>VICE PRESIDENT</b>	Eric Trygg
<b>SECRETARY</b>	Vacant
<b>TREASURER</b>	Sheila Baker
<b>DIRECTORS</b>	Christie Harris Polly Marie Blaze Baker

## 2023 Committee Chairpersons

<b>CLUB PICNIC</b>	Lori Woodhall
<b>FEDERATION DIRECTOR</b>	Frank Van Hecke
<b>HISTORIAN</b>	Beverly Glenn
<b>HOSPITALITY</b>	Christie Harris
<b>JUNIOR PROGRAM</b>	Julie DeHollander Cheryl Hendrickson
<b>LIBRARIAN</b>	Beverly Glenn
<b>MEMBERSHIP</b>	Charles Lindquist
<b>NEWSLETTER EDITOR</b>	Blaze Baker
<b>NEWSLETTER PUBLISHER</b>	Charles Lindquist
<b>PUBIC IMAGE CHAIR</b>	Lori Garcia
<b>REFRESHMENTS</b>	Monthly Birthday Honorees
<b>SCHOLARSHIP</b>	Joyce Emerson ?
<b>SHOW ORGANIZER</b>	Frank Van Hecke
<b>SUNSHINE</b>	Lori Woodhall
<b>TREK LEADER (Field Trips)</b>	John Dolman
<b>WEBMASTER</b>	Charles Lindquist

## **Nevada County Gem & Mineral Society Meetings**

The Nevada County Gem and Mineral Society meets monthly with few exceptions. Membership is informed of exceptions on the website, at meetings and through Rock Writings. You are welcome to attend any meeting.

**General Membership Meeting: First Tuesday of the month, 7:00 p.m.**

**Executive Committee Meeting: First Tuesday of the month, 6:00 p.m.**

**Golden Empire Grange Building, 11363 Grange Ct., Grass Valley, CA**

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**NCG&MS is a non-profit organization with the following objectives:**

### **Membership Information**

- To promote the study of mineralogy, geology & fossils
- To encourage the collection of minerals and gems
- To foster the study and practice of the lapidary arts
- To provide field trips to mineral localities
- To promote good fellowship, education and recreation

Yearly membership dues for NCG&MS are \$25.00 for singles and \$30.00 for families. \*Deduct \$5.00 if you receive your newsletter via email\* For information or an application, email our Membership Chairperson Charlie Lindquist at gvrnner99@yahoo.com

**Check out our website at: <https://www.ncgms.org>**

First Class Mail



*April, 2023*

March 2023 Meeting Tuesday, April 4, 7:00 PM  
Virtual board meeting Monday April 3, 6:00 PM)

Program: **Fakes and enhanced minerals – bring your show & tell!**

First Tuesdays Monthly at 7:00 p.m.  
(no meeting in July - Picnic)  
Golden Empire Grange Guild  
11363 Grange Ct., Grass Valley

✂ Bring a Friend! ✂

**2023 Membership dues**

Yearly membership dues for NCG&MS are \$25.00 for singles and \$30.00 for families. Deduct \$5.00 if you receive your newsletter via email. Dues are annual and payable in January.