



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, scote@earthsciencemuseum.org, 602-973-4291

November 2019
Volume 8, Issue 11

ESM Outreach Update:

By Mardy Zimmermann, Outreach and Education Coordinator

Getting ready for the Flagg Show in early January is beginning to take up time. Thus far I have replenished and organized the specimens for the Egg Carton Program for the agate, calcite, and quartz minerals, as well as the igneous, sedimentary and metamorphic rocks. Fortunately, the garage has room for all of the specimens to be organized by category and alphabetized. I'm about halfway through the 300+ specimens for this project.

We will also have free teaching materials and specimens available for Earth Science teachers at the show.

ESM will again have a fluorescent mineral display. Be sure to stop by and visit!



We are beginning to get requests for school Science Fairs. These events are usually in the months of January through April. ESM presents Harvey Jong's Volcanoes from Around the World, with specimens from each,

and I bring along a scaled down Egg Carton Program for these events. Science Fairs are a great way for ESM to reach both students and their parents.



Lynne and Terry Dyer set up their rock, mineral and fossil display at Basis school on November 15th for the 3rd grade students (98) and 4 adults.



Lynne and Terry also attended the yearly Scout Pow Wow on November 16th, with over 250 cub scouts and leaders visiting their display.

**Boyce Thompson Arboretum
Annual Gem and Mineral Festival
December 8, 2019, 9a.m. - 3p.m.**

ESM board members, Doug and Shirley will participate in Boyce Thompson Arboretum's Annual Gem and Mineral Festival once again. Doug will demonstrate lapidary and Shirley is



planning a display on Arizona volcanoes, volcanic features and have hands-on volcanic rock samples. Did you know that there are four main types of volcanoes and Arizona has all four? The four types are cinder cones, shield volcanoes, composite or stratovolcanoes, and lava domes. While researching for her display, Shirley was surprised to find Arizona has shield volcanoes. Come visit and find out where!

Dr. Raymond Grant, ESM board member; president of the Pinal Gem and Mineral Society; and curator Pinal Geology and Mineral Museum, will join in this year with a couple of tables of minerals for sale.

Sunday, December 8, Gem and Mineral Festival, Boyce Thompson Arboretum, Superior, There is an admission fee to the arboretum.

(<https://www.btarboretum.org/events>)

Members of the Gila County Gem & Mineral Society will also participate again with a fluorescent mineral display.

**48th Annual Flagg Gem & Mineral Show
Mesa Community College
January 3-5, 2020
Theme: ARIZONA VOLCANICS**

Join ESM board members at the 48th Annual Flagg Gem and Mineral Show. This is a great family fun event with free admission and parking. There will be free activities for children along with free mineral, rock and fossil samples for children and teachers.

Harvey Jong has developed an attractive display of world famous volcanoes with samples of volcanic rocks from most of them which will be on



display at the Flagg Foundation display area.



The ESM will once again have a black tent with a display of fluorescent minerals. Rock and mineral sales tables, and the ever popular egg carton program where for just \$1 you can choose twelve specimens with labels from a selection of 300 samples.

The Earth Science Museum will have free materials for Earth Science Teachers.



Arizona Rocks 78

Text and photos by Ray Grant

In one of my geology classes I was describing how sinkholes form from the collapse of rocks over caves in limestone. After the class, one of the students came up and told me a story about a sinkhole near Snowflake, Arizona. There are many sinkholes about 10 miles west of Snowflake and they can be seen on a topographic map or satellite photograph. The story was that the high school senior class would hold a performance at graduation in one of these sinkholes and everyone in town would come to see it. I had to go and find this sinkhole. It was easy from the map to get in the area, but there were many sinkholes, which one? Fortunately there was a ranch house there and the lady who answered the door told me which sinkhole it was. Once you climb down, there is lots of evidence; the years and titles of each year's performance have been scratched on the rocks. The plays were held from 1933 to 1939 and 1945 to 1947, so ten performances. It has been over 35 years since I was there and it would probably take me a while to find the right one, but I have not forgotten this interesting story. It would be great to get a photograph of the people in the sinkhole. Maybe somebody who has some contacts in Snowflake could find one.



Sinkholes about 10 west of Snowflake, AZ



Sinkhole where pageants were held



Years that the senior class from Snowflake High held pageants in the sinkhole



Fairie Queen was performed in 1938
An English poem by Edmund Spenser in 1590



**AZ Mining, Mineral & Natural
Resources Educational Museum**
Update November 2019

<https://ammnre.arizona.edu/>
<http://tinyurl.com/SupportMM-NREMuseum>

Catie Carter Sandoval
cscarter@email.arizona.edu
703.577.6449



After our successful stamp mill run public event on October 26, this month we focused on organizing and sorting through the mineral collection, which we moved back into the building in early October. Volunteer and millman Bill Yedowitz put in several dozen hours sorting boxes in the classroom and main gallery and grouping them by their cabinet number. The next step will be to move the boxes into basement storage. We are also beginning to prepare for the Tucson Gem and Mineral Show in February 2020. The theme this year is “World Class Minerals” and we plan to showcase some of the best Arizona specimens.



Bill Y. working on the mineral collection



The gift shop material organized in the main gallery



The AMMNRE collection organized in the classroom



Pinal Museum and Club News

351 N. Arizona Blvd., Coolidge, AZ

Next Pinal Gem and Mineral Club meeting
Wednesday, December 18, 2019

www.pinalgeologymuseum.org
Ray Grant raycyn@cox.net.

November 28 to 31, Thanksgiving weekend,
Chamber of Commerce and Museum closed

Sunday, December 1, talk at the Pinal Historical Society Museum in Florence (2 PM), Ray Grant, "Minerals and Gems of Arizona" \$5 admission fee to the Museum.

Sunday, December 8, Gem and Mineral Festival, Boyce Thompson Arboretum, Superior (9 AM to 4 PM)

Admission fee to the arboretum (<https://www.btarboretum.org/events>)

Friday and Saturday, December 13 and 14 at 10:30 AM both days or later by request - **New Volunteer Orientation**, If you can volunteer at least one day a month from 10 AM to 2 PM, come learn the ins and outs of opening the Museum, and how everything works. We can use your help! Volunteers can be in the Museum or stay in the Chamber's Visitor Center to help there.

Wednesday, December 18, Gem and Mineral Club meeting, program to be announced.

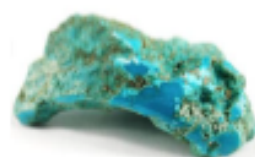
Field trips for the club are yet to be determined and we will let you know ASAP.

Pinal County Historical Museum
Presents:

Minerals and Gems of Arizona

By: Ray Grant

Arizona has over 950 different species of gems and minerals! Come find out where and why these minerals formed some of which are local to Pinal County!



Sunday December 1st
2:00 p.m.
715 S. Main St. Florence, AZ

\$5 Adults

Telephone: 520-868-4382 pchsmuseum@yahoo.com
www.pinalcountyhistoricalmuseum.org

Like us on  [pchsmuseum1](https://www.facebook.com/pchsmuseum1)

Arizona Gem Shows



Wickenburg Gem and Mineral Society
Annual Show
November 30, December 1, 2019
Sat. 9-5, Sun. 10-4
Free admission
Hassayampa Elementary School,
251 S Tegner St
Wickenburg, AZ

January-February - Quartzsite, AZ
For a complete list of shows, go to
<https://www.desertusa.com/cities/az/quartzsite.html#anchor832166>
Desert Garden January 1-February 28
Pow Wow January 15-17
Tyson Wells January 3-12



Flagg Mineral Foundation
48th Annual Flagg Gem and Mineral Show
January 3-5, 2020
Friday, Saturday, Sunday, 9-5
Mesa Community College
Dobson Rd. North of the Superstition
Freeway (Rt. 60)
Mesa, AZ



Gila County Gem and Mineral Society
63rd Annual Gem & Mineral Show
January 10-12, 2020
Fri. & Sat. 9-5, Sun. 10-4
Admission Donation
\$3 single, \$5 couple

Students and kids Free
Gila County Fairgrounds
3 miles NE of Jct. US 60-70
Globe, AZ

Tucson Gem and Mineral Shows
<https://www.visittucson.org/visit/events/tucson-gem-mineral-fossil-showcase>

Tucson Gem and Mineral Society
2020 Tucson Gem & Mineral Show®
February 13-16, 2020
Tucson Convention Center



White Mountain Gem & Mineral Club
23rd Gem, Mineral and Fossil Show
July 11-12, 2020
Sat. 9-6, Sun. 10-4
NEW VENUE:
Country Court Event Hall,
3369 W. White Mountain Blvd.
Lakeside, AZ



Prescott Gem & Mineral Club
17th Annual Show
July 31 - August 2, 2020
Fri. & Sat. 9-5, Sun. 9-4
Adults \$5
Seniors, Vets, and Students \$4
Children under 12 free w/paid adult
admission
Findley Toyota Center
3201 N. Main St.
Prescott Valley, AZ

Rock & Gem Clubs



Apache Junction Rock & Gem Club

Meetings are on the 2nd Thursday
Next Meeting: December 12, 2019, 6:30 pm

www.ajrockclub.com

@ Club Lapidary Shop

2151 W. Superstition Blvd., Apache Jct.



Daisy Mountain Rock & Mineral Club

Meetings are on the 1st Tuesday
(unless a Holiday then 2nd Tuesday)

Next Meeting: December 3, 2019, 6:30 p.m.

www.dmrmc.com

@ Anthem Civic Building

3701 W. Anthem Way, Anthem



Maricopa Lapidary Society, Inc

Meetings are on the 1st Monday
(unless a Holiday then 2nd Monday)

Next Meeting: December 2, 2019, 7:00 pm

www.maricopalapidarysociety.com

@ North Mountain Visitor Center

12950 N. 7th St., Phoenix



Mineralogical Society of Arizona

MSA Holiday Jamboree

December 7, 2019, 5:00 pm

www.msaaaz.org

@ Franciscan Renewal Center,
5802 E. Lincoln Dr., Scottsdale

Next Meeting



Pinal Gem & Mineral Society

Meetings are on the 3rd Wednesday

Next Meeting: December 18, 2019, 7:00 pm

www.pinalgemandmineralsociety.org

@ Artisan Village

351 N. Arizona Blvd., Coolidge



West Valley Rock & Mineral Club

Meetings are on the 2nd Tuesday

Next Meeting: December 10, 2019, 6:30 pm

www.westvalleyrockandmineralclub.com

@ Painted Desert Academy

2400 S. 247th Ave., Buckeye, AZ



White Mountain Gem & Mineral Club

Meetings are on the 1st Sunday

(unless a Holiday then 2nd Sunday)

Next Meeting: December 1, 2019, 1:00 pm

www.whitemountain-azrockclub.org

@ VFW Hall

381 N. Central, Show Low



Wickenburg Gem & Mineral Society

Meetings are on the 2nd Friday

(February & December on the 1st Friday)

Next Meeting: December 6, 2019, 7:00 pm

www.wickenburggms.org

@ Coffinger Park Banquet Room

175 E. Swilling St., Wickenburg

Wickenburg Gem and Mineral Show Nov 30, Dec 1 2019



Free Admission

Jewelry

Fossils

Minerals

Gems



Over 40 Vendors Best Rock Contest Raffle
Door Prizes Kid's Area Silent Auction

Hassayampa Elementary School
251 South Tegner Street Wickenburg, AZ
9am - 5pm Saturday • 10am - 4pm Sunday

48TH ANNUAL FLAGG GEM & MINERAL SHOW



Forsterite var. Peridot - Peridot Mesa, San Carlos, San Carlos Indian Reservation, Gila Co., Arizona, USA
CUT GEM: Don Boushelle - PHOTO: Don Boushelle | ROUGH: Bill Yedowitz - PHOTO: Bill Yedowitz



Obsidian var. Apache Tears - Picketpost Mountain area, Superior, Superior Mining District, Pinal Co., Arizona, USA | Don Boushelle - PHOTO: Don Boushelle



Volcanic Bomb - San Francisco volcanic field, Coconino Co., Arizona, USA
Bill Yedowitz - PHOTO: Bill Yedowitz



Natrolite - Horseshoe Dam area, Maricopa Co., Arizona, USA
Bill Yedowitz - PHOTO: Bill Yedowitz

ARIZONA VOLCANICS

THE TAILGATE SHOW TRADITION CONTINUES!

WWW.FLAGGSHOW.INFO

JANUARY 3RD/4TH/5TH, 2020

MESA COMMUNITY COLLEGE | 9AM - 5PM

NE CORNER OF US 60 & DOBSON ROAD



FREE ADMISSION FREE PARKING FREE SAMPLES FOR KIDS

THE 66TH ANNUAL TUCSON GEM AND MINERAL SHOW®

FEBRUARY 13-16, 2020

Tucson Convention Center
260 South Church Avenue • Tucson, Arizona 85701

Thursday: 10:00 a.m. - 6:00 p.m.

Friday: 10:00 a.m. - 6:00 p.m.

Saturday: 10:00 a.m. - 6:00 p.m.

Sunday: 10:00 a.m. - 5:00 p.m.

Tickets go on sale Thursday, January 17, 2020 at all TCC Ticket outlets or call the TCC Box Office at 520-791-4101, option 1 for more information.

Don't forget, you can buy your ticket at the door!

Admission is \$13.00

(\$12.00 plus \$1.00 facility tax) per adult.

Children 14 and under FREE with a paying adult

Friday, February 14, 2020 is Military (active & retired) and Senior Citizens Day (62 and older). receive \$2.00 off the regularly priced ticket (cannot be used with any other discount)

2-day tickets will be available for a cost of \$22.00 (cannot be used with any other discount)

Clip the coupon for \$2.00 OFF on one adult General Admission ticket (cannot be used with any other discount)

FEATURING:

Honoring 50 years of Mineralogical Record

Retail Dealers | Exhibits

Junior Education Area

FREE Lectures | Symposiums

'Micro- Mineral' Room

Hourly Drawings at the Giveaway Booth

Saturday Night Banquet & Awards

Silent/Live Auctions

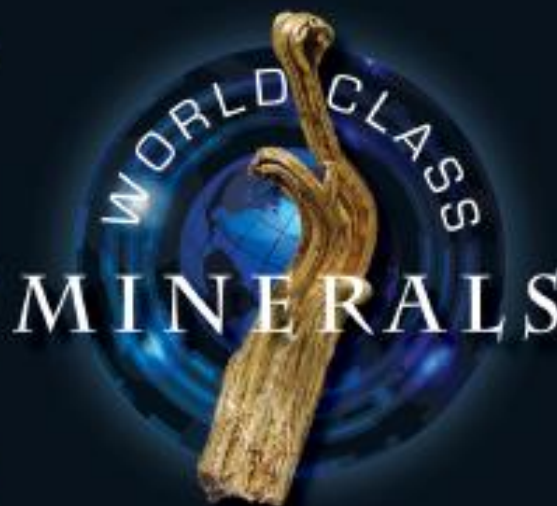
For more information, visit: www.tgms.org



**TUCSON
GEM & MINERAL
SOCIETY**

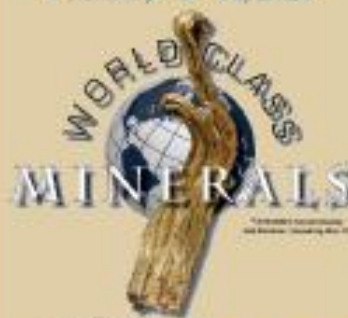


Scan code for
information on our
Tucson Gem and
Mineral Show®



TUCSON GEM AND MINERAL SHOW®

Tucson Convention Center
February 13 - 16, 2020



www.tgms.org

CHILDREN 14 AND UNDER
FREE WITH A PAYING ADULT

This coupon cannot be used with any other discount.

**\$2.00
OFF**
ONE ADULT
GENERAL
ADMISSION

ESM's Meeting Notice

ESM's next meeting will be at North Mountain Visitor Center, 12950 N. 7th St., Phoenix, on Tuesday, January 28, 2020, 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

Friends of the AZ Mining & Mineral Museum

Maricopa Lapidary Society

<http://maricopalapidarysociety.com/>

Mineralogical Society of AZ

www.msaaz.org

Payson Rimstones Rock Club

Sossaman Middle School

White Mountain Gem & Mineral Club

www.whitemountain-azrockclub.org

Wickenburg Gem & Mineral Society

<http://www.wickenburggms.org>
www.facebook.com/pages/Wickenburg-Gem-and-Mineral-Society/111216602326438

Staples Foundation

www.staplesfoundation.org

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Earth Science Museum

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Phoenix, AZ 85017

Phone:

602-973-4291

Editor E-Mail:

scote@earthsciencemuseum.org

We're on the Web!

Visit us on  and at:
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.

NOTICE:

ESM's next meeting will be at North Mountain
Visitor Center, 12950 N 7th St, Phoenix, on Tuesday,
January 28, 2020, at 6:30 p.m.

THANK YOU FOR YOUR CONTINUING INTEREST & SUPPORT!!!

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

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Earth Science Museum

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Phoenix, AZ 85017

