



# EARTHQUAKE

*e-Newsletter about what's movin' and shakin' at the Earth Science Museum*

Earth Science Museum, 3215 W. Bethany Home Rd., Phoenix, AZ 85017  
[www.earthsciencemuseum.org](http://www.earthsciencemuseum.org), [scote@earthsciencemuseum.org](mailto:scote@earthsciencemuseum.org), 602-973-4291

September 2025  
Volume 14, Issue 9

## ESM OUTREACH UPDATE

**Mardy Zimmermann Outreach Coordinator**

With school children settling back into a routine, there were no outreach programs this month.

**October 18<sup>th</sup> between 9-4:** Please join ESM board members Shirley Coté and Harvey Jong who will have geology displays on the rock cycle and volcanoes along with board member Doug Duffy who will have chain making, lapidary, and silversmithing demonstrations during the Festival in the Mountains, a fundraiser for Save Our Mountains Foundation.



**Festival**  
*in the*  
**Mountains**

**OCTOBER 17-19, 2025**  
FRI 4-8PM SAT 9AM-7PM SUN 9AM-4PM

WITH LIVE MUSIC • SILENT AUCTION • LOCAL HIKES  
ACTIVITIES FOR KIDS • DOG COSTUME CONTEST  
DEMOS • DISPLAYS • EXHIBITS & MORE—

INCLUDING THE SAT-SUN

**MARKET IN THE MOUNTAINS**  
FEATURING LOCAL ARTISTS  
& COMMUNITY VENDORS

**NORTH MOUNTAIN VISITOR CENTER**  
12950 N. 7TH ST. PHOENIX, AZ

# **SAVE OUR MOUNTAINS FOUNDATION**

Presents

# Festival in the Mountains GEOLOGY DAY

Saturday, October 18, 2025  
9 A.M. to 4 P.M.



## In celebration of Earth Science Week

DEMONSTRATIONS OF  
CHAIN MAKING,  
LAPIDARY ARTS, SILVERSMITHING  
&  
HANDS ON ROCK CYCLE DISPLAY  
VOLCANO DISPLAY &  
VOLCANO THEMED CONEHOLE



**NORTH MOUNTAIN VISITOR CENTER  
12950 N. 7<sup>th</sup> St. Phoenix, AZ**



# DEMOS-DISPLAYS-EXHIBITS

## FRI OCT 17

### STARGAZING | 6-8 PM

Join Jeff Geyer for family-friendly telescope viewing of stars and planets.  
A close-up look at the night sky.



## SAT OCT 18

### DOUG'S STUDIO OPEN HOUSE | 9 AM - 4 PM

Visit Doug Duffy's Lapidary & Silversmithing Studio.  
Live demos of chain making, silversmithing, and lapidary work.



### GEOLOGY EXHIBIT | 9 AM - 4 PM

Shirley Cote's Rock Cycle Exhibit and Harvey Jong's Volcano Display,  
plus a volcano-themed corn hole game.



### MONARCH BUTTERFLIES | 9 - 10 AM

Gail Morris from the Southwest Monarch Study  
presents a live monarch butterfly demonstration.



### RATTLESNAKE GARAGE | 9 AM - 4 PM

Mark and Amanda showcase desert critters up close.  
Learn fascinating facts and ask questions about Arizona's reptiles.



## ALL WEEKEND



### PHOENIX MTNS PRESERVATION COUNCIL

As a collaborating partner with SOMF, PMPC will have a table at the Market and a display in the Exhibit Hall with interactive activities. Reps will answer questions and share ways to protect our desert mountains and parks.

### CENTRAL AZ MOUNTAIN RESCUE ASSOCIATION

Another valued collaborating organization with Save Our Mountains Foundation, CAMRA will feature a display case and Rescuer booth in the Exhibit Hall.







## Arizona Rocks 148

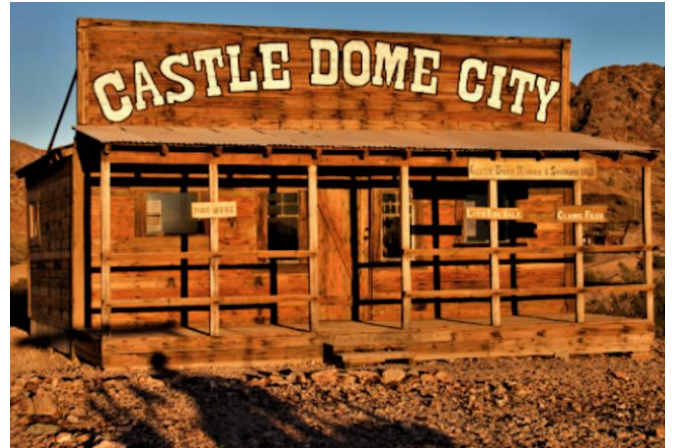
Text by Ray Grant  
Photographs from Castle Dome City website

Roger Naylor in a recent Arizona Republic article described Castle Dome City, Yuma County as one of the ten best places to visit in Arizona. Here is part of what he said: “Allen and Stephanie Armstrong recreated one of Arizona's oldest mining districts north of Yuma. They saved original buildings and constructed others using salvaged materials. Visitors can explore the town, including hotel, doctor's office, church, blacksmith shop, jail and saloons. Each is packed with historic artifacts, many pulled from underground tunnels.” There are also a lot of metal sculptures around the village

The city is named after the Castle Dome Mineral District where it is located. There was probably early Spanish work in the area and the main mining activity was from 1863 to 1974. Lead and silver were the major production with some gold, zinc, and copper.

The city is open from October 15 to April 15 and there is a fee to enter. For more information, check the website [castledomemuseum.org](http://castledomemuseum.org).

Next month's Arizona Rocks will cover the Hull Mine at Castle Dome City.





## Pinal Museum and Society News

351 N. Arizona Blvd., Coolidge, AZ

### Pinal Geology and Mineral Society next meeting

**October 15, 2025**

Meetings are the third Wednesday at 7pm, doors open at 6:00

[www.pinalgeologymuseum.org](http://www.pinalgeologymuseum.org)

Ray Grant [ray@pinalgeologymuseum.org](mailto:ray@pinalgeologymuseum.org)

Pinal Geology and Mineral Museum  
museum open **Fridays & Saturdays from 10 - 4**  
admission is free.

Groups can arrange special visits please call 520-723-3009.

Pinal Geology and Mineral Society October meeting is Wednesday October 15. The speaker is John Mays, General Manager of Florence Copper in Florence, Arizona. He has wide experience in uranium mining and been General Manager of Florence Copper since 2023. Learn more about Florence Copper, its innovative and proven in-situ copper recovery process, and its construction program.

Come early to the meeting and check out the many educational displays.







## AZ Mining, Mineral & Natural Resources Education Museum Update September 2025

<https://ammnre.arizona.edu/>

Catie Carter Sandoval

cscarter@email.arizona.edu

703.577.6449

Help support the museum at:

<http://tinyurl.com/SupportMM-NREMuseum>

We recently returned to Colorado for the second year in a row to participate in the 2025 Denver Gem & Mineral Show. The show was held in coordination with the Hardrock Summit at the Westin Westminster from September 4th through 7th and this year's theme was "Worldwide Barites and Calcites." These two neat minerals are often associated together and can be found in various environments including hydrothermal veins, replacement deposits, and bedded deposits. Both calcite and barite have widespread commercial uses: calcite is a calcium carbonate mineral used in the construction, agriculture and pharmaceutical industry, while barite is an important source of the element barium, which is used in the oil and gas and healthcare industries. Both minerals can be very beautiful and are popular with collectors, so this was a fun theme.

At the show, we installed a special exhibit of barite and calcite specimens from our museum collection, which included 24 exceptional and historic pieces from Arizona and beyond. While the Arizona specimens came from our historical collection, the smaller mounted specimens were from a newer addition to our museum, the United States collection of Robert Weaver, who donated them to us before he passed away in 2023. The pieces

from the Weaver collection came from interesting localities across the country including Colorado, South Dakota, Kentucky, Georgia, Alabama, Florida, Wyoming, Kansas, Pennsylvania, Michigan, Nevada, and Indiana. We also included a small tribute to Bob that read: "We thank Bob Weaver, who passed away in December 2023, for the generous donation of his United States collection - including the mounted specimens seen here."

Other highlights of the show included attending an open house at the Colorado School of Mines Museum of Earth Science and an informal gathering of the Society of Mineral Museum Professionals.



Entrance to the Denver Gem & Mineral Show at the Hardrock Summit.



Our case of barite and calcite specimens on display at the show.

**Sun City Rockhound Mineral Museum  
Sundial Recreation Center  
14801 N. 103<sup>rd</sup> Ave.  
Sun City, AZ 85351**

The museum offers private party tours for schools, clubs and individuals. We'd love to show off our museum to your club or private group. If you are interested, please contact the museum at [scrockmuseum@gmail.com](mailto:scrockmuseum@gmail.com).

Please take a minute to check out our new website at [scrockmuseum.com](http://scrockmuseum.com).

**Sun City Mineral Museum – 35 years and still going strong!**

By Carol Bankert-George, Museum Director

October 1, 2025, will commemorate the 35th anniversary of the Sun City Mineral Museum. Presented below is a history of its establishment, thanks to the museum committee whose leadership guided more than 100 club members in the development of the museum.

**Where it all began** – In 1988 the executive board decided the club needed a permanent display area to raise awareness among Sun City residents about the club and mineral collection. The club president tasked members to work with the Recreation Centers, resulting in plans for a museum. A committee was formed to collaborate with the Recreation Centers. The museum took shape and opened October 1<sup>st</sup>, 1990.

**The start of something big!** During the initial years, additional improvements were made to optimize shelving arrangements, making it possible to house larger specimens in the newly annexed room which was once a meeting room for Sundial staff. From 1990 to 1997, the museum experienced a period of significant growth and active curation of exhibits. The number of cabinets increased from five to twenty-eight, and UV lights



C. Sandoval photo

**Winter Hours**  
October – April  
10 am to 1 pm  
Closed Thurs., & Sunday  
**Summer Hours**  
May-September 10am-1pm  
Saturdays only


expanded from one to eight—a setup that remains in place today.

**Thirty-five years and still going strong!** Over the past 35 years, the museum has curated a large mineral collection and demonstrated an ongoing commitment to encouraging interest in minerals and geology. The education of members, guests, community groups, and local schools has become a greater focus, as well as establishing relationships with local museums, clubs, and related organizations. As we celebrate our 35<sup>th</sup> anniversary with refreshed and new exhibits, the museum is keeping an eye on the future and what the next years will bring.



Club member Geri Thacker one of our 'Guardians of the Gallery' volunteers

## Arizona Rock and Gem Shows



West Valley Rock & Mineral Club  
Buckeye's 11th Annual

# Helzarockin'

## GEM & MINERAL SHOW

October 10 \* 11 \* 12 \* 2025  
9 a.m. - 5 p.m. Fri-Sat  
9 a.m. - 2 p.m. Sun  
Adults \$5 kids under 13 free

★ LOCATION! ★  
Buckeye Equestrian & Events Center  
West Open Air Arena  
10300 S Miller Road  
Buckeye, Arizona

Drive SLOWLY for  
0.3 of a mile, turn LEFT  
at the end of the White Fence

rocks, gems, minerals, fossils  
jewelry, beads, slabs, cabs  
scavenger hunt and rock painting  
panning for gold  
wire wrapping, saw cutting  
geode cracking

Alice: 602-529-2519  
Nikolle: 619-277-6268  
westvalleyrockandmineralclub.com



# Rock, Gem & Jewelry Show

October 18 & 19  
Sat 10-5 / Sun 10-4


Sedona Red Rock High School - 89A at  
Upper Red Rock Loop Rd, W. Sedona

## Hourly Raffles Grand Prize

Admission - \$5 Cash Only  
Children 12 & Under Free



For more information go to:  
[www.sedonagemandmineral.org](http://www.sedonagemandmineral.org)



[www.gilagem.org](http://www.gilagem.org)  
gcgms1954@gmail.com  
Beverly: 928-402-0559

## GILA COUNTY GEM AND MINERAL SOCIETY FALL SHOW AND SELL

November 8, 2025  
(9am-2pm)  
Bullion Plaza Lawn

★ Gems, Jewelry, Minerals and more... No entry Fee



## Arizona Rock and Gem Clubs



### Apache Junction Rock & Gem Club

Meetings are on the 2<sup>nd</sup> Thursday  
 Next Meeting: October 9, 2025, 6:30 pm  
[www.ajrockclub.com](http://www.ajrockclub.com)  
 @ Club Lapidary Shop  
 2151 W. Superstition Blvd., Apache Jct.



### Daisy Mountain Rock & Mineral Club

Meetings are on the 1<sup>st</sup> Tuesday  
 (unless a Holiday then 2<sup>nd</sup> Tuesday)  
 Next Meeting: October 7, 2025, 6:30 p.m.  
[www.dmrmc.com](http://www.dmrmc.com)  
 @ Anthem Civic Building  
 3701 W. Anthem Way, Anthem, AZ



### Maricopa Lapidary Society, Inc

Meetings are on the 3<sup>rd</sup> Tuesday  
 Next Meeting: October 21, 2025, 7:00 pm  
[www.maricopalapidarysociety.com](http://www.maricopalapidarysociety.com)  
 @ North Mountain Visitor Center  
 12950 N. 7<sup>th</sup> St., Phoenix, AZ



### Mineralogical Society of Arizona

Meetings are on the 3<sup>rd</sup> Thursday  
 (Except June & December)  
 Next Meeting: October 16, 2025 @ 6:30  
 @ Franciscan Renewal Center, (Piper Hall),  
 5802 E. Lincoln Drive, Scottsdale, AZ  
[www.msaaz.org](http://www.msaaz.org)



### Pinal Geology & Mineral Society

Meetings are on the 3<sup>rd</sup> Wednesday  
 Next Meeting: October 15, 2025, 7:00 pm  
[www.pinalgeologymuseum.org](http://www.pinalgeologymuseum.org)  
 351 N. Arizona Blvd., Coolidge



### West Valley Rock & Mineral Club

Meetings are on the 2<sup>nd</sup> Tuesday  
 Next Meeting: October 14, 2025, 6:30 pm  
[www.westvalleyrockandmineralclub.com](http://www.westvalleyrockandmineralclub.com)  
 Buckeye Community Veterans Service Center  
 402 E. Narramore Avenue, Buckeye, AZ



### Gila County Gem & Mineral Society

Meetings are on the 1<sup>st</sup> Thursday  
 (unless a Holiday then the next Thursday)  
 Next Meeting October 2, 2025, 6:30 pm  
[www.gilagem.org](http://www.gilagem.org)  
 Club Building  
 413 Live Oak St, Miami, AZ



### Wickenburg Gem & Mineral Society

Meetings are on the 2<sup>nd</sup> Friday  
 (February & December on the 1<sup>st</sup> Friday)  
 Next Meeting: October 10, 2025, 7:00 pm  
[www.wickenburggms.org](http://www.wickenburggms.org)  
 @ Coffinger Park Banquet Room  
 175 E. Swilling St., Wickenburg, AZ

## ESM's Meeting Notice

ESM's next meeting will be at North Mountain Visitor Center, 12950 N. 7<sup>th</sup> St., Phoenix, on Tuesday, TBA 2025, at 6:30 p.m.

**BECOME A MEMBER!**  
Join the Earth Science Museum's



**IS IT TIME TO RENEW YOUR MEMBERSHIP?**  
Please renew today! 😊😊😊

----- cut here -----  
**ESM Earth Science Investigation  
 Team Membership Form**  
 \_\_\_\_\_ New Member \_\_\_\_\_ Renewal  
 Membership levels:  
 \_\_\_\_\_ ESI Family \$20  
 \_\_\_\_\_ ESI Individual \$10

### Membership benefits:

- ◆ Monthly e-newsletter *Earthquake*
- ◆ Official team membership card
- ◆ Knowledge that your contribution is making a difference in earth science education.

## MANY THANKS TO OUR MAJOR DONORS!

AZ Leaverite Rock & Gem Society

Flagg Mineral Foundation

[www.flaggmineralfoundation.org](http://www.flaggmineralfoundation.org)

Friends of the AZ Mining & Mineral Museum

Maricopa Lapidary Society

<http://maricopalapidarysociety.com/>

Mineralogical Society of AZ

[www.msaaaz.org](http://www.msaaaz.org)

Payson Rimstones Rock Club

<https://www.rimstonesrockclub.org/>

Sossaman Middle School

White Mountain Gem & Mineral Club

[www.whitemountain-azrockclub.org](http://www.whitemountain-azrockclub.org)

Sun City Rockhound Club & Mineral Museum

<https://suncityaz.org/recreation/clubs/rockhound-club-mineral-museums/>

Wickenburg Gem & Mineral Society

<http://www.wickenburggms.org>

[www.facebook.com/pages/Wickenburg-Gem-and-Mineral-Society/111216602326438](https://www.facebook.com/pages/Wickenburg-Gem-and-Mineral-Society/111216602326438)

West Valley Rock and Mineral Club

<http://www.westvalleyrockandmineralclub.com/>

Staples Foundation

[www.staplesfoundation.org](http://www.staplesfoundation.org)

Anita Aiston	Will & Carol McDonald
Peter & Judy Ambelang	Debbie Michalowski
Stan & Susan Celestian	Janet Stoeppelmann
Russ Hart	Dennis & Georgia Zeutenhorst

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 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
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**Earth Science Museum**

3215 W. Bethany Home Rd.  
Phoenix, AZ 85017

**Phone:**

602-973-4291

**Editor E-Mail:**

scote@earthsciencemuseum.org

*We're on the Web!*

*Visit us at:*

[www.earthsciencemuseum.org](http://www.earthsciencemuseum.org)

**Mission**

Our Mission is to excite and inspire all generations about earth sciences through educational outreach.

**Vision**

We envision a community where students and the general public have curiosity about, passion for, and understanding of the underlying principles of earth sciences.

For more information about the ESM, how to become a member or how to arrange for a school visit or Community function, go to:  
[www.earthsciencemuseum.org](http://www.earthsciencemuseum.org).

**NOTICE:**

ESM's next meeting will be at North Mountain Visitor Center, 12950 N 7<sup>th</sup> St, Phoenix, on Tuesday, TBA 2025, at 6:30 p.m.

**THANK YOU FOR YOUR CONTINUING INTEREST & SUPPORT!!!**

**EARTH SCIENCE MUSEUM  
NON-PROFIT BOARD OF DIRECTORS**

Harvey Jong	President
Mardy Zimmermann	VP Outreach
Shirley Coté	Secretary/ Treasurer

Cindy Buckner, Doug Duffy, Ray Grant,  
Bob Holmes, Chris Whitney-Smith

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