

# ROCK TALK



White Mountain Gem & Mineral Club  
 P.O. Box 3504  
 Show Low, Arizona 85902  
[www.whitemountain-azrockclub.org](http://www.whitemountain-azrockclub.org)

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 March 2024

## PRESIDENT'S LETTER

**M**arch winds have all of us holding on to our hats. Maybe we should put rocks in our pockets to keep from blowing over. Wonderful seeing so many at our meeting. Welcome Missa, Leif, Glenette, John, Claire, and Dee. Welcome back Carol and Malcolm. Good to see you Mike A.

Thanks to all who shared during Show and Tell this month. We got to see so many interesting specimens - Crystals, fossils, different kinds of opal, and petrified wood. Blue even went to the Petrified Forest to make sure she accurately identified her phytosaurs teeth! That is serious rockhounding!

**"Find something that makes you happy and go for it."** —*Zendaya* This can be the motto of rockhounds everywhere. That being said, we have a number of opportunities that will lead to good times and happiness. In addition to our monthly meetings and field trips we have lots of show-related volunteer opportunities. We also have two highway clean-ups (May and September), Show Low Days, and Harvest Fest. All promise a good time. Think about how you want to play and join us!

**REMINDER!** Annual memberships need to be renewed no later than the end of March. Don't risk being removed from the roster and losing your club privileges.

Trivia: Made of magnesium iron silicate, **olivine** is one of Earth's most common minerals but also found on the moon, Mars, and in meteorites. The most abundant mineral in the Earth's mantle, in semi-liquid form it can drive the tectonic plates around. One liter of crushed crystals can absorb the carbon dioxide released by one liter of oil. The reaction forms heat. It can create power and remove carbon dioxide from the atmosphere - The ultimate green dream!

Take time to enjoy the warming days of our upcoming spring.

Sandra

### TREASURER'S REPORT

#### Current Expense

Club promotion handouts  
**Rock Talk** printing & postage  
 Navajo County STEM Fair

#### Upcoming Expense

Snowflake/Taylor C of C  
 Post Office box rental  
 Show Low Historical donation  
**Rock Talk** printing & postage

#### Income This Month

2024 Gem & Mineral Show  
 Member dues  
 Silent Auction  
 Fifty/Fifty  
 Member donations  
 American Online Giving Foundation

# BULLETIN BOARD

**M**ay the early spring  
**A**waken your soul and  
**R**emind you to  
**C**elebrate the day with the  
**H**ope and joy it brings!

## *Happy March Birthday*

Bonnie Adams

Judy Valentine

Beverly Willmon



## *Why Not Join our Let's Do Lunch Club*

**WHEN:** Friday, March 29, be there at 12:00 Noon.

**WHERE:** China Wok Buffet, in the shopping center in Show Low behind Jack in the Box and Pet Sense, 4411 S. White Mountain Road.

Let's celebrate our March birthday club members!

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## **Notice:**

**Last names A-M will supply the potluck table for the April 7, 2024 meeting.**



### SCAM E-MAIL NOTICE

Several members have reported receiving E-mails supposedly from either Carl or Sandra stating that there is a problem with (in reality a non-existent) club PayPal account, and asking the recipient to make this payment with reimbursement. If you should receive this, delete it immediately. Such a request would never come from Carl or Sandra.

## Rock Talk Newsletter

Our newsletter is published monthly by the White Mountain Gem & Mineral Club, Inc. Any information or comments members wish to include in the monthly newsletter must be given to the editor at the general membership meeting or call the editor no later than Tuesday following the meeting.

## Membership Dues

Membership dues are \$20 for a single membership and \$25 for a couple/family. (\$5 less if you receive newsletter by email.) Dues are paid in January each year along with a completed application form. Memberships initiated in November or later in a given year are also good for the following year.

## Meetings

We meet the first Sunday of the month (unless it falls on a holiday) at the VFW Post 9907, 381 North Central Avenue in Show Low. Turn north off the Deuce of Clubs at Burger King. Social half hour at 1:00 PM, meeting starts at 1:30 PM.

## ELECTED OFFICERS

Office	Name	Phone	E-Mail
PRESIDENT	Sandra Angelo	(928)537-3726	sandra_angelo@hotmail.com
VICE PRESIDENT	Debbie Christmas	(602)475-4714	Deb_xmas@yahoo.com
2ND VICE PRESIDENT	Carol Glick	(928)228-6202	malcarglick@yahoo.com
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TREASURER (Acting)	Carl Hickman	(928)536-3744	carlhickman8@earthlink.net
EDITOR	B.G. Hogarth	(928)532-3043 Cell-(775)397-2312	hogarths@citlink.net
FIELD TRIPS	Dick Turpin	(480)240-0995	
	Rick Palmer	(928)333-5019	palmer57@frontiernet.net

## Members at Large

Dick Turpin	(480)240-0995
Terry Pollard	(480)431-0686
Ursula Wilson	(928)532-5703
Shirley Leistikow	(623)261-5752

## Volunteer Positions

Webmaster/Coalition Chair	Aimee Webster	(602)503-8417	afwebster61@gmail.com
Show Chairman	Cathy Cargile	(714)348-9162	skyranch5734@yahoo.com
Assistant Show Chairman	Carl Hickman	(928)536-3744	carlhickman8@earthlink.net
Sunshine	Donna Pollard	480-600-2714	tdpollard@msn.com
Education, Schools	Open		
Greeter/Door Prizes/Raffle	Thelma Gray/Diane Moten		
Auctioneer	Donna and Terry Pollard		
Highway Cleanup	Brookie/ Larry Embry	(928)537-0760	
Bonus Prizes	Sandra Angelo	(928)537-3726	
Historian	Donna Pollard	(480)600-2714	tdpollard@msn.com
Librarian	Rick Palmer	(928)333-5019	palmer57@frontiernet.net
Meeting Room Setup/cleanup	Shelly Applegate	(928)245-4300	shellylynn@gmail.com

## Chamber of Commerce Liaisons

Show Low: B.G. Hogarth

Snowflake/Taylor: Open

Springerville/Eager: Rick Palmer

Heber/Overgaard: Aimee Webster

# WHITE MOUNTAIN GEM & MINERAL CLUB

## MEETING MINUTES MARCH 3, 2024

**P**resident Sandra Angelo opened the meeting with the Pledge of Allegiance. Visitors Missa Foy, Leif Jentoft, Glenette and John Mousie, and Claire and Dee Lim were welcomed. Members Carol and Malcolm Glick were welcomed back after a short absence.

Show and Tell had several presenters. Greg Wyman had some rocks to donate for the Kids' Corner at the July show and asked if anybody could finish them. Carl Hickman has some ice cream opals, and also needs someone to finish them. Mike Adams displayed some opal. Cathy Cargile showed two fossil shells from Indonesia. Natalee Nixon had crystal quartz from Arkansas, and Blue Thompson displayed a dinosaur tooth, petrified wood, and some other items.

Rick Palmer mentioned that lapidary-related items were found in some old cabinets in the building in which he works. The list of items includes booklets, instructions for various processes, information about mines, some lapidary items, and other items that might be helpful for rockhounds.

The minutes of the February meeting were accepted by those present.

Treasurer Carl Hickman reported that the club's financial situation is in very good condition.

Dick Turpin mentioned that several people have indicated they would like to take a Utah trip like he did last year. He is willing to plan a trip with those interested. He also has information about contacts in Utah if anybody is planning a field trip to that destination.

Sandra said that more specimens are needed for the Kids' Corner at the show.

Carol Glick said that membership flyers are available for distribution, and she is going to put some up in hotels and other public places.

Sandra mentioned that the club needs a treasurer as well as a meeting room set-up and teardown assistant.

Sandra reported that Debbie and her daughter, Othello were judges at the STEM. Our club was one of their Einstein sponsors. There were over 80 entrants.

Thelma Gray was given a lifetime membership upon reaching her 90th birthday per our club by-laws.

Sandra reported on the field trip to the Cultural Museum in Miami. (See Page 5 in *Rock Talk* for more information.)

Dick Turpin said that the March field trip will be to Robert's Butte, where we will find all sizes of purple agate (which is probably jasper). (See Page 8 in *Rock Talk* for further information.)

Cathy Cargile gave a report on the July Show. (See Page 9 in *Rock Talk*.)

Sandra described the door and the raffle prizes available at the meeting.

Dick Turpin, who is also a member of the Apache Junction Club, mentioned that club received a notice from the IRS that their 501-C rating had been revoked. It is a large club; so large that it began to look like a business to the IRS. The club faces at least \$10,000 for an attorney to regain their 501-C rating. He said that IRS seems to be on the path looking for such. He said to be vigilant about the credentials for non-profit.

Door prizes were won by Carol Glick, Shirley Leistikow, and Evva Ripperda.

A presentation on the mineral, olivine was given by Donna Pollard.

Terry Pollard won two of the raffle prizes. Garret Barr also won.

There being no further business to discuss, the meeting was adjourned.

Respectfully submitted,

B.G. Hogarth, Acting Secretary



# EXPLORING THE HISTORY OF COPPER MINING IN ARIZONA-- 1870 TO PRESENT

Article by  
Sandra Angelo

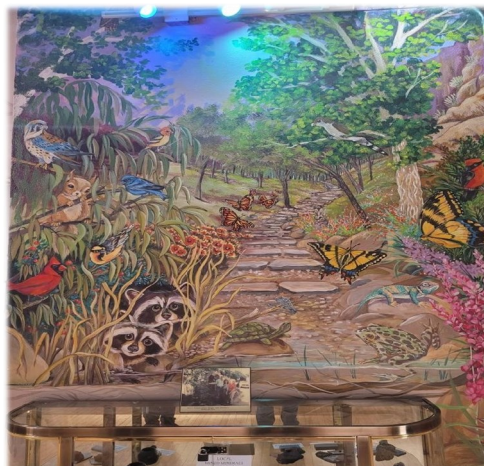
Photos by  
Donna Pollard



ASARCO Ray Open Pit Copper Mine near Kearny, AZ; Teapot Mountain in background. (Your editor's old stomping grounds!)



The Bullion Plaza Cultural Center and Museum in Miami was our February field trip destination. Twelve of us made the journey. The museum is located in the old Bullion Plaza School which opened in 1923 as a segregated grammar school for Mexican and Native American area children. It became a center of pride and evolved to one of equality and opportunity. It has now been repurposed as a museum and community/meeting center. The Mineral Hallway features Arizona Mining History in Minerals. Can you say 'WOW!?' There is also a diorama that shows the mining process from the field to the finished copper ingots. One exhibit showed what underground mining looked like, including artifacts from that era. The rest of the museum included examples of Globe, Miami, and Gila County history. Our action-packed day included lunch at Guayo's El Rey, a visit to the Pickle Barrel Trading Post, and then Copper City Rock Shop. There were a lot of happy faces.





# ROCK OF THE MONTH: OLIVINE



By  
Donna Pollard

Olivine is a nesosilicate, meaning the structure is composed of solitary silica-oxygen tetrahedrons (SiO<sub>4</sub>)-4 which are bonded to each other by ionic bonds which are not very strong. This can be compared to quartz, a tectosilicate, a strong, and common "framework" silicate where each silicon atom shares all four of its oxygens with neighboring silicon atoms.

Olivine has a hardness (H.) of 6  $\frac{1}{2}$  - 7, specific gravity (S.G.) of 3.27 - 4.32, conchoidal fracture, imperfect cleavage, a white streak, is brittle, and belongs to the Orthorhombic crystal system. The crystals are thick and tabular, but olivine is also often found as massive, or granular inclusions in igneous rock, lining fissures in dolostone, marbles, or limestone, and in meteorites. Olivine alters easily by weathering or hydrothermal action. A common product is serpentine. Because olivine is found in silica-poor (mafic) igneous rocks, it is not found with quartz-based igneous rocks such as granite or rhyolite.

Olivine is a member of a system of minerals with specific names based on their formulas. The general formula for olivine is (Mg, Fe)<sub>2</sub>SiO<sub>4</sub>. If there is an abundance of magnesium (Mg), the official name is forsterite, and it is green. If there is an abundance of iron (Fe), the official name is fayalite, and the mineral has more brown or golden overtones. Peridot, which is French for olivine, is the translucent gem version of forsterite olivine. The name olivine comes from the minerals color, much like the color of olives. The forsterite version is named for a German naturalist, Johann R. Forster (1729-1798), who sailed with Captain James Cook. The version Fayalite was named for Fayal, an island in the Azores.

Fine gem quality peridot has a soft velvety, almost oily, appearance. The finest peridot version of olivine comes from an island in the Red Sea off the coast of Egypt. Inhabitants of the island mined peridot as early as 1500 BC.

The mineral was called topazos and the island was known as Topazios. Egyptian kings praised the mineral and believed it was topaz. They also believed the mineral glowed in the dark and so places where the mineral was present were carefully marked at night to be mined the next day. It was sometimes called "night emerald" because they thought the brown overtones disappeared in the evening, giving the mined gem the appearance of the green beryl, emerald. Today the island is called Zabargad, or St. John's Island.

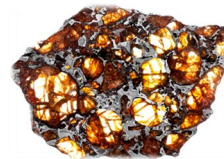
Peridot is found locally in basalt formations of San Carlos Indian Reservation, Globe, Arizona; Dish Hill, Ludlow, California; Jackson County, North Carolina; parts of New Mexico; the Patagonia and Santa Rita Mountains north of Nogales, Arizona; and the San Francisco volcanic field north of Flagstaff.

Two similar minerals are the softer and fluorescent apatite and the green tourmaline, which are not found in volcanic igneous rock or gabbros where olivine is formed. Green garnet is also similar, but it does not have cleavage. Olivine is also a mineral found in meteorites.

Olivine, and its gem variety peridot, have been the source of superstitions for they were thought to break evil spells. Associated with the sun, rays from the mineral were believed to give life and dispel the darkness. Many used the mineral in medicinal practices. Today, olivine makes a nice cabinet specimen. Though a bit fragile, fine jewelry is made with gem-quality peridot. There may even be peridot in the crown jewels of England. The gem was sent to England from St. John's Island as the beryl, emerald during the Crusades.



Forsterite  
Olivine



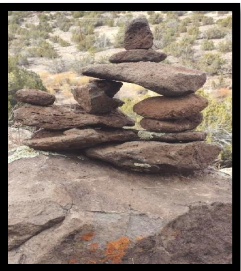
Pallasite Meteorite  
With Olivine



Fayalite  
Olivine

# CRAFTY CORNER

By Lidia Duvall



## CAIRNS *(Pronounced "Karens")*

is the art of rock balancing and has been used all over the world for many purposes for eons. The rock stacks are often used for navigation, the top stone pointing in the direction for the traveler to head on. As landscape art, they are thought to bring good luck to the stacker. The stones represent meditation and giving calm, peace, grounding or finding one's center. They can also be used as monuments and grave markers.

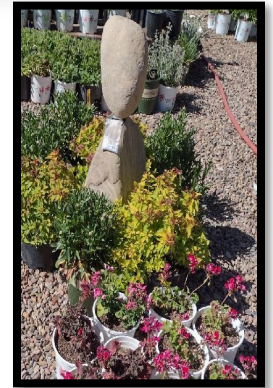
Jewish custom is to leave a stone when visiting a tombstone. It says, "I was here, I care, I witnessed, I honor you." Buddhists stack them like pagodas and stupas, and like everything, they are temporal. It is a hope for good fortune, a form of worship, with each stone representing a wish. It requires concentration, balance, and is common in Zen gardens as it seems to create order from chaos. They generate interest, wonder, and reflection wherever they are built.

Travelers must observe the one common law when encountering cairns in the state and national parks:

"Leave no trace!" Removing rocks in a stack can create erosion, disturb the ecosystem, and confuse hikers. Some parks build them as trail markers. Never add to them or disturb them. Never build any, as tempting as it may be. Take only pictures and memories. I have resorted to building them while hiking in a national forest to find my way back, and it has saved me more than once. However, I knocked them over upon return, or instead drew arrows in the sand or dirt. They can save your life.

As a work of art, they can be built in landscape for a focal point or to create interest. Small stacks glued together can be given as gifts. Some tips for stacking rocks are as follows:

Start with the largest flat stone, and finish with the smallest. Imagine a triangle when trying to balance. Balance on two sides of the triangle, then the third side. Use smaller stones or pebbles as a wedge or stabilizer when needed. Use indents to help balance, and thicker sides of rocks to level the surface to easily balance the next stone. Balance an odd shape rock for interest or build two or three piles that later connect by placing a big flat stone and then continue building. You can build an arch, tower, or curves. Try balancing a 15-pound rock on a pebble!



*(Continued on Page 8)*

*(Cairns, continued from Page 7)*

If you want to cheat, use gorilla glue, or to defy gravity, drill (with a diamond drill bit) half an inch into rocks and peg them together. (A much deeper hole for boulders is needed and use rebar snippets; not wooden pegs). Without water you can expect to drill two holes per bit, stopping regularly to brush the drill bit with a toothbrush to clean off the dust. Know exactly what you're doing if you use water with drill bits! Have fun and be mindful of intentions. It's a good exercise in concentration.

For more inspiration visit: [arttourashville.com](http://arttourashville.com) /Carl Peverall. The photos of the large cairns are for sale at Christopher's Garden in Pinetop. I am certain they have been drilled. The other photos are in my landscape.



## ROBERTS MESA PURPLE AGATE

### SITE FIELD TRIP

Article and Photo By  
Dick Turpin

**Field Trip Leader:** Dick Turpin Phone: 480-240-0995

**Date:** Saturday, March 23, 2024

**Location of the Field Trip Site:** We will be going to a site just north of Route 260 near Tonto Creek Recreation Area.

**Where and When We Will Meet:** The primary meeting point will be the Show Low Chamber of Commerce parking lot in Show Low on Deuce of Clubs at 8:45 AM. A secondary meeting point is the 3 Bears Restaurant on Route 260 in Heber at 9:30 AM. Another meeting point is at the Tonto Creek turnoff, Route 260 at 10:15 AM.

**Recommended Vehicle:** Any vehicle can make it to the collecting area. Only the last mile is a dirt road that is passable by most vehicles. The final 100 yards has a rocky drop off where only high clearance, four-wheel drive vehicles should go. Just before this spot there is a large parking area. From there it is a short walk to the collecting area. At the end of the day there should be enough high-clearance vehicles to help folks carry their rocks from the dig site to the first parking area.

**What We Will Collect:** We will be collecting material that is known as purple agate; however, it is likely jasper because it doesn't display any banding. None the less, it is abundant and very cuttable material that takes a nice polish (see photo). The size runs from tumble material up to yard rock size. The larger rocks may require some digging.

**Recommended Things to Take:** Bucket, rock hammer, grabber, digging tools, crowbar, water, lunch, sunscreen.

**Cell Phone Service:** The site is relatively remote and likely has very weak to no cell service.

**Directions to the Site:** Drive west from the primary meeting location on Highway 260 about 73 miles just past milepost 269 to the Tonto Creek Road and turn right (north). The field trip leader will meet the group at this location and lead the caravan to the collecting area. The first two miles along the Tonto Creek Road is paved. There are two parking areas along this road where there are toilets, if needed. Make a left turn onto a dirt road and drive about a mile to a two track road to the left. Follow this road about a half mile to the parking area. There is a barbwire cattle gate we pass through. The last vehicle must close this gate after passing. The first parking area is a few hundred yards past the gate. The field trip leader will help drivers decide where to park.





# 2024 SHOW UPDATE

By Cathy Cargile  
Show Chair

**PLEASE READ** as we are counting on your help to make our 2024 Gem Show even better than last year! The KEY to a successful show is preplanning and volunteers stepping up.

We are now officially on the runway to our Friday July 26 through Sunday July 28 Gem Show!!! (Please put these dates on your calendar.) As you read these planning notes, be thinking of how you would like to help.

Thursday July 25 is the day we bring items from our storage unit to the Elks Lodge and set up the space. We welcome and register our vendors. It is also our vendor potluck that our members traditionally provide.

Each day of the show we will provide coffee and donuts to our vendors as they arrive. The Elks Lodge will provide food service from 11:00 AM to 2:00 PM. At 3:00 PM daily we will raffle the three gift baskets of the day (large baskets needed). We will hold raffles hourly, and the silent auction will be ongoing throughout the show.

Each day of the show we will need at least two security volunteers each hour to be on duty from doors open until closing for the evening. Security volunteers will wear a vest and badge noting security. Their duty is to be alert, aware, and observe our guests as they shop. Last year we had a report of a few books being stolen and we would like very much to prevent it this year. Sometimes just an obvious security presence is sufficient to deter any sticky-fingered guests!

Volunteers are needed well in advance of the show to help with promotional actions such as putting up and passing out flyers, media coordination for ads in newspapers, magazines, and online, gathering donations for the raffles and to include in our raffle baskets. Our sign committee (Greg, Terry, and Mike) is well under way in planning to upgrade our community signage. They will need volunteers to help in some projects, including posting the signs at designated places along the highways and removing them when the show is over.

As you may have noticed, some of our volunteer activities are not physically difficult and include a lot of sitting. Other volunteer positions will require strong people to help lift, carry, assemble, and so forth.

Several club activities will need volunteers for preplanning and to staff the booths during the show including: Kids' Corner, Silent Auction, ticket sales, raffle ticket sales for baskets and hourly raffles, membership table, Spinning Wheel, fluorescent and other displays. We also need a treasury assistant to work with Carl, and an organizer for the vendor potluck and for the coffee and donut service. Please let me know if you would like to create a display.

We will need **MANY** tumbled rocks and rock specimens for Kids' Corner, Spinning Wheel, other kids' activities and possibly for Silent Auction as well.

Now that you have read all about it, please plan to sign up at our April meeting for the activities in which you are willing to participate to help make our 2024 Gem Show even better than last year!

If you have questions, please feel free to call or text me. I would love to hear from you. My phone number is (714) 348-9162.



**WHITE MOUNTAIN GEM AND MINERAL CLUB**  
SHOW LOW, ARIZONA

# MEMBERSHIP APPLICATION

**PO BOX 3504**

**DATE:** \_\_\_\_\_ **NEW** \_\_\_\_\_ **RENEWAL** \_\_\_\_\_

**Printed Name(s):** \_\_\_\_\_

**Phone(s):** \_\_\_\_\_ **Brass Name Badges (\$5 each)** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_ **City:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**E-mail Address(s):** \_\_\_\_\_

**Type of Membership:** **Single (\$20)** \_\_\_\_\_ **Couple/Family (\$25)** \_\_\_\_\_

*(\$5 deduction if getting newsletter by E-mail)*

**Please send club newsletter by:** **E-mail** \_\_\_\_\_ **US Mail** \_\_\_\_\_

**May we have birthdays? (Month Only)** \_\_\_\_\_

**List any junior members you would like to sponsor (No added fee):**

1. \_\_\_\_\_ **Age:** \_\_\_\_\_ 2. \_\_\_\_\_ **Age:** \_\_\_\_\_

3. \_\_\_\_\_ **Age:** \_\_\_\_\_ 4. \_\_\_\_\_ **Age:** \_\_\_\_\_

**Signatures:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Seasonal members, please list alternate address and months of residency:**

**Address:** \_\_\_\_\_ **City:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Months:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

# MORE PHOTOS FROM THE AMAZING BULLION PLAZA CULTURAL CENTER



(I know — it doesn't match up exactly, but you can get the general idea!

# AROUND AND ABOUT IN THE MEETING ROOM

Photos by  
Donna Pollard

