



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
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ESM Outreach Update:

By Mardy Zimmermann

We have come to the end of another school year. This has been our most successful one to date. The School Program reached 7,867 thus far, and this will likely be our total for this fiscal year ending on June 30. The Community Outreach program will have a final tally by the end of June, as we are still involved in some projects. With the transfer of the MMM included in the budget consolidation bill, we will begin planning to move the School Outreach program to the MMM. The purpose of the Outreach Program has always been to reach students by going to them and until we can reinstate the successful museum program we will continue with outreach. We used the last five years to develop and test hands-on programs that can easily be transferred to the MMM. In addition, we learned a great deal about the kinds of information and displays that will serve the natural resources and science areas of rocks, minerals, geology and mining that our students want and need.

As a thank-you to Senator Griffin for her support and advocacy, I sent her a bouquet of roses from the students. On June second, Dick and I met with Sen. Griffin and I was able to discuss in more detail the ESM Outreach Program and our ability to support the reopening of the MMM. I am very encouraged that this can and will happen.

AZGS Phoenix Branch Office

Packing Day

By Harvey Jong

The recent call for help to pack the library materials of the Arizona Geological Survey's (AZGS) Phoenix Branch Office was answered by past and present Survey volunteers along with a few rock club members. The original plan involved packing books and boxing files over two days, while additional days were scheduled if needed.

The main group of volunteers arrived at the fourth floor office of the AZGS around 8 am on June 13th. Nyal Niemuth, Chief Geologist and Phoenix Branch Manager, explained the "pack, clear, and roll" strategy. Books would be removed from shelves and placed onto carts, and cards labeled with the shelf numbers would be inserted between each group of books. After each bookcase was emptied, the shelves would be removed along with any connecting screws. Fully packed book carts and the disassembled bookcases would be rolled to a staging area for movers.

Teams of two volunteers were formed, and they started working on the first sets of bookcases. Doughnuts, refreshments, and Lee Allison, the State Geologist, later arrived, and everyone stopped for a brief doughnut break and update on the AZGS/UA transition.

Energized by all the doughnut “goodness”, teams fanned out and resumed their work. The entire office hummed with activity as one could hear shelf numbers being called out; books being carefully stacked; short bursts of a cordless screwdriver; and carts and bookcases being rolled away. Before noon, a majority of the bookcases had been emptied and moved.

After a short lunch break, volunteers regrouped and some posed for the following team photo:



Packing Team Volunteers

Photo by Lee Allison - from arizonageology.blogspot.com

Some people continued working on the remaining bookcases, while others focused on the contents of lateral file cabinets. By mid-afternoon, Nyal indicated that all the heavy-lifting tasks had been completed way ahead of schedule! A second day would not be needed.

Professional movers will transport all the packed materials to the mineral museum building around June 24-26. An unpacking session is now re-scheduled for the week of July 5, and again volunteer help will be needed. Please contact Randi Ballassai randi.bellassai@azgs.az.gov our Tucson administrator and me, Nyal Niemuth, nyalniemuth2@gmail.com know of your availability for the week July 5th - 8th if you are interested in participating in the big unpacking event at 1502 W. Washington Street.

History of some of the “Packing Day” Volunteers

By Shirley Cote

A total of eighteen people showed up over the course of the day to help pack up books and disassemble shelving. Some of these individuals are present and past AZGS volunteers and some are past Arizona Mining and Mineral Museum (AMMM) volunteers. Charlie Connell, Morris Jackson and Jeremy Pettengill were part of the “Monday Crew” at the old museum who helped relocate, rebuild, paint, among other tasks, the mining equipment which still can be seen in front of the closed museum building on 15th Ave. and Washington.



Head frame and 5-stamp stamp mill

Photo: miningmineralmuseum.com

Harvey Jong volunteered for the AMMM at the front desk and in the gift shop a couple of Saturdays a month for many years before it was closed.

Cindy Buckner served as an intern in 2012 and 2013 for the Geological Survey working on the national geologic data preservation project.

The files being moved once belonged to the AZ Dept. of Mines and Mineral Resources (DMMR) and with the move of these files from the AZGS’s Phoenix office back to the museum building, the files will have come full circle after two previous relocations.

Another interesting historical fact is that from 1893 to 1915 the AZGS was known as The University of Arizona Bureau of Mines. From 1915 to 1977 its name was shortened to Bureau of Mines, but still run by the UA.



Arizona Rocks 37

Text and photos by Ray Grant

I am off traveling so the next few Arizona Rocks will be modified from the Arizona Mineral Collector column in the Mineralogical Society of Arizona newsletter. This one is about some of the names of minerals first found in Arizona.

All new mineral names must be approved by the Commission on New Minerals and Mineral Names of the International Mineralogical Association. The Commission has a rigorous set of criteria, which must be met before a new mineral is accepted. The locality where a mineral is first found is called the type locality. Arizona has 76 minerals that were first found here. The person who describes the new mineral gets the right to pick the name. For the type minerals of Arizona, 50 are named after people, 18 are named for the locality where they were found, two are named for their chemistry, three are named for a physical property, and three are a combination of two of the above.

Here are some examples of the origins of some of the Arizona type mineral names. The ones named after localities are mostly after cities, counties, or the mines where they were found. Wickenburgite, ajoite, and flagstaffite are examples of minerals named after cities. Maricopaite, yavapaiite, pinalite, gilalite, and coconinoite are named after the counties in which they were found. Grandreefite, antlerite, and coronadite were named after mines. Wupatkiite, one of Arizona's newer minerals was named after the National Monument.

This specimen contains four type minerals from the Grand Reef Mine, Graham County. Aravaipaite, named after the Aravaipa mining district, laurelite named for Laurel Canyon, grandreefite named for the mine, and pseudograndreefite named because it looked like the grandreefite but was a different mineral (Les Presmyk specimen and photograph).

Most of the people who had minerals named after them were geologists, mineralogists, mineral collectors, or miners. Minerals such as andersonite, artroite, bermanite, bidauxite, coesite, graemite, henryite, junitoite, luddenite, ruizite, shannonite, were named after these people. Apacheite, papagoite, and navajoite were named after Indian tribes. Kinoite was named for the historical Padre Kino.

Chalcoalumite and cuprotungstite are named for their chemistry and the names hemihedrite, cryptomelane and paramelaconite are related to something about their physical appearance. Calcioaravaipaite is named for chemistry and the locality in the Aravaipa mining district.



Maricopaite named for Maricopa County, it was first found at the Moon Anchor Mine, near Tonopah, Maricopa County (Ron Gibbs photograph).



AZ Rock & Gem Shows

Flagstaff Mineral & Jewelry Expo

July 9, 10, 2016

Sat. 10-5, Sun. 10-4

Admission \$3, Children under 12 Free

Flagstaff High School

400 W. Elm Ave.

Flagstaff, AZ

Prescott Gem and Mineral Show and Sale

August 5-7, 2016

Fri. & Sat. 9-5, Sun. 9-4

Admission Fee

Free Parking

Prescott Valley Event Center

Prescott, AZ

Summer Sale at 8th Annual Gilbert Mineral Show 2016

Date: **Saturday, August 27, 2016**

Time: **10am to 3pm**

Location: Gilbert Historical Society
Museum

Details to be announced

West Valley Rock & Mineral Club Helzarockin' Gem & Mineral Show Friday - Sunday, October 7-9, 2016

9-4 daily

Admission \$3

Children under 12 free

Helzapoppin' Arena

802 N. 1st Street (Miller Road)

Buckeye, AZ

Mingus Gem and Mineral Club Annual Show and Sale

Sept. 30, Oct. 1-2, 2016

Fri. & Sat. 9-5, Sun. 10-4

Admission \$3, Children under 12 Free
Cliff Castle Casino
555 W. Middle Valley Rd.
Camp Verde, AZ

West Valley Rock & Mineral Club
Helzarockin' Gem & Mineral Show
Friday - Sunday, October 7-9, 2016

9-4 daily

Admission \$3

Children under 12 free

Helzapoppin' Arena

802 N. 1st Street (Miller Road)

Buckeye, AZ

Huachuca Gem & Mineral Club Annual Gem Mineral & Jewelry Show October 8-9, 2016

Sat. 9-5, Sun. 10-4

Free Admission

Cochise College

900 Colombo Ave.

Sierra Vista, AZ

High Desert Helpers

Rock-A-Rama

November 4-6, 2016

Fri., Sat., Sun. 9-4

Free Admission

High Desert Park

19001 E. Jacie Lane

Black Canyon City, AZ

Payson Rimstones Rock Club Annual Show and Sale

November 19-20, 2016

Sat. 9-5, Sun. 10-4

Admission \$2, Children Free

Payson High School

Longhorn Gym

310 S. Mclane Rd.,

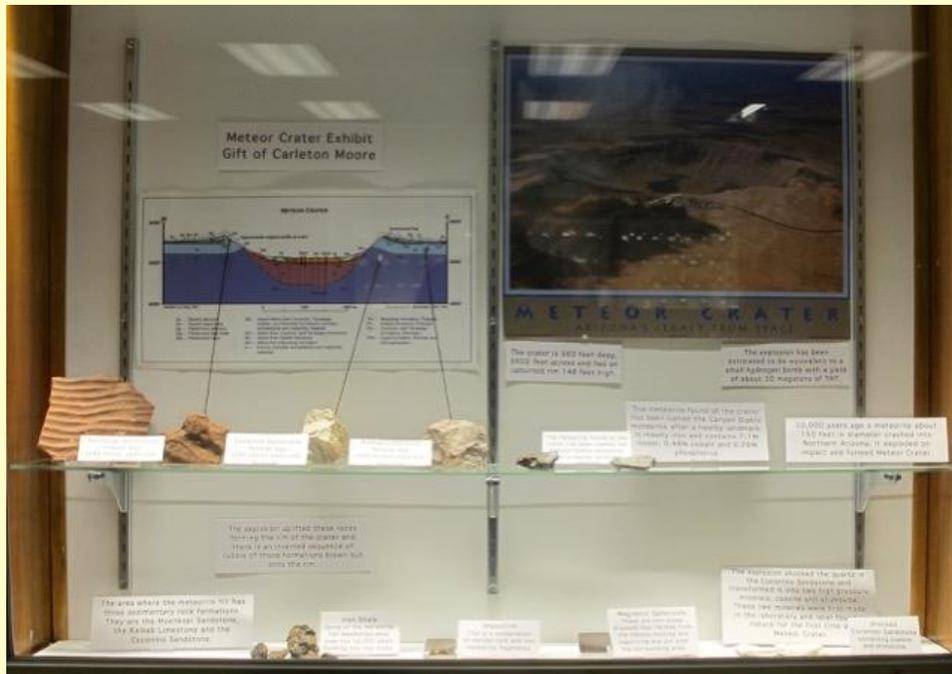
Payson, AZ

Pinal Gem & Mineral Society

UPDATE



The cases so generously given to the Museum by the Flagg Mineral Foundation now all have exhibits. The recent donation by the John Weber family of his mineral and fossil collection has been a great addition to the Museum.



Dr. Carleton Moore has donated a special exhibit about Meteor Crater.

ESM's Upcoming Meeting

The Earth Science Museum's next scheduled Board meeting will be on August 9, 2016, at the Burton Barr Library, located near Central Ave. and McDowel in Phoenix at 6:30 p.m. in Rm. B. Everyone is welcome to attend.

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.mineralogicalsocietyarizona.org
- 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
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- Stan & Susan Celestian
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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.

We're on the Web!

Visit us on  and at:
www.earthsciencemuseum.org

Please join us at the next ESM Board meeting Tuesday, August 9, 2016, at the Burton Barr Library in Phoenix at 6:30 p.m. Rm. B.

THANK YOU FOR YOUR CONTINUING INTEREST & SUPPORT!!!

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

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