

Rock Writings

October, 2024

Newsletter of the Nevada County Gem & Mineral Society

Vol. 57, #10

Nuggets From The Prez

Happy fall, usually my favorite time of year and I thought we might be on our way for cooler weather, but surprise, back to hot dry weather well into October. Fire season is still upon us - Paradise's Camp fire was in November, so still be fire safe at home and while rockhounding. Hoping for rain soon!

Following up on our volunteer needs. First, good news:

Rich Cross volunteered to work on the annual audit, Mike Field is working the Election Committee, and I can't recall, but I think the Christmas party also has volunteers. Thank you all.

The Earth's Treasures Show continues to struggle without a Show Chair, Committee Chairs, and a general lackadaisical support for individual in-show tasks. Dan Chaplain said it well at the last general membership meeting when he noted with lots of support, the show is easy and fun to put on, but if it is just like eight people, it is just no fun.

What is working, albeit not in a well-coordinated way, are preplanning for vendor signups, food, advertising, and a number of in-show tasks like kid's corner, night security, and silent auction. Thank you for your help, it means a lot.

What really needs to happen now are people to sign up for tasks during the show from setup and tear down and during-show support. Almost all are still without many signups – which will be available at the next show. Also, we need someone with a full sized pickup to bring the show trailer to/from the show. Big items like this still have not been solved. Reach out to me if you can help: oominerlas@gmail.com.

I emailed the vendors, graciously thanking them for coming, but was embarrassed to let them know we are floundering with volunteer support and no show chair. I let them know if they have questions now or during the show, I'll give them answers, which I have been doing already.

We are in the home stretch of the year: the October Show, November meeting and election (please step up), and Christmas party. Then we as a club really need to plan early for success next year. I'll still support the May tailgater and work toward Jr/community outreach, and leave space for other to lead us into the future.

And happy birthday to the October folks – the opal and tourmaline are yours (lucky)!

V/r, -Blaze

NCGMS 2024 Field Trips *(please double-check before the trip to ensure it is still planned):*



2024 Proposed Trips		Host
Oct 5-6	OUR GEM & MINERAL SHOW!!!	
Oct 11-14	Tuledad	John Dolman
Oct 18-21	Chinese Camp - Opalite, Magnesite, Mariposite, quartz crystals, jade	John Dolman
Nov 28-30	Big X area or Dec 7/14/21/28 (weather replacement dates)	John Dolman
Dec TBD	Crozier Wildfire and Big X Mountain (pending reopening of area to public)	Rich Cross
TBD	Do you have an idea for a field trip? Maybe you know a nice place for rocks and don't mind sharing with the club? Please contact us with your trip ideas!	varies

Field Trip Report – Quincy For Travertine Onyx

(John Dolman, Trek Leader)

Travertine Onyx, lots of collectors showed for the dig. The ground was quite showy after the sun went down, onyx everywhere. The ground was orange and purple, very intense! The chunks I picked up before sundown and blacklite time showed nicely - who needs a blacklight? Well, it did help! Gene and I stayed till the night bugs started biting, about 11:00 pm. We drove 5 miles or so to Quincy for the night.

The site was easy to find so we might go back for more later.

Field Trip Report – Sharktooth Hill

(Blaze Baker, President)

A co-worker noted to me a while back about a place called Sharktooth Hill near Bakersfield, CA, a fee-dig place. Since I'm now running back and forth either taking my son to college in L.A or to Arizona's rock shows, I thought I'd work a stop there into my travels, and finally made it happen. Friday we got up early, drove to UCLA, got moved into the dorms, and I was on the road back to Bakersfield by 2:30.



I stopped at a Walmart in Bakersfield, getting dinner and things for digging the next day (primarily a case of water thinking it would be hotter than the predicted 94 degrees). I got to the Baymont Hotel I'd

booked on hotel.com a week earlier only to find the City of Bakersfield that day posted red sheets of paper with “unsafe structure” in like 85 point font. I looked at my email, and they had cancelled my reservation that day. I parked on a side street with all the homeless and back to hotel.com to find another place at my price point (goal of under \$80/night and with a fridge/micro). Generally I prefer camping since I think it is more in line with the “rockhounding experience”. But since I was moving kiddo’s stuff, I only had room for rockhound tools in the rooftop carrier. I got to the California Suites Hotel (I think an ex-Comfort Suites), and while the place was rough/worn on the exterior, more homeless everywhere, the lobby and rooms were well cleaned (remember, rockhounds travel with black lights....). The view outside my room was a dirt lot with what I could only describe as a post-apocalyptic wasteland with homeless competitively sorting their trash well into the night among the petroleum fumes dominating Bakersfield’s hot atmosphere. Only thing missing was Mad Max! When I went downstairs the next day, I was relieved to find my car still there and unmolested.



After traveling through Oildale’s oil fields (dominated by Chevron) with an industrial intensity across the landscape I’ve never seen, I got to the Ernst Quarry meeting place at 7:30. When Rob (the owner) came, he quickly organized the 10 cars after getting releases and the \$40/person and caravanned up the hill to the dig area. He gave us a very informative tour of the 40 acre parcel, safety tips, showed specimens, discussed ongoing significant digs of whales and such (areas we had to avoid), and we were off to go dig (they provide most tools like shovels and screen you will need). A kid and I each found a tooth on the surface during the walkabout. He did get some folks exited noting about 1:100 do dig up a megalodon tooth. With 2,200 visitors last year, he said they only dug up over a dozen. In my opinion, to do so, you would have to dig in a way that breaks out large chunks and thereby avoid smashing such a valuable specimen – something hard to do jabbing at the hill with shovels.

After test screening a few areas and settling on a site close to the university's whale dig, I spent much of the day at that hole pulling out teeth every 10-15 minutes. Common in literally every shovel full were bone chunks, especially what appear to be marine mammal rib bones. Common on the site are bones from whale (multiple species), sea lions/seals, porpoise/dolphin, and bony parts of rays, skates, sharks, and turtle.

The day was warm, and after a couple canned margaritas (and resulting heartburn) I decided water was a better choice, and burned through almost 10 bottled waters and never needed the bathroom. I decided at 3:30 I'd had enough and my thermometer was just over 100 so I packed up and headed home, the traffic on Hwy 99 was epic, what a grind. If I come back I'd stay over and leave very early in the morning.



Was it worth it? That depends on what you are looking for. My cost since I was passing by was negligible (\$40 dig fee, hotel \$71, food and beer). Preferably I'd camp a mile or so past the quarry's meeting place at the campground, or since I sold my truck/caper this year I'm hoping to procure a van in the future, and therefore can hide anywhere. Better hotels were available such as Hilton and Hampton (generally \$150-\$200 a night), regardless of hotel quality, the homeless in Bakersfield are inescapable. To go buy what I found, I probably got a retail value of \$200 or more, with the chance to find a \$1000 meg tooth, like buying a lottery ticket or going fishing – you never know!



Digging was productive, and cooler weather would help, so would a second person with one digging while other screened. Plus I did not screen the finer stuff to find the miniscule teeth and especially tiny dolphin teeth. I could see across the site where spring digging in the mud must have been a nightmare. Likely October and into November before rain would be ideal – dry and not too hot.

Rich Cross noted that Ant Hill, south of the Kern river, has the same formation. I did not have time to go explore, but online posts note it is fenced off more than East Berlin now. Scanning

the country, and listening to Rob, it seems there are sites all over at the 800' elevation, but like much of California, access on the private ranches seems impossible.

Kudos to Rob for keeping public access to this site, and I think it will remain productive for many years to come. Seems he has done the math for a business and is keeping the balance between research support and providing something unique. It is a good family trip, digging is close to the car, and places like this are becoming few and far between with so many being closed now.



Collecting Rockhound Equipment

(Editor)

While local and online retail stores are a dependable source of equipment, you can save a lot of money and figure out exactly what you need by obtaining your gear from old rockhounds.

Some clubs host “Silver Pick Sales” when a member passes away, bringing rock enthusiasts to the surviving spouse’s home to help them identify and get rid of all those old rocks and tools. Other rockhounds will have their equipment for sale at yard sales, and considering we’re in gold mining country, rock-related tools are quite common, sometimes priced ridiculously low.

Such events often have several life-long rockhounds present, who will happily explain to you what you're looking at, how to use and maintain it. That's the kind of experienced, direct help you will not find on *amazon.com*. Buyer beware, though; you probably won't be able to return your purchases, so do make sure you are ready for the ongoing maintenance.

Online sites like Craig's List (Gold Country region), FaceBook Marketplace, and ETSY can also be good sources of less-expensive, used equipment, but you won't know how well the equipment works until you get it.



September Board Meeting Minutes (9/3/2024)

President Blaze Baker called the meeting to order at 6:05 pm.

There was a quorum present. Attending: Lori Woodhall, Eric Trygg, Mike Field, Cathie Field, Edwina Swensen and Sheila Baker.

Motion I: Cathie made a motion to approve the minutes of the 8/6/2024 meeting. Seconded by Edwina, motion passed. Blaze abstained.

Discussion of the show budget was added to the agenda, no other additions.

Blaze advised the there were two pick-up loads of rocks taken to storage from the recent rock/yard sale at Don King's along with lots of magazines. It was suggested, and agreed, to have stickers placed on the magazines and give them out at the club show. Charlie and Sheila will make stickers and affix them to said magazines. Stickers to say: "Courtesy of NCGMS," along with our website address.

Mike gave the treasurer's report and expressed some of his concerns with the club going forward.

Motion II: Cathie made a motion to approve the treasurer's report, as presented. Seconded by Edwina, motion passed unanimously.

With approval from the Board, Charlie has agreed to arrange a time to meet the Restore folks at the storage unit to give them the pie case and audio equipment. The bookshelves will be moved to the Grange. All were in favor of it.

Lengthy discussion took place about the club show (October 5 & 6) – we are in need of a Show Chair. Dan Chaplin passed around his notes on what needs to happen to get it off the ground. We are very short on volunteers and a plea will be made at the general meeting. Dan gave his input on how he felt we needed to go forward to have a successful show. It was agreed to have a meeting just to work on the show – what needs to be done, who will do these things, etc. Lori reported she is getting advertising at the Union and on-line ads. Cathie and Mike have agreed to handle the food for set up on Friday and tear down on Sunday evening.

Lori reported that the presenter for the October 1, 2024, meeting will be Blaze doing a demo on how to wire wrap rock stands for display.

Meeting adjourned at 6:50 pm.

Respectfully submitted by Sheila Baker, Secretary

September General Meeting Minutes (9/3/2024)

The General meeting was called to order by President Blaze Baker at 7:05 pm.

Pledge of Allegiance

Attendance –members 24, guests 11

John Dolman advised he had put some flyers out on upcoming trips, please sign up.

Beverly Glenn advised of a sale this coming Sunday at Lillian's Lampshades. Also, there are books to check out from the Grange library.

Lori Woodhall reported there was nothing to report from the Sunshine committee.

It was reported that an estate sale at Don King's home took place and they donated crates of rocks and magazines to the club for use at our club show.

Blaze advised there is need for a nominating committee, as it is that time of year. Mike Field, Cathie Field, Charles Lindquist, and Sheila Baker have volunteered for this task.

Rich Cross has volunteered to perform an audit of the club's financials.

A brief discussion took place regarding our annual holiday party. No action taken.

Blaze and Dan Chaplin gave an overview of where we stand with regard to our show, scheduled for October 5-6, 2024. We need lots of folks to step up and make this a successful show for the club.

Lori Woodhall introduced our guest speaker for the evening – Jenn Ulatowski. She and her husband own New Era Gems in Grass Valley. They specialize in African and Tanzanian gems. She had a lot of specimens to share with the members. It was a very interesting talk.

Raffle held and the club made \$58.00.

Meeting adjourned at 8:37 pm.

Respectfully submitted by Sheila Baker, Secretary



CFMS Updates & Shows (<https://www.cfmsinc.org/>)



2024 CFMS Shows

October 12-13, 2024 – 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 daily Rocks, Minerals, Fossils, Gems, Jewelry, Beads, Demonstrations, Kid's Activities Contact: cci@pacbell.net Website: www.sequoiagemandmineralsociety.org/sgms-gem-mineral-show.html	October 26-27, 2024 – Sacramento, CA Sacramento Mineral Society Scottish Rite Center, 6151 H Street, Sacramento Hours: Saturday 10AM – 5PM, Sun 10AM – 4PM 88th Annual Sacramento Gem, Mineral, & Jewelry Show. Free parking, \$8 adult admission, kids under 12 free with paid adult Contact: (916) 662-5819, gemshow@sacramentomineralsociety.org Website: www.sacgemshow.com
October 5-6, 2024, Grass Valley, CA Our Show! Also, search online using phrases like “Oregon gem and mineral society shows” Other events, closer than the SoCal shows, should appear in search results. Nationally: http://www.amfed.org/fed_shows.htm	

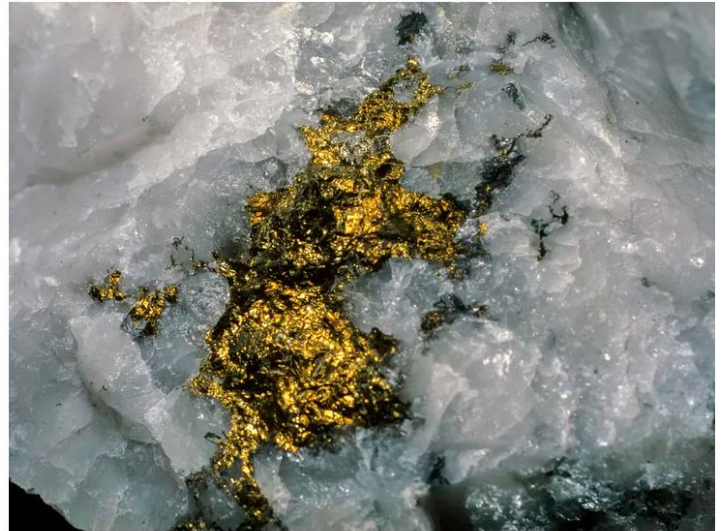
How Large Gold Nuggets Form in Quartz Crystals During Earthquakes

Quartz, which can generate electricity, attracts large chunks of gold when stressed and squeezed by seismic shaking, according to a new study

(By Elizabeth Gamillo, Smithsonian.com.)

Earthquakes may help prospectors strike gold: When these seismic events stir and squeeze quartz veins deep underground, the mineral creates an electric field that gold particles clump to, forming gigantic golden nuggets.

Geologists have known that earthquakes can produce bits of gold on quartz. However, a new study published last week in *Nature Geoscience* details precisely how the seismic waves form the coveted nuggets, helping to solve a long-standing mystery about how gold can cluster together and grow into large, prized pieces.



When earthquakes squeeze quartz crystals, the mineral generates electricity that attracts gold particles.
Pierre Longnus via Getty Images

“Gold forms in quartz all the time,” lead author Chris Voisey, a geologist at Monash University in Australia, tells *Live Science*’s Sascha Pare. “The thing that’s weird is really, really large gold nugget formation. We didn’t know how that worked—how you get a large volume of gold to mineralize in one discreet little place.”

Quartz can generate electrical charges when squeezed, stretched, compressed or vibrated and is well-known for powering quartz watches. The type of charge produced is called piezoelectricity, and quartz is the only abundant mineral on Earth that creates it, according to the study.

Scientists conducted lab experiments to test how gold nuggets form on quartz crystals. Layne Kennedy via Getty Images

About 75 percent of gold mined on Earth comes from deposits found in the fissures of quartz, per the paper. The precious metal naturally forms in quartz when it is flooded with hydrothermal fluids from Earth’s crust that contain dissolved gold. In theory, the gold should cover the quartz evenly, because the hydrothermal fluids cover its surface. But in reality, the nuggets only form in concentrated areas. So, the team of Australia-based researchers wanted to figure out why.

To study how earthquakes help form the gold nuggets, scientists conducted lab experiments with quartz slabs that were submerged in gold-rich liquid. Then, they mimicked seismic waves by placing the slabs into a machine that simulated the shaky motion of an earthquake. Afterward, they checked the quartz and found gold along its surface.

Put simply: “If you shake quartz, it makes electricity. If you make electricity, gold comes out,” of the hydrothermal liquid in Earth’s crust, Voisey tells Robin George Andrews of *National Geographic*.

The process happens because quartz is an insulator, and gold is a conductor. Any gold that has formed on the crystal takes on the voltage from the quartz and acts like a magnet for additional gold particles in Earth’s

hydrothermal liquid. In this way, more gold is drawn out from the solution in areas with pre-existing gold grains. “In essence, the quartz acts like a natural battery, with gold as the electrode slowly accumulating more gold with each seismic event,” Voisey tells Newsweek’s Tom Howarth.

With each passing earthquake, the nugget grows. The largest nuggets in orogenic gold deposits—those that form between tectonic plates that have crashed together to create mountain ranges—weigh about 130 pounds, reports *Live Science*. In nature, gold nuggets are most likely created not by one earthquake but by multiple.

“It appears to be a certainty that episodic earthquakes are important in helping form these important ‘orogenic’ gold nugget deposits,” James Saunders, a consultant geologist who was not involved in the study, tells *Scientific American*’s Kate Graham-Shaw. He adds that future research could get even more specific—exactly how long does an earthquake have to last to create a gold nugget, and why do these deposits form in only some of an area’s quartz veins?

“I think it is a great idea/hypothesis,” he adds to the publication. “I’ll be interested if it stands up upon further evaluation.”



Nevada County Gem & Mineral Society
P.O. Box 1686, Grass Valley, CA 95945-1686

2024 Officers

PRESIDENT	Blaze Baker
VICE PRESIDENT	Lori Woodhall
SECRETARY	Sheila Baker
TREASURER	Mike Field
DIRECTORS	Eric Trygg Edwina Swenson Cathie Field

**(Call, Text, or Email, no voicemail)*

2024 Committee Chairpersons

CLUB PICNIC	Lori Woodhall	
FEDERATION DIRECTOR	Frank Van Hecke	
HISTORIAN	Beverly Glenn	
HOSPITALITY	Christie Harris	
JUNIOR PROGRAM	Julie DeHollander	
LIBRARIAN	Beverly Glenn	
MEMBERSHIP	Charles Lindquist	webmaster@ncgms.org
NEWSLETTER EDITOR	Rich Cross	
NEWSLETTER PUBLISHER	Charles Lindquist	webmaster@ncgms.org
REFRESHMENTS	Monthly Birthday Honorees	
SCHOLARSHIP	Polly Marie	
SHOW ORGANIZER	Frank Van Hecke	
SUNSHINE	Lori Woodhall	
TREK LEADER (Field Trips)	John Dolman	
WEBMASTER	Charles Lindquist	webmaster@ncgms.org

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

October's Meeting: Club president, Blaze Baker, will demonstrate wire wrapping rock stands for display.





Nevada County Gem & Mineral Society
PO Box 1686
Grass Valley, CA 95945-1686

First Class Mail



October, 2024

October Meeting Tuesday, Oct 1. 7:00 PM.
October presentation: *Wire Wrapping for Display*
Meetings Monthly First Tuesdays
Board Meeting (All are welcome!) 6:00 p.m.
General Meeting and program at 7:00 p.m.
Golden Empire Grange Guild
11363 Grange Ct., Grass Valley

2024 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.

Bring a Friend!