President’s Message

WULFENITE IS LOVED!


Our April 13th program speaker is the great Mr. Bob Jones about “Russia Gem Treasures.” The program will cover Bob’s two trips to Russia. Bob visited five museums and government buildings so he could write a script and host a video "Russia Gem Treasures." Bob is a world renowned collector, lecturer, host and author. He is an MSA Milestone Life Member, MSA President 1964, generous donor, volunteer and oldest founding member of our sister organization Flagg Mineral Foundation.

Our March 9th program presented by MSA Life Member & Past MSA President Mr. Les Presmyk about “Competitive Mineral Exhibition” was timely after 2017 Tucson Gem and Mineral Show® where MSA again made a terrific competitive and educational exhibit showing. Thank you Les for the perfect program for MSA!

Juniors Program : Future Rockhounds of America (FRA): Junior members, please arrive no later than 6:40PM for Junior Program before General meeting. Junior Raffles prizes will be awarded after Junior program. Junior Program is 6:45-7:15PM. Program lead by MSA/FRA Junior Program Chairman Dr. Nathan Scholten.

WEARING MSA NAME BADGES PAYS OFF!! MSA members wearing their MSA Name Badges to general meetings will be issued a special raffle ticket and be eligible to participate in raffle to play Prize Drop game with opportunity to win one of four prizes! If you don’t have an MSA Name Badge, see Membership Chair, Mr. Ron Ginn at meetings or email Ron at MSACLub1935@msaaz.org. MSA Name badges are $7.50. It’s not just about winning prizes, it’s fellowship and getting to know each other.

I applied for an International Standard Serial Number (ISSN) from Library of Congress, ISSN Center in Washington, DC for Mineralogical Society of Arizona’s newsletter The Rockhound Record and I am happy to report The Rockhound Record was granted ISSN 2572-7486 and I have included our ISSN on masthead and last pages of The Rockhound Record. See page 13 for more information.

BIG MSA THANK YOU to following who joined me in making donations to MSA since previous MSA meeting:

- Mike Webb
  Hematite psd. Magnetite, BBC Mine.
- Mary Bishop
  Stilbite, India
QUALITY MINERAL DONATIONS WITH LABELS NEEDED: Please see Chris Whitney-Smith. Mineralogical Society of Arizona is a 501(c)(3) non-profit organization and will gratefully acknowledge your significant In-Kind Donation with a TAX Deduction Letter. All individuals making In-Kind donations to our non-profit organization may claim a tax deduction based on the fair resale value of the items donated. It is the contributor's responsibility to determine this value. Your contribution to Mineralogical Society of Arizona is fully deductible for tax purposes to the extent allowed by the current tax laws. If you have any further questions, please consult your tax advisor. Thank you again for supporting Mineralogical Society of Arizona!

MSA TABLE OF FREE AWESOMENESS: Several flats of rock & mineral specimens from recent adventures will be available for MSA membership for Free. Based on available quantities and first come first serve basis, members are requested to pick one item and allow all members who are interested a chance to take home a little treasure. No hoarding allowed. This is a generous and fun practice to build collections & offer members who weren’t able to join a field trip an opportunity to select a specimen from recent excursions.

2017 MSA SPECIAL PROGRAMS:

<table>
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<th>ROOM</th>
<th>SPEAKER / PROGRAM</th>
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<tr>
<td>April 13th</td>
<td>Serra</td>
<td>MR. BOB JONES “Russia Gem Treasures”</td>
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<tr>
<td>May 11th</td>
<td>Serra</td>
<td>DR. JAN RASMUSSEN “Wulfenite in Arizona”</td>
</tr>
<tr>
<td>June 8th</td>
<td>Serra</td>
<td>MR. MIKE FLEEMAN “Paleo World”</td>
</tr>
</tbody>
</table>

2017 Committee Members

President: Chris Whitney-Smith
ChrisWS@msaaz.org (602) 405-1502

Vice President: Joseph Philpott Jr.
JosephP@msaaz.org (602) 828-9298

Secretary: Dawn Boushelle
DawnBoushelle@msaaz.org (602) 403-3031

Treasurer: Dr. Nathan Scholten
NathanS@msaaz.org (602) 418-5896

Editor: Chris Whitney-Smith
ChrisWS@msaaz.org (602) 405-1502

Webmaster: Ron Ginn
MSAClub1935@msaaz.org (480) 294-0731

Field Trip Chair: Joseph Philpott Jr.
FieldTrips@msaaz.org (602) 828-9298

Field Trip Co-Chair: Don Boushelle
FieldTrips@msaaz.org (602) 618-4631

Membership Chair: Ron Ginn
MSAClub1935@msaaz.org (480) 294-0731

Social Coordinator: Joyce Hendrix
JoyceH@msaaz.org (480) 396-2393

Refreshments: Joyce Hendrix
MSAClub1935@msaaz.org (623) 877-9792

Mineral Curator: Chris Whitney-Smith
ChrisWS@msaaz.org (602) 405-1502

FRA/Junior Chair: Dr. Nathan Scholten
MSAFRA@msaaz.org (602) 418-5896

Education/Outreach Coord: Lynne Dyer
lynodyers@hotmail.com (480) 396-2393

Coalition Field Trips: Betty Deming
MSAClub1935@msaaz.org (623) 247-1325

Print Newsletter Distribution: David Lay
MSAClub1935@msaaz.org (480) 800-0299

Hospitality/Door Prizes: Bob Holm
MSAClub1935@msaaz.org (623) 247-1325

Statutory Agent: Terry Dyer
MSAClub1935@msaaz.org (480) 396-2393

Board Governors

Term Expires (2019)
Bob Holm
David Lay

Term Expires (2018)
Don Boushelle
Terry Dyer

Term Expires (2017)
Mike Williams
Joyce Hendrix

Past President
Dr. Raymond Grant

MEETING LOCATION
Franciscan Renewal Center, Piper Hall
5802 E. Lincoln Drive, Scottsdale, AZ. 85253.

* ALERT: Must check Meeting Schedule listed in newsletter or msaaz.org, under MSA CLUB tab to verify meeting location, room, dates and time.

* Future Rockhounds of America Junior members arrive 6:40PM and Junior meeting starts 6:45PM.
* General meeting members arrive 7:00PM. Meeting starts at 7:30PM.
* Brief business meeting, raffles, silent auctions, refreshments & buy/sell/trade events after program.
* Contact MSA via email: MSAClub1935@msaaz.org.
President's Message - Continued / MINDAT.org.

MINDAT.org is the largest mineral database and mineralogical reference website on the internet. Mindat.org contains worldwide (and a few spots on the moon) data on minerals, mineral localities, mineral photographs and other mineralogical information.

Mindat.org is growing every day, with new mineral information, localities and photographs added by members. Join Mindat.org to keep the site updated with information on areas you are familiar with.

Users of mindat.org range from novices just becoming aware of minerals to professional mineralogists. All levels of expertise are welcome to participate on mindat.org, everybody is still learning more about mineralogy. The chat room allows people interested in minerals to communicate with each other in real time, while the message board provides a forum for people that have questions about many aspects of mineralogy to have them answered in a more formal manner.

Mindat.org is an outreach program of the Hudson Institute of Mineralogy, a 501©3 non-profit education foundation based in the state of New York which gives mindat.org the structure needed to protect mindat.org for the future.

INTRODUCTION

Minerals
1. Mineral Information
2. Mineral Classification (Chemical groups)
   - Strunz Groupings
   - Hey Groupings
   - Dana Groupings

Localities (Mineral lists)
1. Standard Locality Display
2. Regional Report
3. Detail information about mineral at a locality
4. Recent Locality Changes

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1. Photographs
2. Photo of the Day

SEARCH

Minerals
1. Mineral Names
2. Search by Chemistry of a mineral
3. Mineral Identification by physical properties

Localities
1. Locality Search
2. Mineral Associations
3. Mineral occurrences in a region
4. Mineral occurrences in a country

Photographs
1. Search Photograph database
2. View a member's Mineral Photograph gallery
3. Mineral photographs in a region

WELCOME NEW MEMBERS TO MSA FAMILY TREE:

♦ Ronald Houser  
  Boring, OR

♦ Joy Parker  
  Mesa, AZ

♦ Mason (Jar) Readon  
  Phoenix, AZ

♦ Aspen Readon  
  Phoenix, AZ

♦ Robert Seitz  
  Phoenix, AZ

♦ Phillip Smith  
  Goodyear, AZ

♦ Jan Miller  
  Scottsdale, AZ

EXPLORE <> SHARE <> INSPIRE

Cheers!  
Chris Whitney-Smith
**Refreshment Volunteer List**  
**MSA Monthly Meetings**

**For Monthly MSA Meetings:**

If your last name begins with the letters listed during each month; please bring in a snack of your choice to share with MSA members after general meetings. Your cooperation is greatly appreciated.

*MSA will supply drinks.*

<table>
<thead>
<tr>
<th>Month</th>
<th>Letters</th>
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<tbody>
<tr>
<td>January</td>
<td>A, B or C</td>
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<tr>
<td>February</td>
<td>D, E or F</td>
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<tr>
<td>March</td>
<td>G, H or I</td>
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<tr>
<td>April</td>
<td>J, K or L</td>
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<td>May</td>
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<td>June</td>
<td>P, Q or R</td>
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<tr>
<td>September</td>
<td>S, T or U</td>
</tr>
<tr>
<td>October</td>
<td>V, W, X, Y or Z</td>
</tr>
<tr>
<td>November</td>
<td>Open to everyone. Please bring something to share with your friends.</td>
</tr>
</tbody>
</table>

**Suggestions for refreshment foods to bring**

Any type of chips, pretzels, cookies, crackers, fruit, vegetable or meat and cheese trays.

This is a volunteer effort and we appreciate your help in making our social time special for all club members.

Thank You.

**RSVP**

Refreshments you will bring to:

MSAClub1935@msaaz.org.
March 9, 2017 Mineralogical Society of Arizona General Meeting Minutes.
By Dawn Boushelle

The meeting was called to order by MSA President Chris Whitney-Smith at 7:32 PM on Thursday, March 9, 2017 at Franciscan Renewal Center, Scottsdale, AZ.

- No flag was brought, no pledge of allegiance.

Chris Whitney-Smith Opening Announcements:
- Visitors and New Members stood and introduced themselves.
- Dues are Due: PayPal available on MSA website to renew or join MSA.
- Chris called up MSA Officers, Board and Committee Members and presented them with MSA name badges featuring new MSA logo in appreciation for their services to MSA.
- March Mineral of the Month is PHOSPHOPYLLITE. April Mineral of the Month is KUTNOHORITE.
- Chris introduced Mr. Les Presmyk to present program “Competitive Mineral Collecting & Exhibition.”
- Chris presented Les with Certificate of Appreciation for his program.
- Joey Philpott Jr. spoke about upcoming field trips;
  - Date Creek Ranch on 3/25 for quartz led by Don & Dawn Boushelle.
  - Prism Mine on 4/8 for fluorite, quartz, wulfenite led by Jeff Craig.
  - New Mexico Trip 4/21 thru 4/25 led by Mike Brown. RSVP for trip in newsletter.
- Chris discussed HB2092 campaign to make wulfenite official mineral of Arizona. Wulfenite Exhibition at Tucson Show was great success and Chris urged everyone to keep up push to make Wulfenite official mineral of Arizona.

Closing Announcements:
- Chris reminded members of following:
- The March coalition trip is to a Slag heap in Cottonwood.
- April speaker will be Mr. Bob Jones, he will talk about his travels in Russia.
- Dr. Jan Rasmussen presents May program on Wulfenite. Timely if Wulfenite becomes new state mineral.
- Dues are Due: PayPal available on MSA website to renew or join MSA.
- MSA Name Badges were on front table for those who ordered name badges to pick up.
- MSA Name Badges Raffle held.
- General Raffles held for Visitors, Juniors and Members.
- Chris thanked everyone for attending meeting and bringing refreshments.

The meeting was adjourned at 9:17pm.
- Silent Auction was held & Refreshments served.
HB2092 Campaign to Make Wulfenite State Mineral of Arizona
By Chris Whitney-Smith.

Response from Office of the Governor

March 24, 2017

Dear Chris Whitney-Smith,

Thank you for sharing your thoughts on HB 2092: Wulfenite; State Mineral
Governor Ducey signed HB 2092 into law on March 22, 2017.

Thank you for contacting the Governor’s Office.

Laddie G. Shane
Director, Office of Constituent Affairs
Arizona Governor Douglas A. Ducey

MAKE
WULFENITE
OFFICIAL ARIZONA MINERAL
WULFENITE IS LOVE
WE DID IT! WULFENITE IS LOVED!
WULFENITE IS OFFICIAL MINERAL OF ARIZONA!

Arizona Governor Ducey signed HB2092 into law on Wednesday, March 22, 2017.

The bill amends Section 1, Title 41, chapter 4.1, and article 5 of the Arizona Statutes, by adding section 41-860.04, to read: Wulfenite is the Official State Mineral.

Dr. Alex Schauss spearheaded this effort in 2016 and with a mountain of support from across Arizona and a Wulfenite Is Love campaign by Mineralogical Society of Arizona, Arizona has a beautiful mineral to add to official symbols of Arizona.

It has been a pleasure partnering with Alex Schauss and collaborating with Rep. Mark Finchem, Bob Jones, Evan Jones, Lithographies, Don Boushelle, Sen. Gail Griffin, Les Presmyk, Peter Megaw, Bryan Swoboda, Jeff Scovel, Bob Downs, Rob Lavinsky, Paul Harter, Phil Richardson, Bill Yedowitz, Tony Occhuzzhi, Molly Busby, Wyatt Busby, Sam Busby, Jennifer Campbell, Maggie Lyons, John Tibbits, David Tibbits, Stan Keith, Frank Sousa, John Lucking, Mark Hay, Dick Morris, Carole Lee, Pam Wilkinson, Will Wilkinson, Keith Wentz, Danni Sotomayor, Jason New, Imelda Klein, Jim Klein, Anna Domitrovic, and many many more that I apologize if I missed you, but rest assured, Wulfenite would not be Official Arizona Mineral without you and your support. Thank you one and ALL!!!

I shared with Alex and I'll share with you, I will always treasure our journey in igniting a successful Wulfenite Is Love campaign across Arizona, Mineralogical Society of Arizona members visit to Arizona Capitol, installation of historic Wulfenite Exhibition at 2017 Tucson Gem & Mineral Show®, and a featured segment in 2017 What's Hot in Tucson. All in awesome support of Wulfenite.

Official Arizona Symbols:

- **TURQUOISE, CuAl₆(PO₄)₄(OH)₈·₄H₂O** - Arizona Gemstone
- **PETRIFIED WOOD (QUARTZ var. Chaledony), SiO₂** - Arizona Fossil
- **COPPER, Cu** - Arizona Metal
- **WULFENITE, PbMoO₄** - Arizona Mineral

MSA Wulfenite Is Love Campaign for HB 2092 at Arizona Capitol: [https://www.mindat.org/photo-806665.html](https://www.mindat.org/photo-806665.html)

The wulfenite calendars have been a tremendous ambassador for wulfenite to allow lawmakers to see the beautiful varieties of wulfenite and help them envision wulfenite as a great symbol of Arizona. Visually, the yellow and red colors of wulfenite offer a perfect match to setting sun rays of our Arizona flag.

WULFENITE IS LOVED!
Happy April Future Rock Hounds!

I look forward to seeing all at Thursday meeting.

We will start on the fourth badge which is the Lapidary badge.

I encourage all of you bring a representative piece of lapidary work to show to the group.

We will go over some brief history of the art form and go over the requirements for the badge.

Mineralogical Society of Arizona in association with American Federation of Mineralogical Societies, is pleased to introduce Future Rockhounds of America Badge Program for Junior Members age 10 to 17 years.

Please contact us at email: MSAFRA@msaaz.org.

MISSION STATEMENT

Future Rockhounds of America is a nationwide nonprofit program within the American Federation of Mineralogical Societies that develops and delivers quality youth activities in the earth sciences and lapidary arts in a fun, family environment. Our underlying goals are to foster science literacy and arts education through structured activities that are engaging and challenging and by which kids—and the adults who mentor them—learn while having fun.
MSA March 9th Meeting Highlights.
Chris Whitney-Smith.

MSA/FRA Chairman Dr. Nathan Scholten teaching FRA Juniors about paleontology and fossils; Chris Whitney-Smith photo.

Bob Holm calling all Juniors to select a mineral prize; Chris Whitney-Smith photo.

Many great rock and mineral specimens for MSA Silent Auctions. Thank you to our generous donors and silent auction winners; Chris Whitney-Smith photo.

MSA Certificate of Appreciation presented to Les Presmyk for his Competitive Mineral Exhibition program for MSA; Nathan Scholten/Chris Whitney-Smith Photo.
The mineral of the month for April is **kutnahorite CaMn̈2(CO₃)₂** and it only has been found at one locality in Arizona, the Iron Cap mine in Graham County. I first went to this area with Leo Langland in 1975. Leo had heard a rumor about emerald green axinite from Landsman Camp, which is about a mile from the Iron Cap, and we went out looking for it with dreams of faceted emerald green gems. We worked some outcrops that Leo had read about in a wash not far from Landsman Camp, but found no axinite and we did not go to the Iron Cap Mine, it was not really known as a locality then. In 1981, Bruce Reiter published a paper in the Arizona Geological Society Digest about the Iron Cap Mine from work that he had done for an M.S. Thesis at Arizona State University. In it he lists manganaxinite (now axinite-(Mn)), manganbabingtonite, and a number of other minerals. During the 1980s it became known to collectors and produced many specimens. Wendell Wilson published an article detailing the collecting and the minerals found at the Iron Cap in the Mineralogical Record, Volume 19, Number 2, page 81, 1988.

There is green axinite, but the crystals are small and the mostly a more yellow green, so our dreams of faceted axinite were not fulfilled. But the mine has produced some interesting minerals not found anywhere else in Arizona. Kutnohorite, nekoite, hopeite, and manganbabingtonite are only reported from the Iron Cap area of Arizona. Mindat.org lists 26 minerals for the Iron Cap Mine. The galena and sphalerite specimens are very good and the issue of the Mineralogical Record with the Iron Cap article has a sphalerite from the mine on the cover. A couple of years ago, there was a locked gate on the road to the Iron Cap and I don’t know the present status of the road. I think it
When in Tucson, plan to visit University of Arizona Mineral Museum to view Mineralogical Society of Arizona (MSA), Flagg Mineral Foundation (FMF) and several suites of other fine mineral collections.

UA Mineral Museum is located within Flandrau Science Center & Planetarium, 1601 E. University BLVD, Tucson, AZ 85721.

www.flandrau.org.

⇒ MSA and FMF Members have FREE admission to UA Mineral Museum while MSA & FMF Mineral Collections are on exhibit.

**Hours of Operation:**
- Monday-Wednesday: 10am - 3pm
- Thursday-Friday: 10am - 3pm, 6pm - 9pm
- Saturday: 10am - 9pm
- Sunday: 1pm - 4pm

RSVP: Convenient parking available at the Cherry Avenue Garage for a small fee. Free street & surface parking is available on weekends (game days excluded).


Azurite and Malachite, Bisbee, Cochise County, Arizona; MSA Collection, Jeff Scovil photos, Chris Whitney-Smith photo center.

MSA signs 10 year loan agreement with UA Mineral Museum good through November 30, 2024. Visit UAMM and check out the many terrific collections on exhibit.
I applied for an International Standard Serial Number (ISSN) from Library of Congress, U.S. ISSN Center in Washington, DC for Mineralogical Society of Arizona’s newsletter The Rockhound Record and I am happy to report The Rockhound Record was granted ISSN 2572-7486 and I have included our ISSN on masthead and last pages of The Rockhound Record.

An International Standard Serial Number (ISSN) is an eight-digit serial number used to uniquely identify a serial publication. The ISSN is especially helpful in distinguishing between serials with the same title. ISSN are used in ordering, cataloging, interlibrary loans, and other practices in connection with serial literature. The ISSN can be thought of as the social security number of the serials world. Just as an individual’s social security number is used in many automated systems to distinguish that person from others with the same or similar names, the ISSN distinguishes a particular serial from others with which it might be confused. The ISSN also helps library patrons, libraries, and others who handle large numbers of serials to find and identify titles in automated systems more quickly and easily.

ISSN are assigned by a network of over 60 centers worldwide coordinated by the ISSN International Centre located in Paris. ISSN are assigned to serials published in the United States by the U.S. ISSN Center at the Library of Congress. Serials published outside of the United States are assigned ISSN by the national center in their country of publication, or, in the case of countries lacking a national center, by the ISSN International Centre. Information about the ISSN network and ISSN centers worldwide can be found on the ISSN International Centre's home page.
April 13, 2017 Program: “Russia Gem Treasures.”
Presented by Mr. Bob Jones.

Our April program speaker is the great Mr. Bob Jones about “Russia Gem Treasures.” The program will cover Bob’s two trips to Russia. Bob visited five museums and government buildings so he could write a script and host a video “Russia Gem Treasures”. Bob’s program will show huge objects of art made of lapis, rhodonite, 50 foot malachite columns in Saint Isaac’s Cathedral, visit inside The Kremlin, see Russian charoite, diamonds, marvel at a 20 foot lapidary map, and highlights from Hermitage Museum and even a dead mouse.


Middle: Cathedral of the Annunciation of the Holy Virgin, Moscow Kremlin, Russia.
Right: Saint Isaac's Cathedral, St. Petersburg, Russia.
Bottom: Malachite table and artifacts, Russia.

All Photos Courtesy Bob Jones.
Mineral of the Month - KUTNOHORITE
Dr. Raymond Grant

Mineral of the Month for April is kutnohorite. Kutnohorite is CaMn$^{2+}$(CO$_3$)$_2$ and a member of the dolomite group of minerals. The calcite group of minerals has minerals like calcite, CaCO$_3$, rhodochrosite, MnCO$_3$, smithsonite, ZnCO$_3$, and magnesite, MgCO$_3$. There can be some substitution of the elements in these minerals for example manganocalcite which is not a mineral but a variety name used for calcite that has some manganese substituting for the calcium. This substitution is random in the crystal structure. The dolomite group has minerals like dolomite, CaMg(CO$_3$)$_2$, ankerite, CaFe(CO$_3$)$_2$, kutnohorite, CaMn$^{2+}$(CO$_3$)$_2$, and minrecordite, CaZn(CO$_3$)$_2$. In these minerals there is an ordered layered structure where one layer is calcium atoms and the next is manganese in the case of kutnohorite (see diagram below).

Minerals in the calcite and dolomite group are all hexagonal and commonly form rhombohedral crystals. Kutnohorite is usually found as spherules and aggregates of crystals. Its color is white to pale or dark pink and the hardness is 3.5.

There is only one recorded locality for kutnohorite in Arizona, the Iron Cap Mine in Graham County (see this month’s Arizona Mineral Collector for more on the Iron cap Mine). We have lots of calcite and lots of manganese in Arizona so there should be more kutnohorite, but it takes the ability to determine the alternate layer (dolomite) structure to identify it for certain so there could be more just not recognized.

Members are invited to bring one sample from their collection of the mineral of the month and give a brief story about where they collected it or something about the specimen.

*Unknown minerals for identification can still be brought to the meetings*
The Pinal Gem and Mineral Society meets monthly on the **third Wednesday at 7pm** at the Artisan Village of Coolidge.

**Next Meeting: Wednesday, April 19, 2017 at 7 PM**

**“The Legend of the Lost Dutchman’s Gold Mine.”**

**Program By Hoyt Huckabay**

He has written a book about it and the book will be available at the meeting. More information will be in the April newsletter.

**New Exhibits in Museum**

Two new exhibits, one on trilobites and one on wulfenite, the Arizona State Mineral have been put in cases donated by Steve Bentz.

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Fossils and Wulfenite Arizona State Mineral Exhibits; Ray Grant photos.
2nd Annual Pinal Gem & Mineral Show, Saturday, March 11, 2017
By Chris Whitney-Smith

MSA members Lynne & Terry Dyer with their traveling rock and mineral hands on exhibit at Pinal Gem & Mineral Show; Chris Whitney-Smith photos.

MSA Junior David Tibbits volunteering at Pinal Gem & Mineral Show’s Paleo Dig Sand Box and helping curious youngsters find fossils and shark teeth; Chris Whitney-Smith photo.

MSA Legacy Life Member John Tibbits speaking with MSA Honor- ary Life Member Dr. Carleton Moore at Moore’s Touch Outer Space table where John and public could touch a piece of Mars, The Moon, The Asteroid Vesta and various meteorites; Chris Whitney-Smith photo.
2nd Annual Pinal Gem & Mineral Show - Continued.
By Chris Whitney-Smith

Mineralogical Society of Arizona Board had opportunity to double the main floor museum exhibit cabinets at Pinal Geology & Mineral Museum by donating (6) display cabinets and lighting from Ikea to match the existing cabinets and lights.

Thank you MSA Board of Governors for approving MSA show of support for Pinal Geology & Mineral Museum.

Thank you Joey Philpott Jr. & Nathan Scholten for picking up display cabinets & lighting from Ikea. Joey will coordinate with Ray Grant for final delivery to Pinal Geology & Mineral Museum.
Ammnre Museum News

Arizona Mining, Mineral and Natural Resources Education Museum
By Michael Conway

Catie Carter’s YouTube video showcasing ‘Minerals of Arizona’s Historic Mining Communities’ is now online at: https://www.youtube.com/watch?v=og23nv49isY&feature=youtu.be

G’day Friends of AZ Mining, Mineral and Natural Resources Museum:

The House Energy, Environment, and Natural Resources Committee passed SB1415 9–0. The bill will permanently transfer the MMNRE Museum, and the former Arizona Mining and Mineral Museum collection of 22,000+ minerals and mining artifacts, to the University of Arizona.

Senator Gail Griffin masterfully introduced the bill and shared an earlier MMNRE planning document with the Committee. The Univ. of Arizona’s Sabrina Vasquez was there to voice UA’s support for the bill. Chair Rusty Bowers spoke passionately about seeing the museum opened on the Capitol Mall and packed with school children.

Six individuals were signed in to support the bill if needed. The next step for SB1415 is to appear before the House Rules Committee.

We’ll keep you informed about progress.

Last, AZGS funding bill, SB1184, appears before the House Appropriations Committee.

Michael Conway | Chief, Geologic Extension Service
Arizona Geological Survey
1955 E 6th St.
PO Box 210184
Tucson, AZ 85721
Ph 520.621.2352 | Ph C 520.971.3688
fmconway@email.arizona.edu
http://www.azgs.az.gov
repository.azgs.az.gov

University of Arizona’s Tim Bee at the podium and Kimberly Espy waiting for her opportunity to throw U of A support behind SB1415; arizonageologicalsoc.org photo.
Flagg Mineral Foundation and Earth Science Museum

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.

March 19, 2017, Earth Science Museum (ESM) members assembled teacher kits at Mardy & Dick Zimmermann's Home.

MSA Legacy Life Member and Past MSA Vice President Mike Williams presented Flagg Mineral Foundation’s 2017 A.L. Flagg Distinguished Service Award by Foundation Vice Chairman Bill Yedowitz for his volunteer services as foundation officer, board member, show volunteer, and webmaster; Phil Richardson photo.

Learn More at: flagmineralfoundation.org

Check out photos from 2017 Minerals of Arizona Symposium at Mindat Events: https://www.mindat.org/sh/1539 /
The purpose of the Rocky Mountain Federation is to bring a closer association of all clubs in the Society, and to promote the study of earth sciences, including the lapidary arts, the study of fossils and paleontology, and related crafts.

The RMFMS was organized in 1941, and held its first annual convention at the Argonaut Hotel in Denver, Colorado. There were 16 organizations in attendance. The RMFMS became one of the original four founders of the American Federation of Mineralogical Societies when it was organized in 1947.

The Rocky Mountain Federation has clubs in these states: Arizona (17), Arkansas (1), Colorado (20), Kansas (7), Nebraska (western portion of state) (1), New Mexico (7), Nevada (1), North Dakota (western portion of state) (1), Oklahoma (10), South Dakota (western portion of state) (1), Texas (1), Utah (7) and Wyoming (6).

RMFMS President’s Message
Beth Simmons, Ph.D.
cloverknoll@comcast.net

Because we are all part of a TEAM trying to promote our hobby, this year the overriding theme will be – RMFMS T.E.A.M.S.

T is for TEACH – at every meeting TEACH something, in every newsletter TEACH something. You then achieve the most valuable goal of your club’s mission statement! It doesn’t have to be a Ph.D. dissertation – just something the members didn’t know before.

E is for ENCOURAGE – At every meeting and gathering encourage folks to learn something new, to attain some personal goal, to do something beneficial for the club. Then you have achieved the personal goals of your members in a positive way.

A is for ACCOMMODATE – At every instance, you and your club should accommodate the youth, the elderly, the handicapped and infirmed, the uninformed. Welcome members from all walks of life, from all the corners of the world. Simply because EVERYONE LOVES ROCKS!

M is for MENTOR – your club should have a nurturing program in place where each officer has an assistant who is mentored in the job. Every experienced member should train another to take their place in the regime. Certainly succession results in change, but mentoring will make the transition smooth and non-disruptive to the club’s over-all program.

S is for SUPPORT – Club members should feel buoyed and ecstatic by all the support they receive from club officers and members. After all, this is a hobby group and members perform their “tasks” simply for enjoyment. When the support falters, members will drift away. In many regions there aren’t eight other clubs where rock hounds can find a new home! So today, take the time to tell someone they are doing a great job, before they walk away down an arroyo!

As the year goes on, we will give examples of each of these goals, plus incorporate advice about them on the RMFMS webpage.

Again my thanks to everyone who stepped up to help out! Let’s KICK ROCKS!
American Federation of Mineralogical Societies

Mineralogical Society of Arizona (MSA) members in good standing are members by affiliation of American Federation of Mineralogical Societies (AFMS). AFMS website is terrific educational resources to stay current on what's happening in our awesome hobby. Thank you for your membership and please enjoy all the benefits, privileges and opportunities as members of MSA & AFMS.

Purpose of the AFMS: To promote popular interest and education in the various Earth Sciences, and in particular the subjects of Geology, Mineralogy, Paleontology, Lapidary and other related subjects, and to sponsor and provide means of coordinating the work and efforts of all persons and groups interested therein; to sponsor and encourage the formation and international development of Societies and Regional Federations and by and through such means to strive toward greater international good will and fellowship.

"Code of Ethics"

◆ I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.
◆ I will keep informed on all laws, regulations or rules governing collecting on public lands and will observe them.
◆ I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
◆ I will use no firearms or blasting material in collecting areas.
◆ I will cause no willful damage to property of any kind such as fences, signs, buildings, etc.
◆ I will leave all gates as found.
◆ I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.
◆ I will discard no burning material - matches, cigarettes, etc.
◆ I will fill all excavation holes which may be dangerous to livestock.
◆ I will not contaminate wells, creeks, or other water supplies.
◆ I will cause no willful damage to collecting material and will take home only what I can reasonably use.
◆ I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
◆ I will support the Rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
◆ I will cooperate with field-trip leaders and those in designated authority in all collecting areas.
◆ I will report to my club or federation officers, Bureau of Land Management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
◆ I will appreciate and protect our heritage of natural resources.
◆ I will observe the "Golden Rule", will use Good Outdoor Manners and will at all times conduct myself in a manner which will add to the stature and Public Image of Rockhounds everywhere.

American Federation of Mineralogical Societies

AMFED.org

Ron Carman
AFMS President
APRIL MSA FIELD TRIP: Prism Mine
April 8th-9th, 2017

MSA FIELD TRIP
Prism Mine
April 8th-9th, 2017
(Overnight Optional, see below)

TRIP INFO

The Overnight portion of this trip is OPTIONAL. You are more than welcome to come either Saturday or Sunday for the day (see the Fee section for more info). The meeting spot and time will be the same for either day.

This trip will be to the Prism Mine, a private fluorite and amethyst claim in the Harquahala Mountains. The amethyst here is mostly massive, though good cutting quality and crystal plates can also be found. The fluorite is typically green/blue. Both have been found with small wulfenite crystals. While some can be found surface collecting, the best will be found digging in the pits and breaking layers of rock to expose the vein.

Mid to High clearance vehicle recommended (2wd ok)

FEE: $30 FOR 2 DAYS ($15 PER DAY)

TOOLS
Rock Hammer, Sledge, Chisels, Gloves, Eye Protection

OPTIONAL: Wisk Broom/Brush, Pick, Shovel, Prybar, Eye Protection, Hat, Sunscreen

LEADER INFO
Name: Jeff & Nicole Craig
Phone: (480) 717-9326
Vehicle: Green Jeep

MEET-UP INFO
Date: April 8th & 9th, 2017
Time: 8:00 am
Depart: 8:20 am
Phone: (480) 717-9326
Email: fieldtrips@msaaz.org

MEET LOCATION:
Salome Road and I-10

DRIVING DIRECTIONS:
From Phoenix, AZ head West on I-10 for 63 miles to Exit 81, Salome Road. Turn right at the stop sign. Destination will be on the right.
APRIL MSA FIELD TRIP MAP: Prism Mine

MSA FIELD TRIP
Prism Mine
April 8th-9th, 2017
(Overnight Optional)
APRIL MSA FIELD TRIP: New Mexico Trip
March 25, 2017

MSA FIELD TRIP
New Mexico
April 21st-25th, 2017

LEADER INFO
Names: Mike Brown & Cody Schwenk
Phone: (480) 228-4297
Vehicle: Black Nissan Pickup

TRIP INFO
Anyone can meet us at the Valley of Fire campground on Thursday night or Friday and can stay for all trips or just some.

If you have any questions call 480-228-4297 before and throughout the trip. All campgrounds and rock shop locations can be found on Google maps. Looks like all roads will be easily passable with any vehicle except a small portion of Blanchard mine may need a high clearance.

Also need everyone to RSVP asap to mikedbmikedb@gmail.com please send a message telling me what day you are arriving and how many will be with you.

SCHEDULE / DIRECTIONS

Thursday Night
I will be at Valley of Fire campground late on Thursday night. The closest Hotel to the Valley of Fire campground is 4 miles away in Carrizoza.

Friday Morning
Bonito lake
Collecting quartz, barite and pyrite, then to captain for oyster/shellfish fossils. Then head back to Valley of Fire recreation area.

Friday night
Valley of Fire recreation area
Carrizoza nm 88301
Tent camping $7

From I8 and I10 take I10 east 327 miles
To exit 135 onto US-70 .................................. 7.2 miles
Turn left onto N Main St .................................. 14 miles
Continue on State Highway 70 .......................... 52 miles
Keep right on US-54 n .................................. 900 ft
Turn left onto Alamogordo relief road .............. 5 miles
Turn left onto Highway 54/70 .......................... 9.8 miles
Turn left onto St Francis Dr ............................. 45 miles
Turn left onto E 1st St./hwy380I ....................... 3.9 miles
Turn left ................................................. 50 ft destination on the left

Fill up on fuel in Carrizoza
Hotels 4 miles before on highway 380 in carrizoza
APRIL MSA FIELD TRIP MAP: New Mexico Trip

Saturday morning
Blanchard mine
Collecting fluorite, galena, limonite, brochantite.
Meet up at 10am 32 miles away on E 1st St/
Highway 380 adjacent the Blanchard rock shop
(2972 E 1st St).

Meeting up with Mike brown.

Passenger cars can make it to the pad but high
clearance will be needed after the pad to the mine.
Hammers and chisels needed & hard hat and light
will be needed to go under ground. We will go under
into the Sunshine #3 adit.

Saturday night
Water Canyon campground 60 miles from
Blanchard. 505-346-3900 575-854-2281

From Blanchard, take 380 for 29 miles to I 25, head
North for 8.4 miles, take Exit 147, US 60 West to I 25
bus loop 1.4 miles, turn left on Spring St then 16
miles turn left on Water Canyon Rd for 5 miles then
turn right.

Not sure if there will be a camp fee

Sunday morning
Kelly mine
Collecting pyrite, smithsonite and maybe others.
Meet at Tony’s rock shop 9:00 am

Tony’s rock shop: 911 Kelly Rd Magdalena, NM.
575-854-2401 – $10 per person
20 miles from water canyon campground
Closest hotels in Socorro 31 miles away

Sunday night
Back to water canyon campground.

Monday morning
New Mexico Mineral Museum tour 9am - 11am

Meeting at New Mexico tech university
801 Leroy pl Socorro nm 87801

Monday afternoon
Get lunch then follow me to collect psilomelane
minerals at Chupadera Mountain.

Monday night
Either stay at Water Canyon campground for the
night or just head home.
2017 MSA FIELDTRIPS

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Location</th>
<th>Mineralogy</th>
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<td>OVERNIGHT</td>
<td>Prism Mine</td>
<td>Fluorite, Wulfenite, Barite, Amethyst</td>
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<tr>
<td>April 21-25</td>
<td>OVERNIGHT</td>
<td>NEW MEXICO</td>
<td>Fluorite, Galena, Smithsonite</td>
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<td>OVERNIGHT / 4X4</td>
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<td>Tour</td>
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<td>September 2</td>
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<td>Mission Mine</td>
<td>Tour</td>
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<td>October 7</td>
<td>STRENUOUS</td>
<td>TO BE REVEALED - (RSVP Required)</td>
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<td>October 14</td>
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<td>Camp Verde Salt Mine</td>
<td>Glauberite, Calcite</td>
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<td>October 21-22</td>
<td>OVERNIGHT</td>
<td>Amethyst Hill / Purple Passion Mine</td>
<td>Amethyst, Cerussite, Fluorescents, Wulfenite</td>
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<td>November 4-5</td>
<td>OVERNIGHT</td>
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<td>November 18-19</td>
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<td>December 2-3</td>
<td>OVERNIGHT</td>
<td>Red Cloud Mine / Blue Bird Mine</td>
<td>Wulfenite, Vanadinite, Kyanite, Fluorescent</td>
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<tr>
<td>December 17</td>
<td>4x4</td>
<td>UFO Mine</td>
<td>Chrysocolla, Shattuckite</td>
</tr>
</tbody>
</table>

DATES MAY CHANGE AND TRIPS MAY BE ADDED OR REMOVED
OVERNIGHT TRIPS COULD ALSO BE DAY TRIPS.

We want to hear from you!!! Let us know what you think of the trips. How was your experience? Or you could tell us your version of the trip report. Your article or parts of it may be used in the RR, Facebook, on our website msaaz.org or for other promotional purposes. You can send them to Joseph Philpott Jr. at josephp@msaaz.org.

Please use fieldtrips@msaaz.org for all field trip questions, comments or concerns.

Important information: MSA membership is required to go on field trips. You can become a member at meetings, mineral shows MSA attends, at meet up location for field trips or by downloading membership application from msaaz.org under MSA CLUB tab.

MSA field trips are a privilege of membership; however, MSA is open to joint ventures with other clubs and of course, coalition trips are open to all.

MSA Field Trip Inquiries? Please email fieldtrips@msaaz.org.
APRIL COALITION FIELD TRIP: Dobell Ranch - Petrified Wood.  
Hosted by Sedona Gem & Mineral Club

For questions related to this Coalition Field Trip, please contact Anthony Shannon. 
Email: tonyshannon6669@aol.com

Hi Coalition Members,

Sedona Gem & Mineral Club will host April Coalition Field Trip to Dobell Ranch for petrified Wood. 
Information to be posted when available.

** This trips has already past. **

Petrified Wood from Dobell Ranch; Jim Stoops photo.
MSA FIELD TRIP REPORT: Vulture & Reserve Bank Mines 2/25/17
By Dr. Nathan Scholten.

The Wickenburg area of Arizona is not only beautiful but rich in Arizona history and geology as well. The M.S.A’s trip to the historic Vulture mine was one that provided both in abundance. We arrived and were mildly shocked when around 90 people were waiting to take the tour. We were amazed at all the new faces & pretty jeeps. We learned though that they were not all new MSA members but other groups that had made reservations for the mine tour as well.

The tour of the Vulture mine provided a perspective on not only the historic operations, but explanations of how the various mining tools were used on a daily basis. Lasting about 90 minutes the tour made the rounds of complex including the famous “Hanging Tree.” Legend has it that five men were hung from this old and gnarly Ironwood tree.
Later, our very gregarious tour guide, who also happened to own the Reserve Bank mine was generous enough to take us down into the Glory Hole of the Vulture mine as part of a private tour of the mine pit itself.

It was a somber event in my opinion in that not only were we in a mine pit but also the tomb of a number of unknown men who died during a clandestine high grading operation.

From there we traveled to the Reserve Bank mine, Arizona’s smallest operational copper mine, and hunted for copper ores from the tailings around the mine itself. The day concluded with everyone obtaining enough samples to satisfy their needs. A big thanks to Joey Philpott Jr. for setting up and organizing the trip.

Past meets present at Vulture Mine. MSA Junior Harrison Scholten checks out rusted relic of a bygone era; Mike Brown Photo.

5-Star accommodations for miners at Vulture Mine ... you know this to be true if you’ve operated a mine in the Arizona outback; Mike Brown Photo.
Another great trip to the planet mine. We had a good group that camped out on Friday night. I made the 45 minute journey back to Bouse on Saturday morning to pick up the group that I was leading in. We arrived at the mine about 9:30 AM and soon after headed over to the collecting site in the wash, a favorite site of many to collect all kinds of nice malachite and chrysocolla specimens, some even found barite and halotrichite.

Everybody was done collecting around 3PM and we headed back to campsite to start making dinner and sit around the fire for great conversation. Sunday morning we woke and packed our gear to head over to BCC mine area for bladed hematite. BBC is a great area which always produces lots of nice specimens of hematite. We collected there for several hours until Don showed me what Michael Webb found. Mike found what we thought was a nice specimen of hematite pseudo magnetite. The whole group moved over to that spot and everybody seem to find a piece just laying on the ground until John showed us a piece that he had found a little further down the road, so everyone headed over to see what we could find. Several people showed me pieces they found and it seems this area was producing hematite pseudo-pyrite. We collected there until about 2PM and then it was time for our journey back to civilization and back to our normal lives of all work and no play, just kidding.
MSA FIELD TRIP REPORT: Planet Mine - Continued.
By Chris Whitney-Smith.

To learn more about Planet Mine History by William Ascarza, visit following web link:
MSA FIELD TRIP REPORT: Planet Mine - Continued.
By Chris Whitney-Smith.

Sue and Stan Celestian taking in enormity and beauty of Planet Mine Complex; Chris Whitney-Smith photo.

Close up of Sue and Stan Planet Mine Complex; Chris Whitney-Smith photo.

Cody Schwenk Malachite find of the day at Planet Mine; Chris Whitney-Smith photo.

Joey Philpott Jr. and Nathan Scholten working a pocket at Planet Mine as Harrison looks on; Steve Knox photo.

Close up of Joey & Nathan working a pocket at Planet Mine; Chris Whitney-Smith photo.
HEMATITE, Fe₂O₃, BBC Mine collected by Steve Knox. Steve wrote: "It didn't show magnetism and there were flakes of hematite (specular?) throughout some of the limestone in some layers near the contact. I took some large pieces. Some of the crystals were distinctly octahedral, and appeared to look like magnetite. The contact or heat could have made some into the pseudos?" Steve Knox photos.
MSA FIELD TRIP REPORT: Planet Mine - Continued.
By Chris Whitney-Smith.

Drone aerial shot of MSA base camp at Planet Mine; Nathan Scholten photo.

Drone aerial of structure at Planet Mine near MSA base camp; Nathan Scholten photo.

Drone aerial shot of MSA Field Trip Crew at Planet Mine; Nathan Scholten photo.
### Upcoming Shows and Events

#### March 11, 2017

**2nd Annual Pinal Gem & Mineral Show “Touch Outer Space with Dr. Carleton Moore”**

Sat. 10-4

Pinal Geology and Mineral Museum
351 N. Arizona Ave.
Coolidge, AZ

Co-Sponsored by Mineralogical Society of Arizona & Artisan Village of Coolidge.

#### March 17, 18, 19, 2017

**48th Annual 2017 RMFMS CONVENTION & SHOW “Treasures of the Earth”**

Hosted by Albuquerque Gem & Mineral Club, Albuquerque, NM.

Creative Arts Center NM State Fairgrounds
Fri & Sat. 10-6
Sun 10-5

Admission $3

See [Agmc.info](http://www.agmc.info)

#### March 18-19, 2017

**Cottonwood Annual Show**

Sat. 10-5, Sun 10-4

Admission $3

Children under 12 free

Mingus Union HS
1801 E. Fir St.
Cottonwood, AZ

#### March 25-26, 2017

**Daisy Mountain Rock & Mineral Club Annual Show**

Sat. 9-5, Sun. 9-4

Admission

$3 Adults

$2 Students/Seniors

**Children under 12 FREE**

Boulder Creek High School
40404 N. Gavilan Peak Pkwy.
Anthem, AZ

#### March 31-April 2, 2017

**25th Annual 2017 Minerals of Arizona Symposium, Tucson, Arizona.**

$45 registration fee includes: Saturday breakfast, coffee breaks, Saturday lunch, Symposium Proceedings and admission to the Museum.

$20 catered banquet on Saturday is additional.

**Please register prior to March 25th.**

Arizona-Sonora Desert Museum,
2021 N. Kinney Rd, Tucson, AZ 85743.

The Holiday Inn Express at Cortaro/I10 (8373 North Cracker Barrel, Tucson, AZ 85743) will be the host hotel.

2017 Information & Registration Form

#### May 6-7, 2017

**Mohave County Gemstoners Annual Gem & Mineral Show**

Saturday 9-5
Sunday 10-4

Free Admission

Kingman Academy of Learning
3420 N. Burbank Ave.,
Kingman, AZ

#### May 18-19, 2017

**White Mountain Gem and Mineral Club 20th Annual Jewelry, Gem & Mineral Show**

Saturday 9-6
Sunday 10-4

Hondah Resort and Casino
Pinetop, AZ

#### May 27 & 28, 2017

**Bisbee Annual Show**

Sat. 9-5, Sun. 9-5

Free Admission

Queen Mine
478 N Dart Rd
Bisbee, AZ

#### May 27-28, 2017

**Prescott Gem and Mineral Club**

Friday & Saturday 9-5
Sunday 9-4

Admission $5, Seniors/Students $4

Children under 12 Free

Prescott Valley Event Center
3201 N. Main St.
Prescott Valley, AZ

#### June 2-4, 2017

**Coconino Lapidary Club Rock, Gem & Mineral Show**

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

Free Admission

Outdoor Market
Hwy. 89N and Silver Saddle Road
Flagstaff, AZ

#### August 4-6, 2017

**Prescott Gem and Mineral Club**

Friday & Saturday 9-5
Sunday 9-4

Admission $5, Seniors/Students $4

Children under 12 Free

Prescott Valley Event Center
3201 N. Main St.
Prescott Valley, AZ
25th Annual Minerals of Arizona Symposium - Tucson
Show Poster By Don Boushelle.

25th Annual Minerals of Arizona Symposium - Tucson
MARCH 31ST, APRIL 1ST AND APRIL 2ND, 2017
ARIZONA-SONORA DESERT MUSEUM

Chairpersons:
Chair – Phil Richardson
Co-Chair – Ray Grant
Co-Chair – Anna Domitrovc

Sponsored by Flagg Mineral Foundation
Symposium Agenda

Friday Program: 2 to 4 PM Arizona-Sonora Desert Museum mineral vault tour by Anna Domitrovic.

Dealers: Friday & Saturday evening 5 PM to 10 PM there will be a mineral sale at the Holiday Inn Express with dealers selling from rooms.

Saturday Program: 8 AM to 4:00 PM at the Arizona-Sonora Desert Museum followed by a Dinner at 6:30 PM at the Holiday Inn.

Sunday Program: 10 AM Field trip to CalPortland Cement Quarry.

Symposium Programs

8:50 – 9:30   Piedmont Mine, Yavapai County.  
             BARBARA MUNTYAN

9:30 – 10:10  Agates of the United States, 
             PAT MCMAHAN

10:40 – 11:20 Silver and Gold in Arizona, the Mining History and the specimens that resulted. 
              LES PRESMYK

              RAY GRANT

1:00 – 1:40   Geology of the Tucson Mountains,  
              JAN RASMUSSEN

1:40 – 2:20   Genesis of a limestone Cave & Associated Mineralogy,  
              ANNA DOMITROVIC

2:40 – 3:20   Arizona Cerussite.  
              MARK HAY

3:20 – 4:00   What’s New in Arizona Minerals,  
              RON GIBBS

Symposium dedicated to the late Hon. Joe A. Ruiz for his considerable contributions to Arizona Mineralogy. Ruiz family and friends; Ron Gibbs, Melani Ruiz-Pyland, Rose Ruiz, Chris Whitney-Smith and Bob Jenkins; Chris Whitney-Smith Photo.

Arizona-Sonora Desert Museum turned 65 in 2017 and Anna Domitrovic who has distinction of presenting at all 25 symposiums shared slides celebrating 40th anniversary of building geologically accurate caves at ASDM; Chris Whitney-Smith photo.

By Chris Whitney-Smith.

MSA members enjoying micro minerals outside vault at Arizona-Sonora Desert Museum at Minerals of Arizona Symposium; Chris Whitney-Smith photo.

Check out photos from 2017 Minerals of Arizona Symposium at Mindat Events: https://www.mindat.org/sh/1539/

MALACHITE, Cu2CO3(OH)2, stalactite, Bisbee, Cochise County, Arizona, ASDM Mineral Vault; Chris Whitney-Smith photo.

Anna Domitrovic leading lucky group of Minerals of Arizona Symposium guests in VIP tour of mineral vault at Arizona-Sonora Desert Museum; Chris Whitney-Smith photo.

CERUSSITE, PbCO3, Mammoth-St. Anthony Mine, Pinal County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

LINARITE, PbCuSO4(OH)2, Grand Reef Mine, Graham County, AZ; ASDM Collection, Chris Whitney-Smith photo.

CERUSSITE, PbCO3, Mammoth-St. Anthony Mine, Pinal County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.
By Chris Whitney-Smith.

PYRITE, FeS₂, Huanzala, Peru; ASDM Collection, Chris Whitney-Smith photo.

WULFENITE, PbMoO₄, Finch Mine, Gila County, ASDM Collection, Chris Whitney-Smith photo.

CALCITE, CaCO₃, Cyprus Bagdad Mine, Yavapai County, AZ; ASDM Collection, Chris Whitney-Smith photo.

NATIVE COPPER, Cu, Ajo, Pima County, AZ, ASDM Collection, Chris Whitney-Smith photo.

Bottom Left:
WULFENITE, PbMoO₄, 79 Mine, Gila County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

Bottom Right:
WULFENITE, PbMoO₄, CERUSSITE, PbCO₃, DIOPTASE, CuSiO₃ - H₂O, Mammoth-St. Anthony Mine, Pinal County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

QUARTZ var. AMETHYST, SiO₂, Four Peaks Mine, Maricopa County, AZ; ASDM Collection, Chris Whitney-Smith photo.

QUARTZ var. AMETHYST, SiO₂, Washington Camp, Santa Cruz County, AZ, ASDM Collection, Chris Whitney-Smith photo.
By Chris Whitney-Smith.

MALACHITE, \( \text{Cu}_2\text{CO}_3(\text{OH})_2 \), Copper Queen Mine, Bisbee, Cochise County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

WULFENITE, \( \text{PbMoO}_4 \), 79 Mine, Gila County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

By Chris Whitney-Smith.

**WULFENITE, PbMoO₄**

**LEFT:** San Francisco Mine, Cucupe, Sonora, Mexico; **CENTER:** Red Cloud Mine, Glove Mine, San Francisco Mine, Old Yuma Mine; **RIGHT:** Red Cloud Mine, Trigo Mountains, La Paz County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photos.

**WULFENITE, PbMoO₄**, 79 Mine, Gila County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

**WULFENITE, PbMoO₄**, Glove Mine, Santa Cruz County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.

**WULFENITE, PbMoO₄**, Mammoth-St. Anthony Mine, Pinal County, Arizona; Arizona-Sonora Desert Museum Collection, Chris Whitney-Smith photo.
ANNOUNCEMENT: 2017 Arizona China Travel & Tours

Trips to Hubei and Hunan Provinces (China) are being finalized for April and May 2017. Detailed itineraries will follow shortly.

11 Day Hubei Tour

This tour will take you to the Turquoise producing region of Hubei, including Yungai Shan (Cloud Covered Mountain) in Yun County, and Zhushan (Bamboo Mountain). You will visit turquoise markets, factories, and shops. Optional trip to Wudang Mountain, the “Forbidden City in the Sky”, an UNESCO World Heritage site, birth place of Tai Chi, and Taoist holy mountain.

http://www.arizonachinatravel.com/wudang-mountain.html

You will also visit Daye Mine, Huangshi (“Yellowstone”) National Mining Park, and Tonglushan Ancient Copper Mine Ruins, a copper mining and smelting site dating back 3,000 years.

10 Day Hunan Tour

The special May 2017 tour will take you to Hunan Gem & Mineral Show, and to Phoenix Ancient Town (“Fenghuang”), a historical town in Western Hunan with a high concentration of ethnic Miao and Tujia Minorities.

The Intangible Cultural Heritage of Miao is silversmithing. Miao women are known for their exquisite silver ornaments, which are hand-made by men in family workshops. You will visit one of the workshops.

7 Day “Venice of the East” Tour

This is a 7 day/6 night foodie tour that starts in Shanghai, but focuses on Suzhou, a 2,500 year old town known for its spectacular classical gardens and crisscrossing canals (all UNESCO World Heritage Sites).

A day excursion will also take you to Hangzhou, known for its scenic West Lake and the enchanting Buddhist Temple (UNESCO World Heritage Site). This tour has nothing to do with minerals, but can be combined with other tours.

For Questions and/or Information, Please Contact:
Wei Chen at Arizona China Travel & Tours
Phone: (602) 908-7306
Email: info@ArizonaChinaTravel.com
Website: www.ArizonaChinaTravel.com
2017 MSA MEETING SCHEDULE & MAP

MEETING DATE            ROOM NAME            START TIME
April 13th              Padre Serra            7:30 PM
May 11th                Padre Serra            7:30 PM
June 8th                Padre Serra            7:30 PM
July                    NO MEETING
August                  NO MEETING
September 14th          Padre Serra            7:30 PM
October 12th            Padre Serra            7:30 PM
November 9th            Padre Serra            7:30 PM
Saturday, December 16th Padre Serra            5:00 PM

Franciscan Renewal Center
5802 E. Lincoln Drive
Scottsdale, AZ 85253

Arrive 7:00 PM – Meeting at 7:30 PM

*** Verify Room & Date Above ***

MEETING ROOMS LOCATED INSIDE PIPER HALL
MEMBERSHIP CORNER: Dues, Name Badges and More...

MEMBERSHIP CORNER

RENEWING & NEW MEMBERS:
Existing and New Members can renew and Join Us at msaaz.org, under “MSA CLUB” tab, click on “Smiley Face” or “Joining Hands” and pay via PayPal. You may also bring membership application & dues to next meeting and give to Membership Chair, Mr. Ron Ginn or mail to Membership Chair at following address:

MINERALOGICAL SOCIETY OF ARIZONA
MEMBERSHIP CHAIR
691 N. VELERO ST.
CHANDLER, AZ 85225

DUES AND FEES:
Single Adult (18+): $15.00 (Annual: Jan 1 - Dec 31)
Couple: $25.00 (Annual: Jan 1 - Dec 31)
Junior (Under 18): FREE
Legacy Life Members: FREE (After Initial Payment)

MSA Name Badge: $7.50
MSA 75th Pin: $3.00
MSA Bumper Sticker: $2.00

LIFE MEMBERSHIP:
MSA Legacy Life Membership available for purchase based on single adult (18+) for a onetime fee and comes with Name Badge. See Fee Schedule on msaaz.org under “MSA CLUB” tab.

Junior members, Honorary Life, and MSA Milestone Life members are exempt from payment of dues. MSA Legacy Life members are exempt after the initial life payment.

Membership questions can be emailed to Membership Chair, Mr. Ron Ginn at: MSAClub1935@msaaz.org.

WEBSITE: msaaz.org
JUNIORS / FRA: MSAFRA@msaaz.org
FIELD TRIPS: FieldTrips@msaaz.org
PHOTOGRAPHY SPOTLIGHT: Spotlight@msaaz.org
MAIN CONTACT: MSAClub1935@msaaz.org

WEARING MSA NAME BADGES PAYS OFF!!
MSA members wearing their MSA Name Badges to general meeting will be issued a special raffle ticket and be eligible to participate in an additional prize drawing!

If you don’t have an MSA Name Badge, see Membership Chair, Mr. Ron Ginn at meetings or email Ron at MSAClub1935@msaaz.org.

MSA Name badges are $7.50.

(1944) “Rockhounds and Arizona Minerals”; Published by The Whispering Wind Press, Photo Chris Whitney-Smith.
(1958) “Mineralogical Journeys in Arizona”; Published by Fred H. Bitter, Photo Chris Whitney-Smith.

MINERALOGICAL SOCIETY OF ARIZONA
Established 1935
501(c)(3) Non-Profit Organization
EXPLORE <> SHARE <> INSPIRE

PURPOSE: To promote popular interest and education in Earth Science, and related fields (Geology, Mineralogy, Paleontology, and Lapidary arts). To foster a fellowship among individuals interested in Earth Science and enable our members to better identify materials we collect, and how to display or further process these materials. To teach all generations about rocks, minerals, fossils, and what can be done with them, and be collaborative in community of groups with similar interests to our Society.

MEETINGS: 7:30 p.m. Second Thursday of the month, September through June; however, must confirm meeting location, dates and times at MSA website msaaz.org.

CONTACT US: MSAClub1935@msaaz.org

Annual Dues / Rates
Couple - $25.00
Single Adults - $15.00
Junior (Under 18), Honorary and MSA Milestone Life members - FREE

MSA Legacy Life members are FREE (after the initial payment).

For information about purchasing a Life Membership based on your age, please visit our website: msaaz.org and click on “MSA Club” tab.