



# THE ROCKHOUND RECORD

MINERALOGICAL SOCIETY OF ARIZONA

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MAY 2017



***"Official MSA/Arizona Campaign Wulfenite"***  
***Heart Shaped Matrix & Wulfenite Crystal,***  
***made perfect **Wulfenite is Loved** ICON.***

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On March 22, 2017, Wulfenite became Official Mineral of Arizona, so May, we celebrate Wulfenite with a program and as mineral of the month.

Congratulations Joyce & Bob Hendrix on new home in Payson. MSA wishes you much happiness in your new mountain paradise. I am pleased to announce Joyce will remain MSA Social Coordinator At-Large and join us on field trips & meetings.

Since Joyce won't be able to make as many meetings, please give a warm MSA Welcome to Carlie Murphy, our new MSA Social Coordinator. Thank You Carlie for joining MSA Team.

**Our May 8th program** speaker is Dr. Jan Rasmussen about “**Wulfenite in Arizona.**” The program is based on molybdenum research Jan did while at the Arizona Geological Survey and at the Arizona Mining and Mineral Museum. Dr. Rasmussen received the SME Individual GEM award in 2010 for her work as Curator of the Arizona Mining and Mineral Museum in Phoenix.

**Our April 13th program presented by MSA Milestone Life Member & Past MSA President Mr. Bob Jones on “Russia Gem Treasures” was an incredible journey through some of the most interesting and historic locations in Russia. Bob is a great story teller and everyone enjoyed Bob’s animated and interesting delivery. Thank you Bob for sharing your amazing and storied life with Us!**

**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.

**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](mailto: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.

**BIG THANK YOU** to following volunteers at May meeting:

- ◆ Joseph Philpott Jr. & Cody Schwenk for leading FRA Junior program.
- ◆ Maggie Lyons for taking May meeting minutes.
- ◆ Carlie Murphy for set-up & take down of refreshments.
- ◆ David Tibbits for photography.

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

- |                       |                                  |
|-----------------------|----------------------------------|
| ◆ Dr. Carleton Moore  | Tremolite, Utah                  |
| ◆ Joseph Philpott Jr. | Fluorite, Blue Cube Mine         |
| ◆ Jeff & Nicole Craig | Minerals from Blanchard Mine, NM |
| ◆ Sharleen Harvey     | Bag of Opals for FRA Juniors     |





## 2017 Committee Members

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

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

**Secretary:** Dawn Boushelle  
[DawnBoushelle@msaaz.org](mailto:DawnBoushelle@msaaz.org) (602) 403-3031

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

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

**Webmaster:** Ron Ginn  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org) (480) 294-0731

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

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

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

**Social Coordinator:** Joyce Hendrix  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org)

**Social Coord/Refreshments:** Carlie Murphy  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org)

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

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

**Education/Outreach Coord:** Lynne Dyer  
[unodyers@hotmail.com](mailto:unodyers@hotmail.com) (480) 396-2393

**Coalition Field Trips:** Betty Deming  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org) (602) 242-1553

**Print Newsletter Distribution:** David Lay  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org) (480) 600-0299

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

**Statutory Agent:** Terry Dyer  
[MSAClub1935@msaaz.org](mailto: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

## President's Message - Continued.

### 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](http://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](mailto:MSAClub1935@msaaz.org).

**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:

<u>MONTH/DAY</u>	<u>ROOM</u>	<u>SPEAKER / PROGRAM</u>
May 11th	Serra	DR. JAN RASMUSSEN "Wulfenite in Arizona"
June 8th	Serra	MR. MICHAEL FLEEMAN "Prehistoric Oceans"
September 14th	Serra	DR. RAY GRANT "Forty Plus Years of Collecting Minerals in Arizona"
October 12th	Serra	MR. EVAN JONES "How Wulfenite Became Official Arizona Mineral"
November 9th	Serra	MR. CHUCK HOUSER "Got Calcite?"
December 16th	Serra	MSA HOLIDAY JAMBOREE / CHRISTMAS PARTY Election of 2018 Officers & TN Mineral Competition





### WELCOME NEW MEMBER TO MSA FAMILY TREE:

**Bren Moon-McNamar**    Tempe, AZ

### WELCOME NEW MSA LEGACY LIFE MEMBER: RON WITTER



**EXPLORE <> SHARE <> INSPIRE**

**Cheers!**

*Chris Whitney-Smith*



[Mindat.org](http://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](http://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](http://mindat.org) range from novices just becoming aware of minerals to professional mineralogists. All levels of expertise are welcome to participate on [mindat.org](http://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](http://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](http://mindat.org) the structure needed to protect [mindat.org](http://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

##### Photographs

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



## MSA Social Coordinators Message: Refreshment Volunteer List

By Joyce Hendrix & Carlie Murphy.

### 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.*

**January**      A, B or C

**February**      D, E or F

**March**      G, H or I

**April**      J, K or L

**May**      **M, N or O**

**June**      P, Q or R

**September**      S, T or U

**October**      V, W, X, Y or Z

**November**      Open to everyone. Please bring something to share with your friends.

#### **\*\* 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](mailto:MSAClub1935@msaaz.org).



## May 11, 2017 Mineralogical Society of Arizona General Meeting Minutes. By Maggie Lyons & Chris Whitney-Smith

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The meeting was called to order by MSA President Chris Whitney-Smith at 7:30 PM on Thursday, May 11, 2017 at Franciscan Renewal Center, Scottsdale, AZ.

### Chris Whitney-Smith Opening Announcements:

- Visitors and New Members stood and introduced themselves and were welcomed by membership.
- Distinguished Visitor Catie Carter, Curator, Arizona Geological Survey/University of Arizona
- Chris thanked those who volunteered to bring refreshments.
- MSA Name Badges were on front table for those who ordered name badges to pick up.
- Richard Brundige thanked honest MSA Member who returned his missing ring from April meeting.
- Chris presented MSA Legacy Life Member Name Badge, thanked and welcomed RON WITTER to MSA.
- May Mineral of the Month is **WULFENITE**. June Mineral of the Month is **CROCOITE**.
- Chris introduced program speaker Dr. Jan Rasmussen for presentation on “**Wulfenite in Arizona**.” PowerPoint of presentation can found at [janrasmussen.com](http://janrasmussen.com) under research.
- Chris presented Jan Rasmussen with Certificate of Appreciation for her program.
- Chris showed members the Free Table of Awesomeness with materials donated from members.
- Cody Schwenk & Jeff Craig brought in minerals from Piedmont Mine to show members.
- Joey Philpott Jr. spoke about upcoming field trips;
  - Critic Mine, May 21st, Jeff Craig leader.
  - Diamond Point Field Trip, June 10-11, Mike Brown & Cody Schwenk leaders.
  - Joey spoke about New Mexico trip to Blanchard Mine, Kelly Mine, New Mexico Mineral Museum where Cody Schwenk had a donated mineral on exhibit.

### Closing Announcements:

- Chris shared Joyce Hendrix recovering well from recent back surgery.
- Shirley Cote' from Earth Science Museum announced ESM received \$5,000 grant from Staples Foundation based on nomination by Chris Whitney-Smith. The grant will help fund ESM Education & Outreach & Lending Library for Title 1 School Districts.
- Doug Duffy announced he will be offering Lapidary & Silver Smith classes at North Mountain Visitor Center, details to come.
- Joanne Hesterman announced she offers free wirewrapping classes 3rd Saturday monthly at Fuddruckers off I-17 & Dunlap, details to be emailed.
- **Michael Fleeman** to present June program on “**Prehistoric Oceans**.”
- 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 the volunteers who filled in for key members and asked volunteers to come up and claim a mineral prize for volunteering.
- Chris thanked everyone for attending meeting and bringing refreshments.

### The meeting was adjourned at 9:15pm.

- Silent Auction was held & Refreshments served.



## Future Rockhounds of America (FRA) - Calling All Juniors!

Dr. Nathan Scholten, MSA FRA/Juniors Program Chair

### Greetings Juniors!

This month we will change things up a bit. We are going back to basics on geology.

We will have a discussion and quiz on identification and recognition of the basic types of rocks and what we can potentially glean from them in regarding mineral collecting.

See you all Thursday.



*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](mailto: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.*

Check out new **JUNIORS** tab on MSA website; [msaaz.org](http://msaaz.org).

We will start adding content to website in coming months for parents & FRA to download.

Thanks to all Juniors in MSA/AFMS FRA Program and keep on working towards all FRA badges to earn the coveted Rockhound Badge & Rock Star Pin!



**Mineralogical Society of Arizona & Flagg Mineral Foundation Mineral Collections on Exhibit at University of Arizona Mineral Museum.**  
**Chris Whitney-Smith, Curator MSA Mineral Collection.**

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.

⇒ *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

**MSA signs 10 year loan agreement with UA Mineral Museum good through November 30, 2024.**

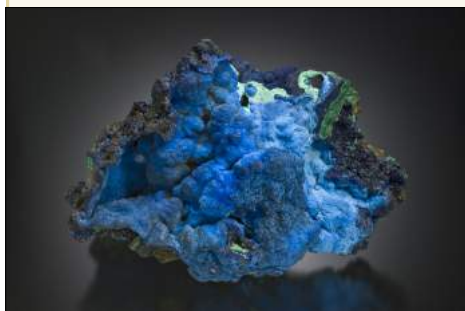
**Visit UAMM and check out the many terrific collections on exhibit.**

**Parking:**

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

**LEARN MORE**

[msaaz.org](http://msaaz.org)  
[flandrau.org](http://flandrau.org)  
[uamineralmuseum.org](http://uamineralmuseum.org)  
[flaggmineralfoundation.org](http://flaggmineralfoundation.org)



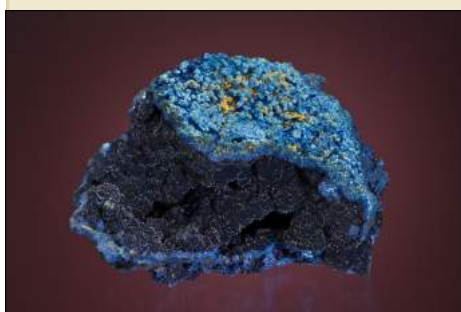
**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



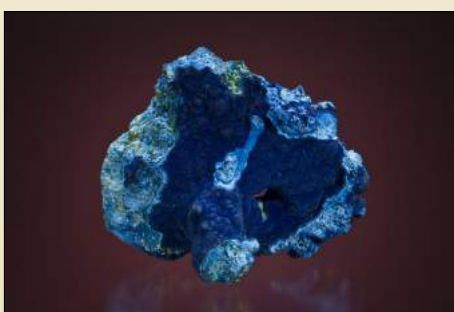
**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , and **MALACHITE**,  $\text{Cu}_2\text{CO}_3(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Chris Whitney-Smith.



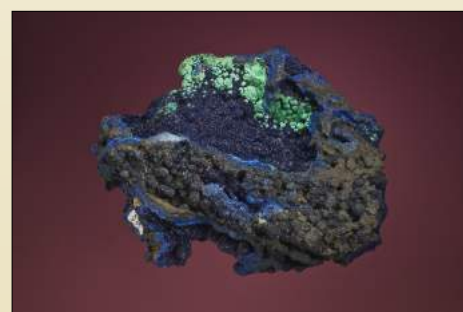
**MALACHITE**,  $\text{Cu}_2\text{CO}_3(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , and **MALACHITE**,  $\text{Cu}_2\text{CO}_3(\text{OH})_2$ , Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.

THE UA MINERAL MUSEUM





## Official Arizona Symbols

By Chris Whitney-Smith.

### TURQUOISE ARIZONA GEMSTONE



**TURQUOISE**,  $\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4(\text{H}_2\text{O})$ , 5.5cm, Morenci Mine, Morenci, Greenlee County, Arizona, USA; Collected 1983, Chris Whitney-Smith Collection & Photo.

### COPPER ARIZONA METAL



**COPPER**, Cu, 12.5cm, 2200 Level, Campbell Mine, Bisbee, Cochise County, Arizona, USA; Les Presmyk Collection, © Jeff Scovil.

### PETRIFIED WOOD ARIZONA FOSSIL



**PETRIFIED WOOD-Araucarioxylon arizonicum**, (QUARTZ var. **Chalcedony**),  $\text{SiO}_2$  Triassic period, 51.44cm, Chinle Formation, Holbrook, Arizona, USA; Michael Fleeman Collection & Photo.

*Araucarioxylon arizonicum* is an extinct species of conifer and is the state fossil of Arizona. The petrified wood of this tree is frequently referred to as "Rainbow wood" because of the large variety of colors some specimens exhibit. The red and yellow are produced by large particulate forms of iron oxide, the yellow being limonite and the red being hematite. The purple hue comes from extremely fine spherules of hematite distributed throughout the quartz matrix.

In the Triassic period (around 250 to 200 million years ago), Arizona was a flat tropical expanse in the northwest corner of the super-continent Pangaea. There, a forest grew in which *Araucarioxylon arizonicum* towered as high as 60 meters (200 ft) and measured more than 60 centimeters (2.0 ft) in diameter.



### WULFENITE ARIZONA MINERAL



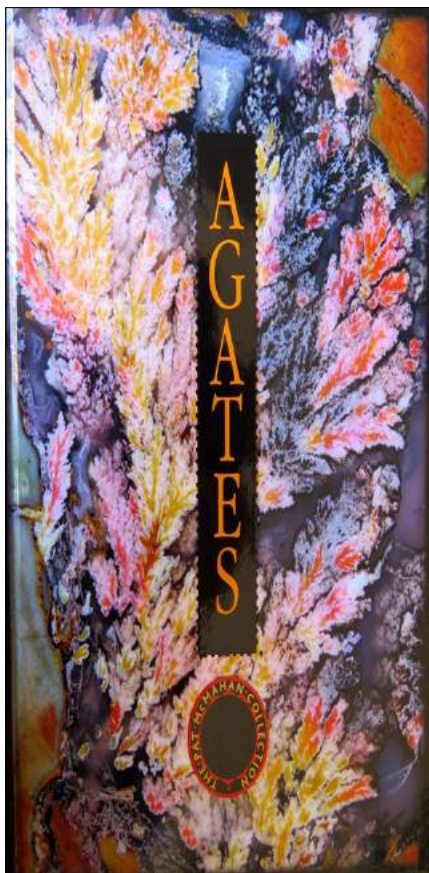
**WULFENITE**,  $\text{PbMoO}_4$ , 7cm, Red Cloud Mine, Trigo Mountains, La Paz County, Arizona, USA; Evan Jones Collection, © Jeff Scovil.

*"Official MSA /Arizona Campaign Wulfenite"  
Heart Shaped Matrix & Wulfenite Crystal,  
made for perfect **Wulfenite is Loved** ICON.*



## Arizona Mineral Collector – Number 198

By Dr. Raymond Grant.



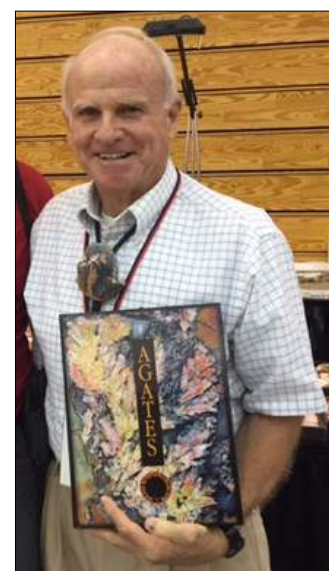
Agates, the Pat McMahan Collection;  
Ray Grant Photo.

At the Minerals of Arizona Symposium this year, Pat McMahan gave a presentation on Arizona agates. He has a new agate book, *Agates, the Pat McMahan Collection*, that has 58 pages of photographs of Arizona agates and many many more photographs of agates from all over the world.

There has never been such complete coverage of Arizona agate localities and most collectors have no idea that Arizona has such spectacular agates, I didn't. Go to Pat's website: [agateswithinclusions.com](http://agateswithinclusions.com) to see many agate photographs and how to order the book. This is great addition to the knowledge of Arizona minerals and gemstones.



One of the pages with Arizona agates from Muggins Mountains; Ray Grant Photo.

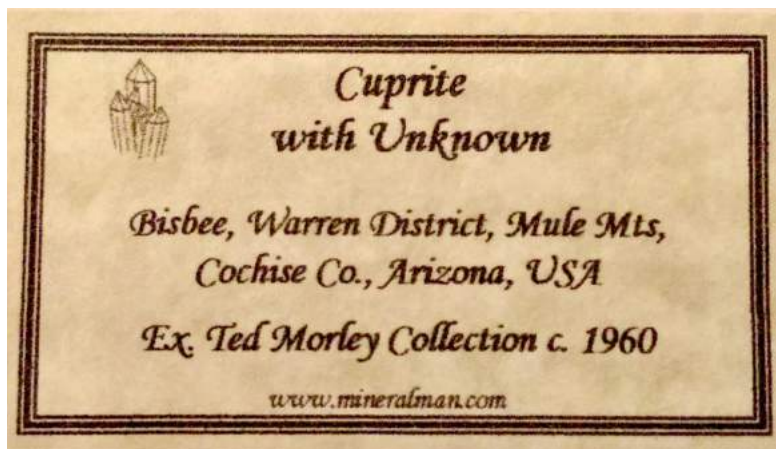


Pat McMahan with his book;  
Ray Grant Photo.



## Mystery Mineral Journey of Discovery

By Chris Whitney-Smith



**CUPRITE** :  $\text{Cu}_2\text{O}$  with **Unknown**, 8cm, Bisbee, Warren District, Mule Mts., Cochise County, Arizona, USA;  
Chris Whitney-Smith Collection, © Jasun McAvoy.

I acquired this specimen from Jasun McAvoy in 2014. Label indicated Cuprite with Unknown from Bisbee. Ex. Ted Morley Collection; circa 1960.

Every great mineral has a great story and this beauty provided an amazing journey of discovery that reached around the world.

My mission was to confirm this specimen's true origin and to learn what the mystery blue/green mineral was.

I sent specimen to Dr. Marcus Origlieri at University of Arizona to analyze in October of 2014. Raman spectroscopy results were high for chalcosiderite & aheylite. Raman  $>\text{Fe}$  suggested mineral was a rare copper-iron secondary phosphate chalcosiderite, member of Turquoise Group (**R060007**).

Based on chemical analysis of Energy Dispersive X-ray Spectroscopy (EDS) and electron beam of Scanning Electron Microscopy (SEM), the mineral has  $\text{Al} > \text{Fe}$  by weight percentage results, so **mineral is a crystalline turquoise**. The reason turquoise was not a top match on the Raman spectrum was due to the sample's unusually high Fe content. Turquoise is a secondary mineral occurring in the potassic alteration zone of hydrothermal porphyry copper deposits and is in Triclinic Crystal System.

Once I learned identity of mystery mineral, I moved on to pursuing specimen's origin. I am fortunate to have several friends who are mineral and in particular Arizona mineral experts. I showed specimen to Les Presmyk & Evan Jones who upon examination, both agreed the matrix was not Bisbee or Arizona, but perhaps Cornwall, England and recommended I show Ian Bruce of Crystal Classics at 2015 Tucson Show.

Prior to Tucson Show, I began corresponding with Mr. Dick Graeme III who lives in Peru, but is Bisbee born and raised and

a well-known collector and expert of Bisbee material. We arranged to meet at Tucson Show and I was excited to meet Mr. Graeme and had high hopes he could solve origin of this specimen.

Before my meeting with Mr. Graeme, I met Ian Bruce at Hotel Tucson City Center aka Inn Suites and asked if specimen could be from Cornwall. Honestly, if specimen wasn't from Bisbee, I would have been thrilled for it to be from Cornwall. Ian examined specimen and exclaimed, it wasn't Cornish or European. I asked if it could be from Australia and Ian advised not Australian ... specimen looks to be from the American Southwest, but he could not nail down a specific location.

So far I had shared specimen with several prominent Arizona and an eminent European mineral expert with no positive origin. My fascination with this specimen grew as it was looking as if I had an amazing specimen from nowhere.

I arranged to visit University of Arizona Mineral Museum and Dr. Bob Downs granted me access to research through several drawers of Bisbee material and I did locate two specimens with similar matrix, so I felt reinvigorated that my specimen could be from Bisbee.





## Mystery Mineral Journey of Discovery - Continued.

By Chris Whitney-Smith

The big day arrived and I was pleased to meet Mr. Dick Graeme III on main floor of 2015 Tucson Gem & Mineral Show®. I produced this specimen and placed it in his hand. He examined it and exclaimed, this specimen is from 1400 Level, Dallas Mine, Bisbee. He added, it was from a one-time pocket and he has similar specimens in his personal collection. I was beyond AMAZED!!! What an amazing bank of knowledge he has.



Chris Whitney-Smith and Dick Graeme III at 2015 Tucson Gem & Mineral Show®; © Chris Whitney-Smith.

Preservation of such knowledge is a concern for all and especially future generations of collectors. Dick has worked with his sons to preserve such knowledge on history & mineralogy of Bisbee and I encourage you to visit [bisbeeminingandminerals.com](http://bisbeeminingandminerals.com) to learn more.

### IN CONCLUSION:

**I LOVED this journey of discovery and the destination was BEYOND AMAZING!!!**

### WHAT A HOBBY!!!

### THANK YOU TO FOLLOWING:

Mr. Jasun McAvoy  
Dr. Bob Downs  
Mr. Les Presmyk  
Mr. Evan Jones  
Mr. Ian Bruce  
Dr. Raymond Grant  
Mr. Bob Jones

### SPECIAL THANK YOU TO:

Dr. Marcus Origlieri for his help and expert analysis of specimen.

### VERY SPECIAL THANK YOU TO:

Mr. Dick Graeme III for being singular soul on Earth with intimate knowledge of Bisbee mine, ore body, stope and pocket that produced this unique specimen.

I hope this story inspires others to take up such challenges. I also hope this information provides historical significance to persons who find they possess a similar very rare specimen.

### MAY 12, 2017 UPDATE FROM MR. DICK GRAEME III:

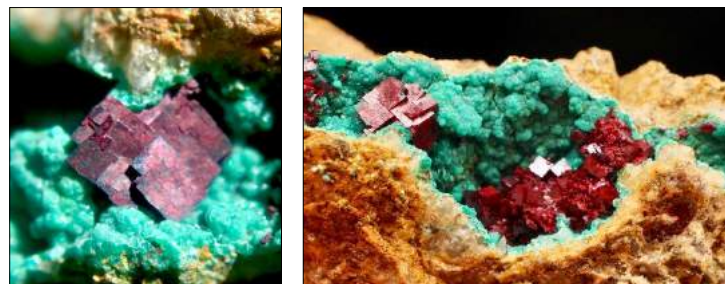
“The abundant iron in ore body made occurrence of chalcosiderite & turquoise possible and **this is a new locality at Bisbee for turquoise**, but totally consistent with the mineralogy of the ore body, which was carbonate poor, but silica rich and close to an intrusive dike.

A bit more info on the ore body, it was 10-D stope and it was a most prolific stope. I collected a number of fine copper pseudos of cuprite and, separately, cuprite specimens from there in 1967. Look at Figure 57 on page 296 of my article in The Mineralogical Record, Bisbee!, ARIZONA III, Volume Twelve, Number Five, September-October 1981 and you will see one of the cuprite's I collected. While not obvious in the photo, the funky intergrowth of the cuprite XLS is identical to your specimen.

Elemental copper was also abundant in this stope, with pieces more than a meter across not uncommon, impossible to collect, but not uncommon. Copper occurred in many forms including abstract curving forms and XLS to 5 cm. I got my fair share with a good bit of hard work.”

Mindat:

<https://www.mindat.org/photo-820646.html>



**CUPRITE** :  $\text{Cu}_2\text{O}$ , **Turquoise** :  $\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4(\text{H}_2\text{O})$ ,  
Left FOV: 1cm, 4mm, 1400 Level, 10-D Stope, Dallas Mine, Bisbee,  
Cochise County, Arizona, USA; Chris Whitney-Smith Collection.  
Left: © Chris Whitney-Smith. Right: © Jasun McAvoy.



**Chris Whitney-Smith**  
**Gemstone & Mineral Collection**

**CUPRITE** :  $\text{Cu}_2\text{O}$ ,  
**Turquoise** :  $\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4(\text{H}_2\text{O})$   
1400 Level, 10-D Stope, Dallas Mine, Bisbee,  
Cochise County, Arizona, USA.

**Page 13 Editors Corner**  
**Chris Whitney-Smith, Editor**



**RICE MUSEUM  
UPCOMING EVENTS**

May 6, 2017	First Annual Benefit Dinner
May 27, 2017	Meteorite and Family Fun Day
August 5-6, 2017	Summer Fest
August 12, 2017	NW Fossil Fest by NARG

**The Rice Northwest Museum of Rocks and Minerals**  
26385 NW Groveland Dr., Hillsboro, OR 97124  
Phone: (503) 647-2418  
<https://ricenorthwestmuseum.org/>

To learn more about origins of Alma Rose Rhodochrosite  
and Sweet Home Mine, please visit following:  
<https://www.collectorsedge.com/t-sweethome1.aspx>

May 1, 2017

Chris,

I see you now have an ISSN number!!  
Fabulous! Congratulations!

Now each issue can be found by anyone searching for information published in your newsletter, and know it even exists.

Regards,

Alex Schauss, PhD  
Legacy Life Member, Mineralogical Society of Arizona  
Research Associate, Department of Geosciences,  
University of Arizona

**THE ROCKHOUND RECORD**

Please send inquires regarding Rockhound Record to:

**Mineralogical Society of Arizona, Editor**  
**Chris Whitney-Smith**  
P.O. BOX 54307  
PHOENIX, AZ 85078

[ask.chrisws@msaaz.org](mailto:ask.chrisws@msaaz.org)

(602) 405-1502

**\* Deadline to submit RR bulletin content is 15th each Month \***



**THE ROCKHOUND RECORD WINS 1ST PLACE!**

Mineralogical Society of Arizona's The Rockhound Record and Chris Whitney-Smith win **1st place for New Editor** at 2017 Rocky Mountain Federation of Mineralogical Societies Convention held in Albuquerque, New Mexico.



Chris Whitney-Smith, Joseph Philpott Jr., Cody Schwenk & Nathan Scholten all a little amazed with awards; Steve Kaminski photo.



## MSA April 13th Meeting Highlights: FRA Junior Program.



Dr. Nathan Scholten discussing Lapidary arts in FRA Junior Program; Chris Whitney-Smith photo.



Lapidary material Nathan & FRA Juniors brought for Junior Program; Chris Whitney-Smith photo.



MSA member Steve Kaminski invited Scouts to participate in MSA/FRA Junior Program and meeting; Steve Kaminski photo.



MSA Hospitality Chair Bob Holm calling all Juniors to select a mineral prize; Steve Kaminski photos.





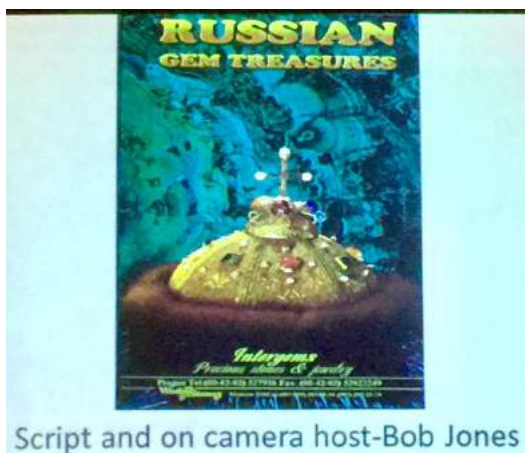
## MSA April 13th Meeting Highlights. Chris Whitney-Smith.



Chris Whitney-Smith introducing Bob Jones who talked about his two trips to Russia; Steve Kaminski photo.



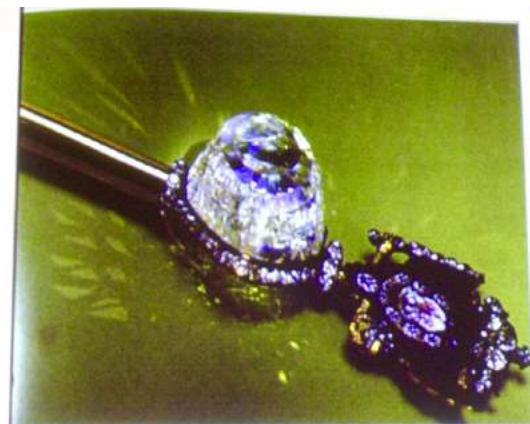
Bob Jones past MSA President preamble to his Russia program; Steve Kaminski photo.



The Great Bob Jones, always very animated and a great story teller on his adventures in Russia; Steve Kaminski photos.



Packed house for Bob Jones as he makes his way around the room engaging all in attendance; Steve Kaminski photo.



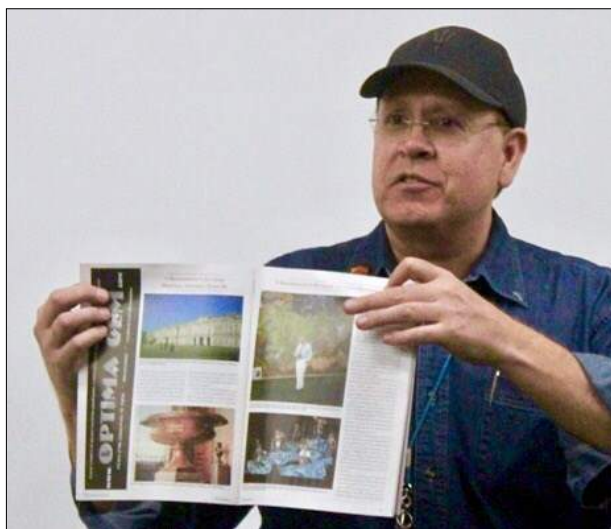
Orloff diamond-200 ct. Czar Scepter

Slide from Bob's program of Orloff diamond given to Catherine the Great; Steve Kaminski photo.



## MSA April 13th Meeting Highlights - Continued.

Chris Whitney-Smith.



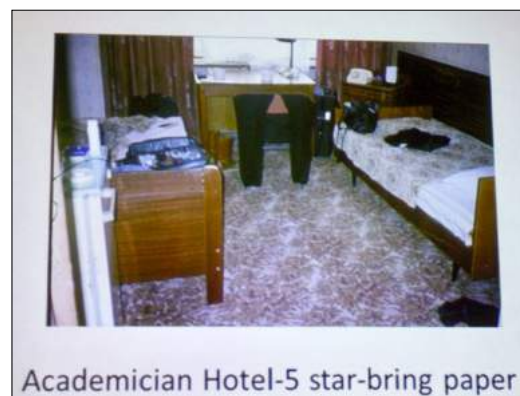
Chris Whitney-Smith showing members Rock&Gem, November 2016, Vol. 46, Issue 11, pages 52-53 featuring "Part III, A Rockhound's 80-Year Mineral Odyssey," featuring Bob Jones and his trips to Russia; Steve Kaminski photo.



Bob Jones illustrating the intricate gemstone inlay over entrance to a Russian cathedral; Steve Kaminski photo.



Bob Jones showing map of Russia at geological museum of Saint-Petersburg made of 45 000 gemstones; Steve Kaminski photo.



Bob's 5-Star accommodations at Academician Hotel in Russia; Steve Kaminski photo.



CHALCANTHITE  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  and ATACAMITE  $\text{Cu}_2\text{Cl}(\text{OH})_3$  after MOUSE, Ural Mountains, Russia; Fersman Mineralogical Museum, Russia; © spookygeology.com.



## MSA April 13th Meeting Highlights - Continued.

Chris Whitney-Smith.



Chris Whitney-Smith presenting Bob Jones Mineralogical Society of Arizona Certificate of Appreciation after Bob's terrific program on Russia; Steve Kaminski photo.



Packed house and several junior members and visitors anxious to see what MSA Name Badge Raffle Ticket winner wins.; Steve Kaminski photo.



MSA Vice President & Field Trip Coordinator Joseph Philpott Jr. reviewing upcoming Field Trips; Steve Kaminski photo.



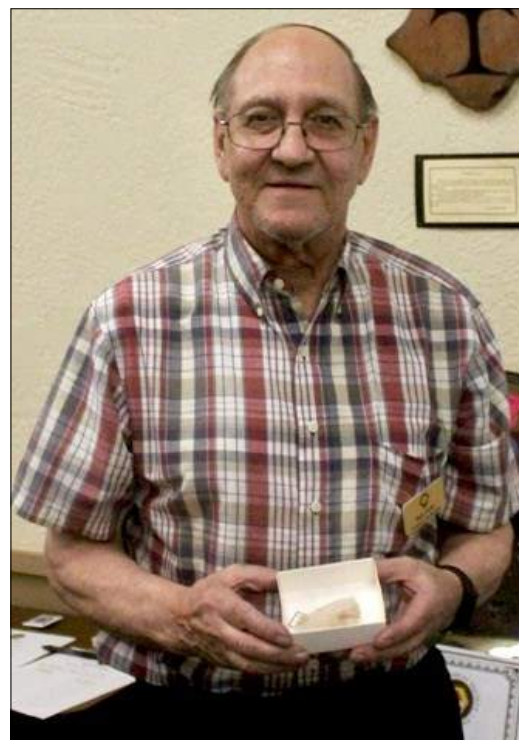
**Pro-Trim** is a new tool to help trim your rocks and minerals; Steve Kaminski photo.

Interested in purchasing a Pro-Trim, Contact Joseph Philpott Jr. by email at: [Joseph\\_13\\_13@yahoo.com](mailto:Joseph_13_13@yahoo.com).

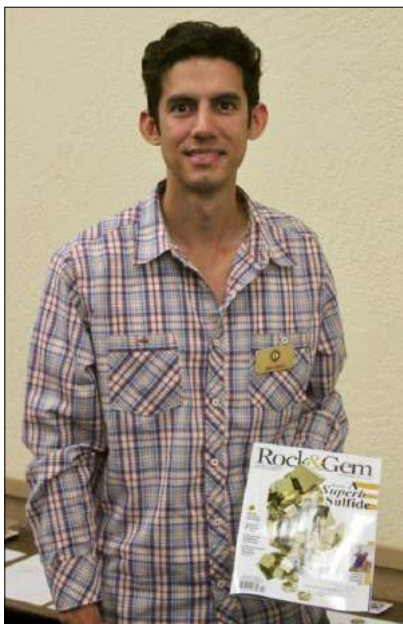


## MSA April 13th Meeting Highlights - Continued.

Chris Whitney-Smith.



Bob Holm wins MSA Name Badge Raffle and opportunity to play Prize Drop Game to win a mineral prize; Steve Kaminski photos.



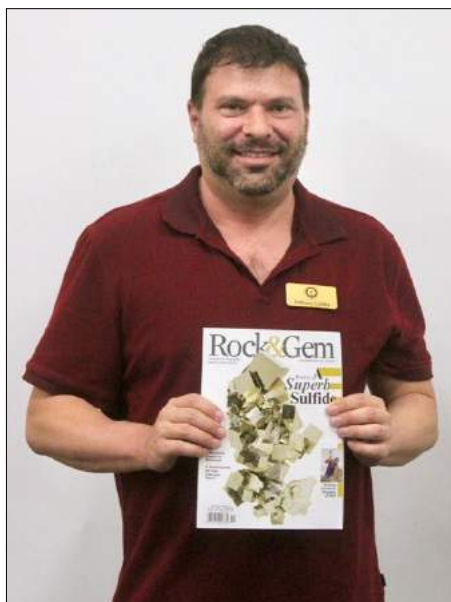
John Orozco MSA Name Badge Raffle ticket called to play for opportunity to play Prize Drop Game and win Rock&Gem November 2016 issue with Bob Jones Russian Odyssey; Steve Kaminski photo.



Sharon Brundige plays for Richard Brundige who's ticket was called for MSA Name Badge Raffle; Steve Kaminski photos.



**MSA April 13th Meeting Highlights - Continued.**  
**Chris Whitney-Smith.**



Lucky winners of MSA Name Badge Raffle; MSA Member, Anthony Cuttitta and Steve Baker; Steve Kaminski photos.



More lucky winners of MSA Name Badge Raffle; John Tibbits, Jeff Craig, and Joe Nychay; Steve Kaminski photos.



## 2017 Rocky Mountain Federation of Mineralogical Societies Convention Awards. Chris Whitney-Smith.



I was pleased to submit multiple MSA member articles from 2016 The Rockhound Records for competition at **2017 Rocky Mountain Federation of Mineralogical Societies Convention in Albuquerque, New Mexico**. **MSA did quite well winning seven awards; Chris Whitney-Smith** 1st place for New Editor for The Rockhound Record newsletter and 2nd place for Photo Collage Supportive Photos Article for “2016 Westward Look Show February 6, 2016: Collectors Day: Evan Jones,” **Joseph Philpott Jr.** 3rd place for Adult Articles Club Activities for “MSA December 2016 Field Trip Report: Red Cloud.” **Cody Schwenk** 1st place for Adult Articles Collecting Localities for “MSA September 3, 2016 Field Trip Report: St. David,” **Nathan Scholten** 3rd place for Photo Collage Supportive Photos for “The Micro Minute No. 3 “The Search for Micro Mineral Perfection: Five Dollar Field Trips,” **Ray Grant** 1st place for Advanced Adult Article Science for “April 2016 Mineral of the Month Mononite,” and 1st place for Photo Collage Supportive Photos for “October 2016 Mineral of the Month Cuprite.” Steve Kaminski Photo.



**RMFMS Awards Left to Right: Chris Whitney-Smith, Joseph Philpott Jr., Cody Schwenk & Nathan Scholten; Chris Whitney-Smith photos.**





## May 11, 2017 Program: "Wulfenite in Arizona."

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*Presented by Jan Rasmussen, PhD., Registered Geologist.*

Our May program speaker is Dr. Jan Rasmussen about "*Wulfenite in Arizona.*" The program is based on molybdenum research Jan did while at the Arizona Geological Survey and at the Arizona Mining and Mineral Museum. If you want to read the publications discussing this research, they are on Jan's website: [janrasmussen.com](http://janrasmussen.com).

Jan worked for the University of Arizona as Associate Curator of the Mineral Museum, Arizona Geological Survey, Woodward-Clyde Federal Services, MagmaChem Exploration and various other mining and oil companies. She has taught Physical, Historical, and Environmental Geology as part time adjunct faculty for the University of Arizona, Austin Community College, Cochise College, and Pima Community College.

Dr. Rasmussen received the SME Individual GEM award in 2010 for her work as Curator of the Arizona Mining and Mineral Museum in Phoenix. Jan has co-authored 14 books or open-file reports on Arizona geology and resources, as well as numerous articles, most of which are available as pdf files on her website [janrasmussen.com/research](http://janrasmussen.com/research) and recently started a photographic website [MiningMineralMuseum.com](http://MiningMineralMuseum.com) about the Arizona Mining and Mineral Museum as it was in 2010.



**Jan Rasmussen;** Photo courtesy Jan Rasmussen.



**WULFENITE**,  $\text{PbMoO}_4$ , 4mm, Gleeson, Dragoon Mts., Cochise County, Arizona, USA; © Oliver Dziallas Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2.6cm, Red Cloud Mine, Trigo Mts., La Paz County, Arizona, USA; © Dan & Diana Weinrich Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , 2cm, 79 Mine, Dripping Spring Mts., Gila County, Arizona, USA; © Rock Currier Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 15cm, Rowley Mine, Painted Rock Mts., Maricopa County, Arizona, USA; Evan Jones Collection, © Chris Whitney-Smith.

## Mineral of the Month - WULFENITE

By Dr. Raymond Grant.

Mineral of the Month for May is Wulfenite.

On March 22, 2017, Governor Doug Ducey signed House Bill 2092 making Wulfenite Arizona's Official State Mineral. Dr. Alex Schauss led this effort with help from Chris Whitney-Smith and all the collectors who called, emailed and wrote to their legislators and the Governor.

Wulfenite can occur in a variety of colors from colorless to brown, yellow, orange, red, and rarely green, blue, or black. It is in the tetragonal crystal system and most often is found as square flat crystals or pyramidal crystals. It is lead molybdate in composition and found in galena deposits where oxidation of the galena by ground water has occurred.

Wulfenite was found in Arizona from the early days of mining. W.P. Blake in his Annotated Catalogue, 1866, lists wulfenite (molybdate of lead) in good crystals from an unnamed mine in the Weaver District (There were two Weaver Districts listed for the late 1800s, one by Rich Hill and one south of Quartzsite, that was probably the area where the wulfenite was found.) Blake in 1881 described wulfenite from Castle Dome District, Red Cloud Mine, Oakland Boys Claim, and other points in the Silver District. Benjamin Silliman also in 1881 described wulfenite crystals of rare beauty found in the Red Cloud Mine. By the early 1900s there were many wulfenite localities known in Arizona.



**WULFENITE**,  $\text{PbMoO}_4$ , **MIMETITE**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2.5cm,  
San Francisco Mine, Cerro Prieto, Sonora, Mexico;  
Alex Schauss Collection, © Mark Mauth.

*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\**



**WULFENITE**,  $\text{PbMoO}_4$ , 2cm, Rowley Mine, Painted Rock Mts., Maricopa County, Arizona, USA; © Chris Whitney-Smith Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , 1.7cm, Silver Bell Mine, Silver Bell Mts., Pima County, Arizona, USA; © Chris Whitney-Smith Collection & Photo.





## Mineral of the Month - WULFENITE - Continued.

By Dr. Raymond Grant.



**WULFENITE**,  $\text{PbMoO}_4$ , 2.1cm, Sierra de los Lamentos, Mun. de Ahumada, Chihuahua, Mexico; Spirifer Minerals, © Jeff Scovil.

At present Randel Heath and I have a list of about 273 wulfenite localities for Arizona (Mindat.org has about 250 wulfenite localities listed for Arizona). We think that when we are done compiling all the data, it is possible there will be more than 300 localities.

Wulfenite has been found in every county in Arizona with the exception of Apache and Navajo Counties. The following is a list of Arizona counties with the number of wulfenite localities that we have for each: Coconino – 1, Cochise – 37, Gila – 24, Graham – 7, Greenlee – 3, La Paz – 28, Maricopa – 12, Mohave – 37, Pima – 42, Pinal – 31, Santa Cruz – 21, Yavapai – 12, and Yuma – 18.

Many of these localities are world famous (Red Cloud Mine, Glove Mine, Defiance Mine, Mammoth-St. Anthony Mine, Tombstone, Rowley Mine, Old Yuma Mine, and 79 Mine) and well known to collectors. Many of the others have produced only micro-crystals and some are not well documented and need further investigation.

Why does Arizona have so much wulfenite including the best in the world? There are several reasons for that. First, you need lead and molybdenum to make the chemical formula of lead molybdate ( $\text{PbMoO}_4$ ). There are many lead deposits in Arizona and molybdenum is also fairly abundant. Second you need to have the right conditions for the formation of the wulfenite. This is complex and depends on ground water availability, acidity of the water, oxidation conditions, and other factors. Conditions over much of Arizona must have been good for the formation of wulfenite.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 10.8cm, San Francisco Mine, Cucurpe, Sonora, Mexico; Irv Brown Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2.5cm, Rowley Mine, Painted Rock Mts., Maricopa County, Arizona, USA; Alex Schauss Collection, © Jeff Scovil.



## Mineral of the Month - WULFENITE - Continued.

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By Dr. Raymond Grant.



**WULFENITE**,  $\text{PbMoO}_4$ , 1cm, 79 Mine, Dripping Spring Mts., Gila County, Arizona, USA; Winston Wutkee Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **MIMETITE**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2.5cm, San Francisco Mine, Cerro Prieto, Sonora, Mexico; C & K Graeber Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , 6cm, San Francisco Mine, Cucurpe, Sonora, Mexico; Tony Potucek Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 6.5cm, San Francisco Mine, Cerro Prieto, Sonora, Mexico; Scott Werschky Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2.2cm, Rowley Mine, Painted Rock Mts., Maricopa County, Arizona; Paul Geffner Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 6.2cm, San Francisco Mine, Cerro Prieto, Sonora, Mexico; Conan Barker Collection, © Jeff Scovil.





## Mineral of the Month - WULFENITE - Continued.

By Dr. Raymond Grant.



**WULFENITE**,  $\text{PbMoO}_4$ , 11.7cm, Defiance Mine, Gleeson, Cochise County, Arizona, USA; Bruce Carter Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**,  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 7.8cm, Ojuela Mine, Mapimi, Durango, Mexico; Steve Knox Collection, © Jeff Scovil.



**WULFENITE**,  $\text{PbMoO}_4$ , 10cm, Red Cloud Mine, Trigo Mts., La Paz County, Arizona, USA; Rob Lavinsky Collection, On Exhibit UofA Mineral Museum, © Chris Whitney-Smith.



**WULFENITE**,  $\text{PbMoO}_4$ , 7.5cm, Whim Creek Mine, Roebourne Shire, Western Australia, Australia; Pinal Geology & Mineral Museum Collection, Ex. John Weber Collection, © Chris Whitney-Smith.



**WULFENITE**,  $\text{PbMoO}_4$ , FOV 3cm, Whim Creek Copper Mine, Whim Creek, Roebourne Shire, Pilbara Region, Western Australia, Australia; © R. Tanaka Collection & Photo.



## The Micro Minute – The Search for Mineral Perfection.

Volume 2, Issue 4.

By Nathan Scholten, D.V.M.

### Micro Guess

Make your best guess below.



Answer for last month:

Bariopharmacosiderite,

$\text{Ba}_{0.5}\text{Fe}_4^{3+}(\text{AsO}_4)_3(\text{OH})_4 \cdot 5\text{H}_2\text{O}$ , Germany.

### Micro World

Micros from around the globe.



## Spring has Sprung!

April & May is here, the beginning of spring. Flowers are blooming, bees buzzing...you get the idea. The days are mild(ish), and the weather is getting perfect for Rockhounding. To celebrate Spring this month we will focus on Love. What is love you may ask? **“Wulfenite is Love!”** If you are not already aware, Wulfenite is the official mineral of Arizona.

So to foster the feeling of love, here are some micro photos of some of the most sought after mineral specimens in Arizona.



**WULFENITE,  $\text{PbMoO}_4$ , Quartz (druse coating),  $\text{SiO}_2$ , FOV: 4mm,**  
Finch Mine (Barking Spider Mine), Dripping Spring Mts., Gila County, Arizona, USA;  
© Nathan Scholten Collection & Photo.

Contact [nathanscholtendvm@gmail.com](mailto:nathanscholtendvm@gmail.com) for reproduction permission.





## The Micro Minute – Continued.

By Nathan Scholten, D.V.M.

### Tips n Tools

Every rock hound and especially Micro Mounters need to trim their rough now and then. Until now the selection of table top units was fairly limited and expensive.

For right around \$500 you can purchase a Zuber. The problem I have see with this unit is the aluminum guide arm. This armature is easily bent and damaged; however, now you have another option the Pro-Trim for \$200 and this unit will last your lifetime and your grandchildren as well.

Interested in purchasing a Pro-Trim, Contact Joseph Philpott Jr. by email at: [Joseph\\_13\\_13@yahoo.com](mailto:Joseph_13_13@yahoo.com)



**Pro-Trim;**  
© Nathan Scholten.



**WULFENITE**,  $\text{PbMoO}_4$ , FOV: 5mm, Total Wreck Mine,  
Pima County, Arizona, USA; © Nathan Scholten Collection & Photos.



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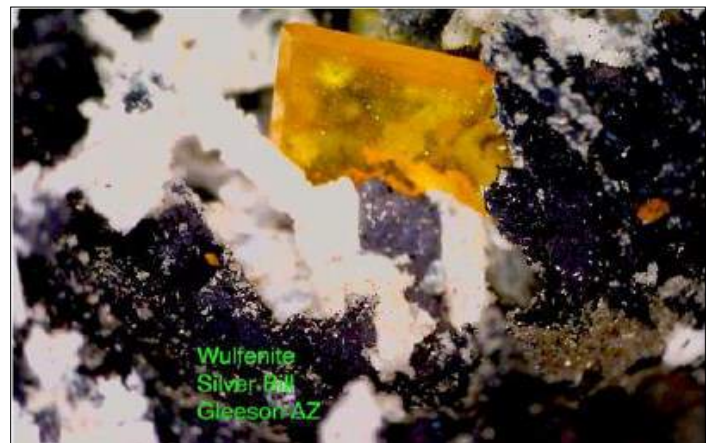


## The Micro Minute – Continued.

By Nathan Scholten, D.V.M.



**WULFENITE**,  $\text{PbMoO}_4$ , **Quartz (druse coating)**,  $\text{SiO}_2$ , **FOV: 3mm & 2mm**, Finch Mine (Barking Spider Mine), Dripping Spring Mts., Gila County, Arizona, USA; © Nathan Scholten Collection & Photos.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 1mm**, Silver Bill Mine, Gleeson, Dragoon Mts., Cochise County, Arizona, USA;  
© Nathan Scholten Collection & Photos.



**WULFENITE**,  $\text{PbMoO}_4$ , **: 1mm**, Childs-Adwinkle Mine, Copper Creek, Galiuro Mts., Pinal County, Arizona, USA;  
© Nathan Scholten Collection & Photos.





## The Micro Minute – Continued.

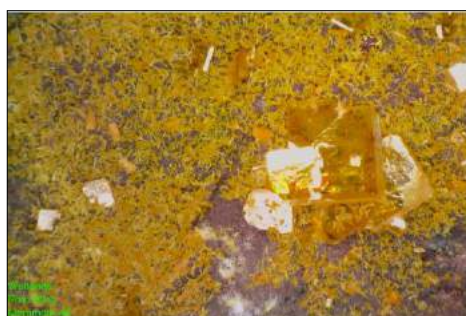
By Nathan Scholten, D.V.M.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 4mm**,  
Black Glory Diggings, Wickenburg Mts.,  
Yavapai County, Arizona, USA;  
© Nathan Scholten Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 1mm & 2mm**,  
Padre Kino Mine, Trigo Mts., La Paz County, Arizona, USA;  
© Nathan Scholten Collection & Photos.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 1cm**,  
Ford Mine, Mammoth, Mammoth District,  
Pinal County, Arizona, USA;  
© Nathan Scholten Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 4mm**,  
Hull Mine, Castle Dome Mts.,  
Yuma County, Arizona, USA;  
© Nathan Scholten Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **FOV: 4mm**,  
Puzzler Mine, Castle Dome Mts.,  
Yuma County, Arizona, USA;  
© Nathan Scholten Collection & Photo.



**WULFENITE**,  $\text{PbMoO}_4$ , **Mimetite**  $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ , 2cm, Rowley Mine, Painted Rock Mts.,  
Maricopa County, Arizona; © Nathan Scholten Collection & Photos.

## Pinal Gem & Mineral Society and Pinal Geology & Mineral Museum Page 30

The Pinal Gem and Mineral Society meets monthly on the **third Wednesday at 7pm** at the Artisan Village of Coolidge.

**Next Meeting: Wednesday, May 17, 2017 at 7 PM**

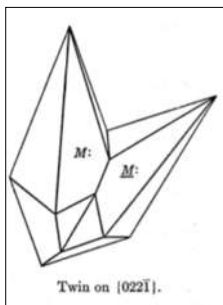
**"Gold, Silver, and Copper in Pinal County."**

**Program By Dr. Ray Grant.**



### NEW DONATION:

A new very large calcite specimen is on display in the Museum it is from near Dinamita, Durango, Mexico and was donated by Dana Slaughter. What is unusual about the specimen is that it is composed of twin crystals. Twinning in minerals follows certain rules and can only happen in certain crystallographic directions versus the random intergrowth of crystals.



**CALCITE**,  $\text{CaCO}_3$ , near Dinamita, Durango, Mexico, Pinal Geology & Mineral Museum Collection; Donated by Dana Slaughter, Photos & Drawing provided by Ray Grant.

**Pinal Gem & Mineral Society**  
Located in Artisan Village of Coolidge  
351 N. Arizona Boulevard  
Coolidge, AZ 85128

**Phone:** (520) 251-5419

**Email:** [in-fo@PinalGemandMineralSociety.org](mailto:info@PinalGemandMineralSociety.org)

**Web:** [pinalgemandmineralsociety.org](http://pinalgemandmineralsociety.org)

**Pinal Geology & Mineral Museum**  
Located in Artisan Village of Coolidge  
351 N. Arizona Boulevard  
Coolidge, AZ 85128

**Phone:** (480) 655-5760

**Email:** [info@PinalGeologyMuseum.org](mailto:info@PinalGeologyMuseum.org)

**Web:** [pinalgeologymuseum.org](http://pinalgeologymuseum.org)

**Curator:** Dr. Ray Grant

Looking for some donations big and small. We have given away hundreds of apache tears to kids and are almost out so if you have some you can donate please do.

We are working on a rock dig for kids next to the building. They will be able to collect some specimens to take home. We will do desert landscaping around the dig area and I would like to add some mining memorabilia. If you have or know someone who has ore carts, ore buckets or other appropriate items that they are willing to donate (tax deduction) please contact me [raycyn@cox.net](mailto:raycyn@cox.net).

**MARK YOUR 2018 CALENDAR: 3rd Annual Pinal Gem & Mineral Show & Touch Outer Space Event**, Coolidge, AZ, hosted by Pinal Gem & Mineral Museum and sponsored by Artisan Village of Coolidge and Mineralogical Society of Arizona is **March 10, 2018**.

<https://www.mindat.org/sh/1650/>

### New Museum Exhibit



**Wulfenite,  $\text{PbMoO}_4$ , Arizona State Mineral Exhibit;** Ray Grant photo.



**Pinal Gem & Mineral Society**



## SB1415 NEWS: Arizona Geological Survey and Arizona Mining, Mineral and Natural Resources Education (AMMNRE) Museum

By Michael Conway

G'day Friends of Arizona Mining, Mineral and Natural Resources Museum:

Good news to report regarding the fate of Arizona Geological Survey (AZGS).

On Friday, May 5th, Arizona Gov. Doug Ducey signed the FY2018 budget into law. It includes \$941,000 in annual funding for AZGS and assures that we will be part of the base budget through 2020. For more on this and the challenges that lie ahead, please see Arizona State Geologist's Phil Pearthree's short note: <http://arizonageology.blogspot.com/>

I'm delighted to report that we are back in business with sufficient state funding to perform our state-mandated services, including: geologic mapping, economic geology assessment, natural hazard assessment, and outreach and education, among other things.

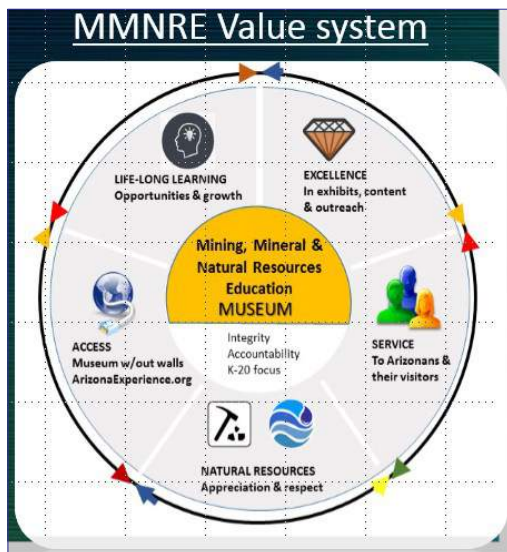
Please feel free to alert your community and colleagues.

Thanks for your help, encouragement and support over the past several years.

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](mailto:fmconway@email.arizona.edu)  
<http://www.azgs.az.gov>  
[repository.azgs.az.gov](http://repository.azgs.az.gov)



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>



## Flagg Mineral Foundation and Earth Science Museum



MSA Board Member and Flagg Mineral Foundation Secretary **Mike Williams** received the **2017 A.L. Flagg Distinguished Service Award** at Minerals of Arizona Symposium; Shirley Coté Photo.

### MARK YOUR CALENDARS:

#### **46th Annual 2018 Flagg Gem & Mineral Show (Friday-Sunday, January 5th-7th, 2018).**

Mesa Community College  
1833 W Southern Ave  
Mesa, AZ 85202

<https://www.mindat.org/sh/1536/>

Flagg Show is an informal tailgate format offering a low cost venue for field collectors and local mineral/lapidary clubs to share their latest finds with children, teachers, Rockhounds, and the general public. One goal of this show is to increase the interest of children in rocks, minerals, geology, and science. Children can become interested in science through minerals, crystals, and fossils, and our hope is to encourage their interest. Several groups will have free samples for children and for teachers and there are free activities as well.



#### **26th Annual 2018 Minerals of Arizona Symposium (Friday-Sunday, April 6th-8th, 2018).**

Show Location: Phoenix (To Be Announced)

<https://www.mindat.org/sh/1539/>

Learn More at: [flaggmineralfoundation.org](http://flaggmineralfoundation.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.



2million  
&change

### **Earth Science Museum (ESM) AWARDED GRANT:**

Based on nomination from Staples associate Chris Whitney-Smith, Staples Foundation awarded \$5,000 grant to Earth Science Museum to help fund ESM initiatives with Arizona Title 1 Schools.

Grant will help ESM Vice-President of Education and Outreach Mardy Zimmermann create a Lending Library of ESM classroom kits of hands-on rocks, minerals, and fossils in sets that can accommodate the 3rd and 7th grade students in this large and needy district. The Lending Library approach is an exciting solution to serving our most needy districts. The Roosevelt District has 9,500 students; with 87 percent qualifying for free lunch.

### **Our Mission**

The mission of our outreach education program is to present earth science information, with hands-on instruction, materials and activities to Arizona students -for free!

### **Our Values**

We offer exciting and interactive learning opportunities for K-12 students, teachers, college students, and life-long learners-providing them new ways to encounter compelling narratives on Earth science.

Our hands-on outreach programs are consistent with STEM education and can be customized for any grade level.

Our free outreach programs meet and exceed state earth science standards.



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)





## Rocky Mountain Federation of Mineralogical Societies

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*Mineralogical Society of Arizona (MSA) members in good standing are members by affiliation of Rocky Mountain Federation of Mineralogical Societies (RMFMS). RMFMS 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 & RMFMS.*



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](mailto: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!**

### Mineralogical Society of Arizona won several awards at **2017 RMFMS CONVENTION & SHOW**

March 17, 18, 19, 2017.

Convention Show hosted by

Albuquerque Gem & Mineral Club, Albuquerque, NM.

- **Chris Whitney-Smith** won 1st place for **New Editor for The Rockhound Record** newsletter.
- **Chris Whitney-Smith** won 2nd place for Photo Collage Supportive Photos Article for **"2016 Westward Look Show February 6, 2016: Collectors Day: Evan Jones."**
- **Ray Grant** won 1st place for Advanced Adult Article Science for **"April 2016 Mineral of the Month Bournonite"**
- **Ray Grant** won 1st place for Photo Collage Supportive Photos for **"October 2016 Mineral of the Month Cuprite"**
- **Cody Schwenk** won 1st place for Adult Articles Collecting Localities for **"MSA September 3, 2016 Field Trip Report: St. David"**
- **Joseph Philpott Jr.** won 3rd place for Adult Articles Club Activities for **"MSA December 2016 Field Trip Report: Red Cloud"**
- **Nathan Scholten** won 3rd place for Photo Collage Supportive Photos for **"The Micro Minute No. 3 "The Search for Micro Mineral Perfection: Five Dollar Field Trips"**

#### 2017 RMFMS Convention Certificates of Participation to:

- **Phil Richardson**
- **Don Boushelle**
- **Dan Janko**

Rocky Mountain Federation of Mineralogical Societies  
[RMFMS.org](http://RMFMS.org)



## 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.



**Ron Carman**  
AFMS President

American Federation of Mineralogical Societies

[AMFED.org](http://AMFED.org)



## MAY MSA FIELD TRIP: Fat Jack Mine May 6th-7th, 2017



# MSA FIELD TRIP

Fat Jack Mine  
May 6th-7th, 2017  
(Overnight Optional, see below)



Chris Whitney-Smith Photo



Elmer Lackner Photo



Michael Roark's Photo



Don Boushelle Photo

### TRIP INFO

The overnight portion of this trip is **OPTIONAL**. You are more than welcome to come Saturday for the day. Anyone who wishes may camp out with us overnight and continue to collect on Sunday. Please note, we will not be meeting anyone Sunday morning at the meetup spot. There is a great campground near the mine that can accommodate everyone who stays. There are no facilities near the campground, so please come prepared with any food, water, or anything else you may need for however long you will stay.

Most of the road is passable with a mid to high clearance 2wd (long (32 miles), bumpy dirt road). The last couple of miles to the mine requires a high clearance 4wd(difficulty high). If you do not have a high clearance 4wd, you will be able to park your vehicle and ride with someone else the rest of the way. Please arrange ride

with other members before trip. (Dawn and I will have room for 2, please contact before the trip). Email or call with Questions.

**FEE: \$15 for Members**

### TOOLS

Rock Hammer, a Rake, a Small Shovel, Screen, Gloves, Eye Protection

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

### LEADER INFO

Name: Dawn & Don Boushelle  
Phone: (602) 403-3031  
Vehicle: White Ford P.U.

### MEET-UP INFO

**Date:** Saturday, May 6th, 2017

**Time:** 8:00 am

**Depart:** 8:20 am

**Phone:** (602) 403-3031

**Email:** fieldtrips@msaaz.org

### MEET LOCATION:

**I-17 and Bumble Bee Road**

### DRIVING DIRECTIONS:

Take I-17 north 49 miles from Phoenix, AZ  
Exit I-17 at Bumble Bee Road (Exit 248)  
Take Bumble Bee .4 miles to an asphalt staging area

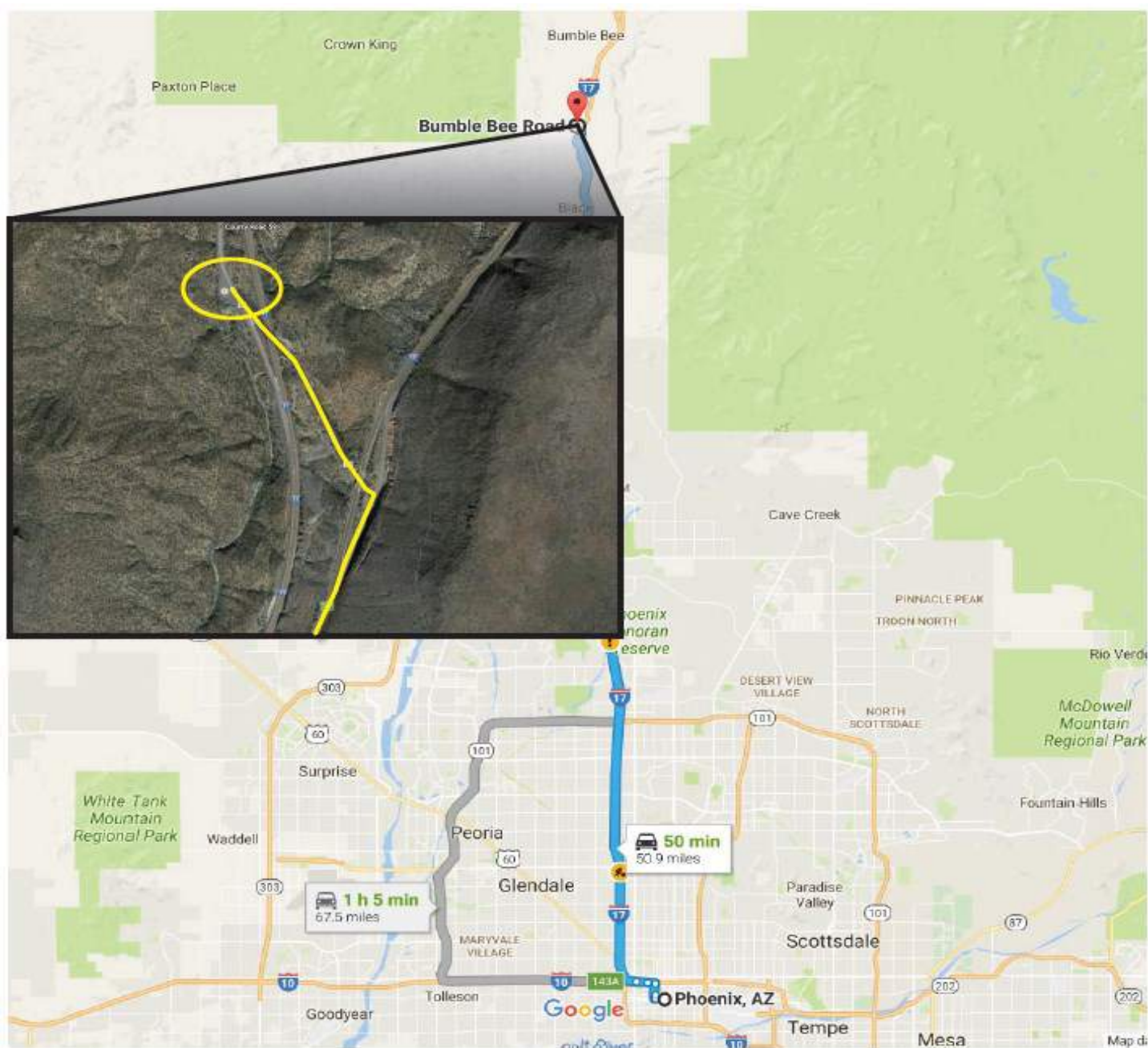


## MAY MSA FIELD TRIP MAP: Fat Jack Mine



# MSA FIELD TRIP

Fat Jack Mine  
May 6th-7th, 2017







## MAY MSA FIELD TRIP: Critic Mine Sunday, May 21st, 2017



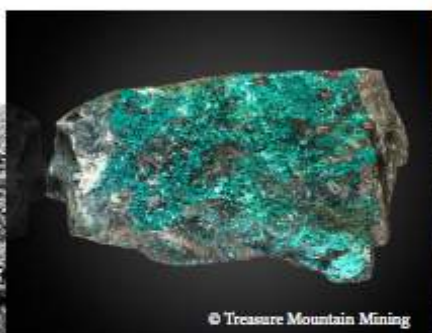
# MSA FIELD TRIP

## The Critic Mine

### May 21st, 2017



© Mindat photo.



© Treasure Mountain Mining



© Paul J. Broyles

### TRIP INFO

This trip will be to the Critic Mine as well as a few other mines in the area. Most of the material we will be collecting is laying on the surface of the tailing piles. Terrain includes: unstable tailing piles, steep mountains, moderate hiking to some areas, open shafts (most are fenced). Mid to high clearance 2x2 vehicles will make it to most areas we will be exploring. The Critic mine itself may require 4x4.

### TOOLS

Rock pick, chisels, water pack, small shovel, small sifter, 3-5 lb. sledge hammer, eye protection, gloves

### MINERALS

Malachite, Baryte, Chalcocite, Chalcopyrite, Chrysocolla, Copper, Cuprite, Hematite var. Specularite, Magnetite, Pseudomalachite, Pyrite, Quartz var. Jasper

### LEADER INFO

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

### MEET-UP INFO

Date: May 21st, 2017  
Time: 8:00 am  
Depart: 8:20 am  
Phone: (480) 717-9326  
Email: [fieldtrips@msaaz.org](mailto:fieldtrips@msaaz.org)

### MEET LOCATION:

25292 Alamo Road, Wenden, AZ

### DRIVING DIRECTIONS:

Follow I-10 W to Salome Rd. exit 81 .....63 mi  
Turn right onto & follow Salome Rd.....29.0 mi  
Turn right toward Centennial Park Rd .....167 ft  
Continue onto Centennial Park Rd.....2.1 mi  
Slight left to stay on Centennial Park Rd..... 1.6 mi  
Turn right onto US-60 E.....1.2 mi  
Turn left onto 2nd St/Cunningham Pass Rd.0.4 mi  
Continue onto Alamo Rd.....9.6 mi  
Keep right to stay on Alamo Rd  
Destination will be on the left

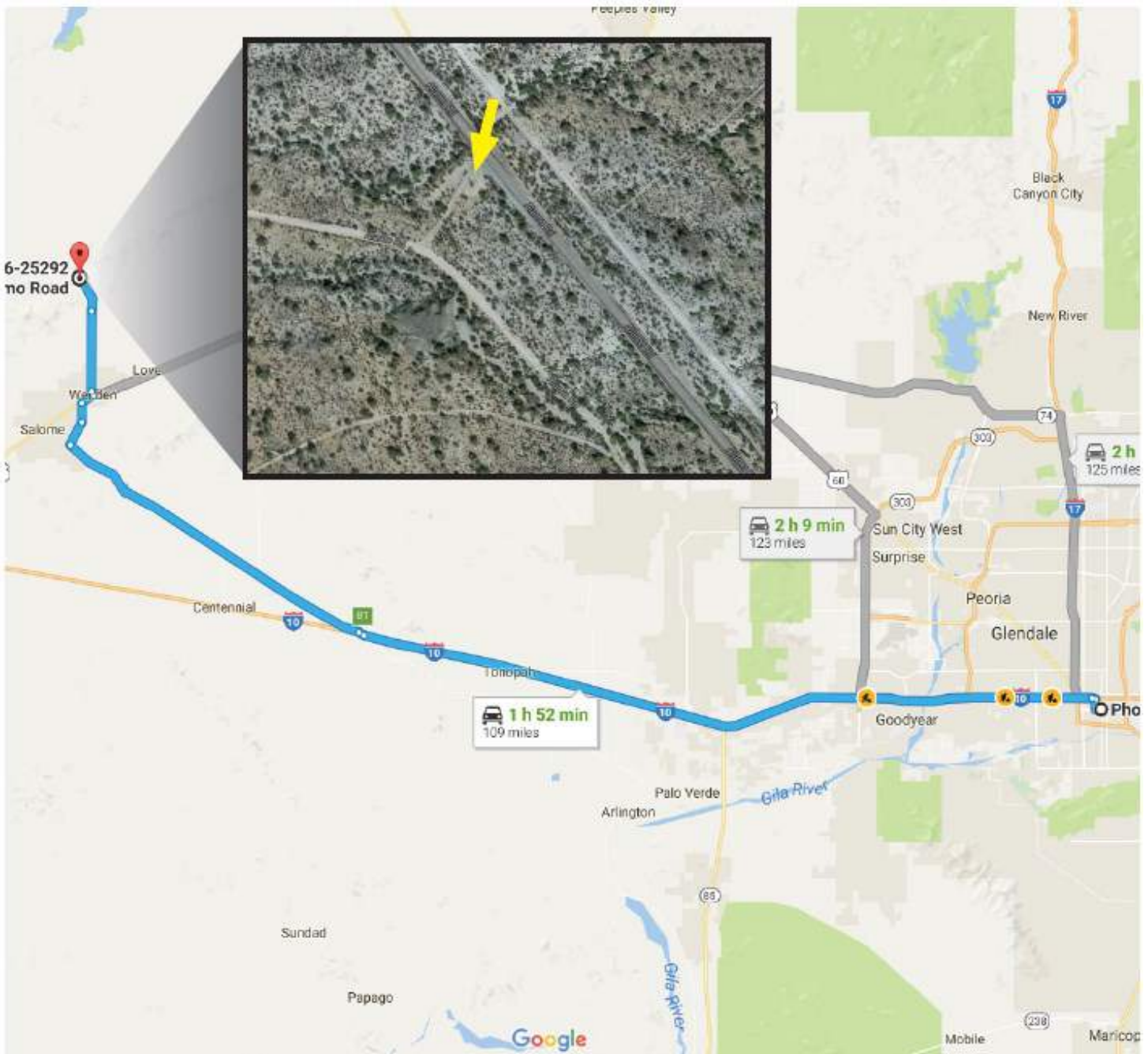


## MAY MSA FIELD TRIP MAP: Critic Mine



# MSA FIELD TRIP

The Critic Mine  
May 21st, 2017





## 2017 MSA FIELDTRIPS

May 6-7	OVERNIGHT / 4X4	<u>Fat Jack</u> (Quartz, Pyrite Pseudomorphs, Stolzite)
May 21	4X4	<u>Critic Mine</u> (Malachite)
June 10-11	OVERNIGHT	<u>Diamond Point / Christopher Creek</u> (Quartz, Agate, Fossils)
July 22		<u>Jerome</u> (Tour)
August 26-27	OVERNIGHT	<u>Alpine/Luna</u> (Agate)
September 2		<u>Mission Mine</u> (Tour)
September 16		<u>San Carlos</u> (Peridot)
October 7	STRENUOUS	<u>TO BE REVEALED - (RSVP Required)</u>
October 14		<u>Camp Verde Salt Mine</u> (Gluaberrite, Calcite)
October 21-22	OVERNIGHT	<u>Amethyst Hill / Purple Passion Mine</u> (Amethyst, Cerussite, Fluorescents, Wulfenite)
November 4-5	OVERNIGHT	<u>NEVADA</u> (Pegmatites)
November 18-19	OVERNIGHT	<u>Mulligan Peak - Clifton</u> (Agate)
December 2-3	OVERNIGHT	<u>Red Cloud Mine / Blue Bird Mine</u> (Wulfenite, Vanadinite, Kyanite, Fluorescent)
December 17	4x4	<u>UFO Mine</u> (Chrysocolla, Shattuckite)

**\*\* MSA HOSTED COALITION FIELD TRIP 4TH WEEKEND IN FEBRUARY ANNUALLY \*\***

**\*\* 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](http://msaaz.org) or for other promotional purposes. You can send them to Joseph Philpott Jr. at [josephp@msaaz.org](mailto:josephp@msaaz.org).

Please use [fieldtrips@msaaz.org](mailto: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](http://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.

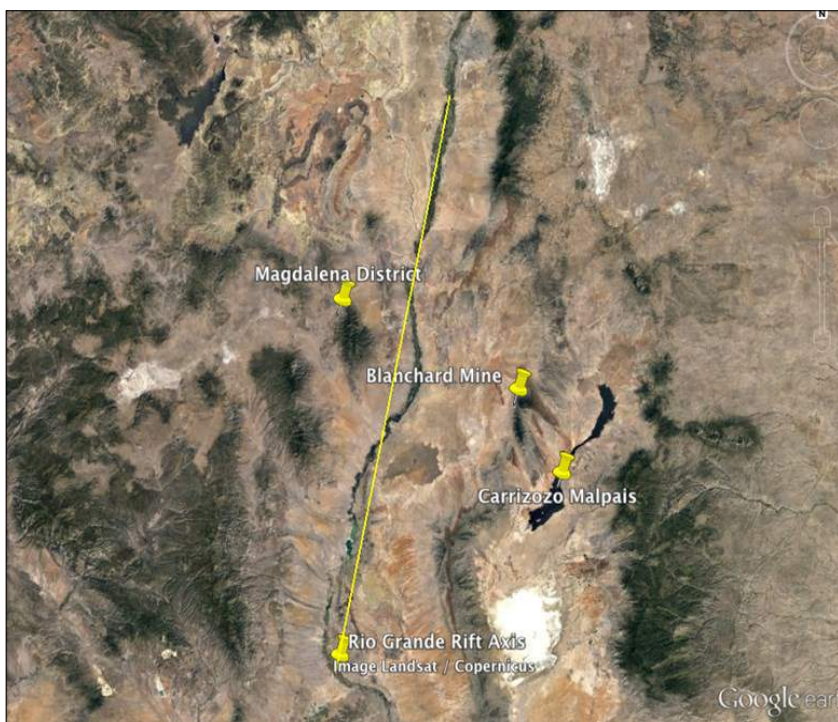
MSA Field Trip Inquiries? Please email [fieldtrips@msaaz.org](mailto:fieldtrips@msaaz.org).



## MSA FIELD TRIP REPORT: New Mexico Field Trip April 21-25, 2017. Page 40

By Cody Schwenk.

New Mexico is a state with a rich geologic history, as well as a long history of mining and mineral collecting. New Mexico, like Arizona, has undergone multiple mountain building events that have shaped its landscape, as well as its mineral deposits. The two events to be familiar with are the Laramide orogeny and the opening of the Rio Grande Rift. The Laramide Orogeny was a compressive event that occurred from about 70 MA to 35 MA. It is thought to have been caused by a shallowing of the subduction angle of the Farrallon plate. This caused a thickening of the crust, faulting, deformation, and magmatism across much of the southwest.



MSA collecting areas in relation to the Rio Grande Rift; Google Map Photo.

About 30 million years ago, this period of compression changed into extension, resulting in the Rio Grand Rift. This transition is poorly understood, and is a current topic for research. (Mack 2004) Some models relate the start of rifting to the development of the San Andreas Fault, which created shear across the southwest; others blame the onset of extension on post orogenic collapse of crust thickened by the Sevier and Laramide orogenies. Yet others attribute rift development to a rotation of the Colorado Plateau. (Smith 2004) Whatever the mechanism of formation, the Rio Grande Rift is probably the most important feature to know about for our trip.



CODY SCHWENK,  
Joseph Philpott Jr. Photo.

### Day1

We arrived late Thursday night to the Valley of fires recreation site to find that the party had already started, since Joey's family had arrived earlier in the day and snagged the group campsite for us. Valley of Fires is part of the Carrizozo Malpais, a 5000 year old lava flow that lies along both the Capitan lineament and Rio grand rift. A basaltic flow erupted from a small cinder cone volcano and flowed southward. It is 75 km in length and probably flowed for several decades. (Baldrige 2004) Pahoehoe (ropey) texture was readily observable from our campsite.



MSA Campfire at Valley of Fire Campground near Carrizozo, New Mexico; Mike Brown Photo.





## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

Page 41

By Cody Schwenk.

### Day 2

The Blanchard claims lie high up in the Northern Sierra Oscura Mts, a tilted fault block on the eastern side of the Rio Grande rift. The district has been classified by some as a fluorite rich subtype of Mississippi Valley Type deposits, or as its own type called Rio Grande Rift deposits. (Partey et al., 2009). The deposits were formed by hydrothermal brines sourced from the adjacent Jornada del Muerto Basin (Rakovan and Partey 2009) Work using chlorine isotopes and Be/Cl ratios has shown that the large amount of fluorine required came in part from mantle sources related to rift related magmas, which mixed with the basin sourced brines.(Partey et al)

The Brines flowed from the basin, along rift related faults, and into accommodating sedimentary layers, particularly the Council Springs Limestone. Primary minerals include fluorite, barite, galena, quartz, chalcophyrite, and sphalerite. Secondary minerals include linarite, brochantite, cerussite, anglesite, aurichalcite, and cyanotrichite. (Taggart et al 1989)

We woke up late (some of us barely woke up) and headed to the Blanchard claims. After a brief look around about half of us decided to work on a boulder about 5ft x4ft 3ft. in size. After some good specimens were found, more people gathered in. Suffice it to say, the boulder is no more. Many nice fluorite specimens were found in this boulder, but what impressed me the most were the brochantite and an unidentified blue acicular mineral. Feeling satisfied after demolishing our boulder, we headed back to camp early to save strength for the next day.



**Blanchard Mine**, Hansonburg District, Socorro County, New Mexico, USA; Cody Schwenk photo.



**Blanchard Mine**, New Mexico, USA; Joseph Philpott Jr. photo.



**Brad Benton & Mike Brown at Blanchard Mine;**  
Joseph Philpott Jr. photo.



**Brad Benton & Joseph Philpott Jr. working on boulder**  
with **FLUORITE**  $\text{CaF}_2$  at Blanchard Mine; Nicole Craig photos.





## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

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By Cody Schwenk.



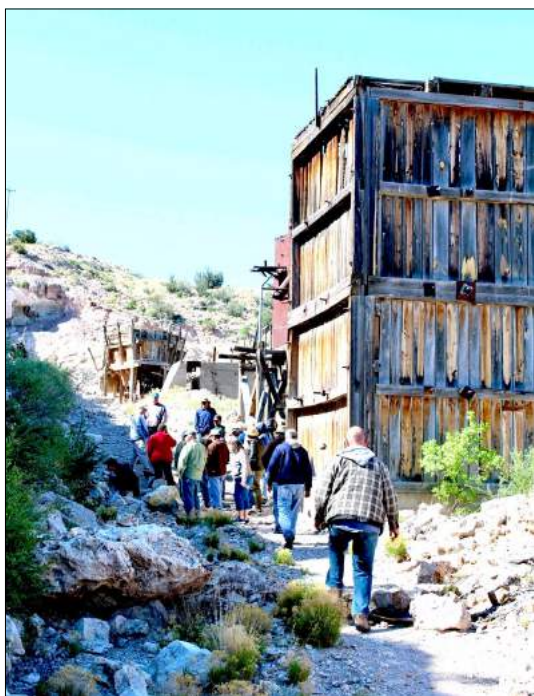
**Ray DeMark , Blanchard Mine  
Owner; Nicole Craig photo.**



**MSA Members mustering at Blanchard Mine; Nicole Craig photo.**

### Day 3

We met back at the base of the mountain the next morning to meet the mine owner, Ray DeMark . He gave us an introduction to the area, showed us the local mines, and explained the local geology. We would all like to give a huge thanks to Ray for his hospitality. We all went into the #3 Sunshine together. The best finds were specimens of linarite and cerussite on galena. Everybody found good specimens, and I know that at least I enjoyed myself immensely.



**MSA Members at Blanchard Mine;  
Nicole Craig photo.**



**MSA Members make way to Blanchard  
Mine Adit; Nicole Craig photo.**



**MSA Members checking out Blanchard Mine; Nicole Craig photo.**





## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

Page 43

By Cody Schwenk.



Ray DeMark assists MSA Members make way inside #3 Sunshine Adit, Blanchard Mine; Joseph Philpott Jr. photo.



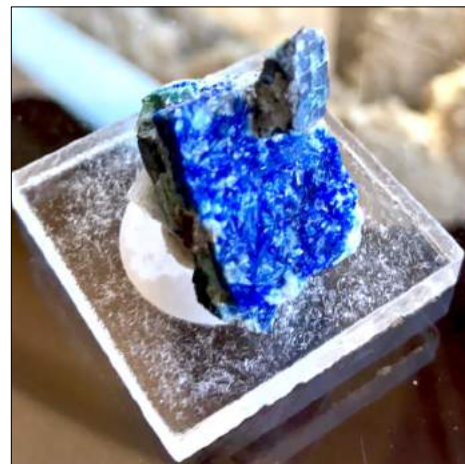
MSA Members checking out equipment at Blanchard Mine; Joseph Philpott Jr. photo.



Cody Schwenk working a linarite pocket at #3 Sunshine, Blanchard Mine; Joseph Philpott Jr. photo.



**CERUSSITE**  $\text{PbCO}_3$ , **LINARITE**  $\text{PbCu}(\text{SO}_4)(\text{OH})_2$  on **GALENA**  $\text{PbS}$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Cody Schwenk Collection & Photo.



**LINARITE**  $\text{PbCu}(\text{SO}_4)(\text{OH})_2$  on **GALENA**  $\text{PbS}$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Cody Schwenk Collection & Photo.





## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

Page 44

By Cody Schwenk.



**FLUORITE**  $\text{CaF}_2$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Cody Schwenk Collection & Photo.



**LINARITE**  $\text{PbCu}(\text{SO}_4)(\text{OH})_2$  on **GALENA**  $\text{PbS}$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Jeff Craig Collection & Photo.



**BROCHANTITE**  $\text{Cu}_4\text{SO}_4(\text{OH})_6$  on **FLUORITE**  $\text{CaF}_2$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Jeff Craig Collection & Photo.



**FLUORITE**  $\text{CaF}_2$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; Jeff Craig Collection & Photo.



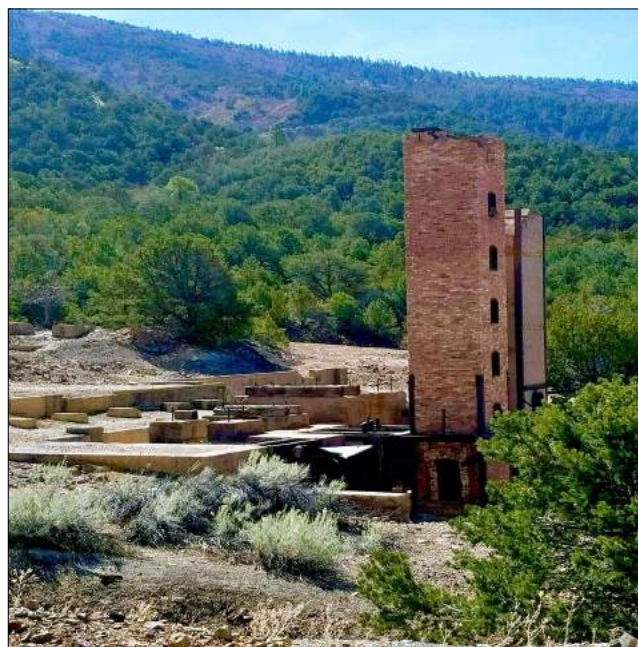
## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

By Cody Schwenk.

### Day 4

We went to three mines in the Magdalena district the next day, The Kelly mine, the Nitt Mine, and the Graphic Mine. The Magdalena district is at the west side of the Magdalena Mountains, another tilted fault-block range within the Rio Grande Rift. (Gibbs 1989) The mineralization occurs mostly in the Mississippian Kelly Limestone in the down dropped block. (Titley 1959) The source of mineralizing fluids was laramide age intrusions, and ore body composition depends on distance from those intrusions. (Blakestad 1978) Later hydrothermal fluids modified the deposit, creating secondary carbonate deposits, such as the smithsonite we know and love. (Gibbs 1989)

We had high hopes for the Kelly mine, since it is world famous for its sky blue smithsonite. However only a few small fragments were found, and we moved on to the Nitt Mine. There was pyrite everywhere on the dumps there. We found some decent specimens quickly by breaking open some boulders, and quickly moved on to the Graphic Mine. Nicole inspired us by finding a fantastic smithsonite specimen right off the bat. While not abundant, some diligent searching revealed quite a few smithsonite specimens. I think everyone came away with something they were happy with.



Kelly Mine; Joseph Philpott Jr. photo.



Kelly Mine Headframe; Cody Schwenk photo.



Kelly Mine Headframe; Nicole Craig photo.



SMITHSONITE ZnCO<sub>3</sub>, Kelly Mine, Magdalena, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Cody Schwenk Photo.



Kelly Mine; Joseph Philpott Jr. photo.



## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

### By Cody Schwenk.

#### Day 5

We went to the New Mexico Tech Mineral Museum Monday morning. The mineral museum houses a world-class collection of minerals, with a special focus on New Mexican specimens. We all knew that New Mexico produced some of the best fluorite, smithsonite, and halite in the world, but there were many surprises. There were amethyst scepters from the Ben Nevis Mine similar in appearance to Arizona localities like Fat Jack or Washington Camp. There was Wulfenite that I could have easily mistaken for Moroccan material from the Stephenson-Bennett Mine. It was quite enlightening to see a dedicated collection from an area that is unfamiliar.

After the museum we made a short stop at a psilomelane locality a short drive away. Psilomelane of a banded cuttable variety was abundant on the dumps, but we were after crystalized specimens. We soon discovered that specimens could be found by breaking open rocks along psilomelane veins. After finding some specimens, we all packed up and headed home. Thanks to everyone for a fantastic trip.



Cody Schwenk with Dr. Virgil W. Lueth, Director of New Mexico Tech Mineral Museum, Jeff Craig Photo.



**QUARTZ var. AMETHYST**  $\text{SiO}_2$ , Ben Nevis Mine, Dona Ana County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Cody Schwenk photo.



**HALITE**  $\text{NaCl}$  & **SYLVITE**  $\text{KCl}$ , Eddy Mine, Eddy County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Cody Schwenk photo.



**AZURITE**,  $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ , and **MALACHITE**,  $\text{Cu}_2\text{CO}_3(\text{OH})_2$ , 85 Mine, California District, Hidalgo County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



**CHALCANTHITE**  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  on **GYPSUM**,  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ , Copper Flat, Hillsboro District, Sierra County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo. (Gift of Cody Schwenk to NM Tech Mineral Museum)



**WULFENITE**,  $\text{PbMoO}_4$ , Glove Mine, Amado, Santa Rita Mts., Santa Cruz County, Arizona, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.

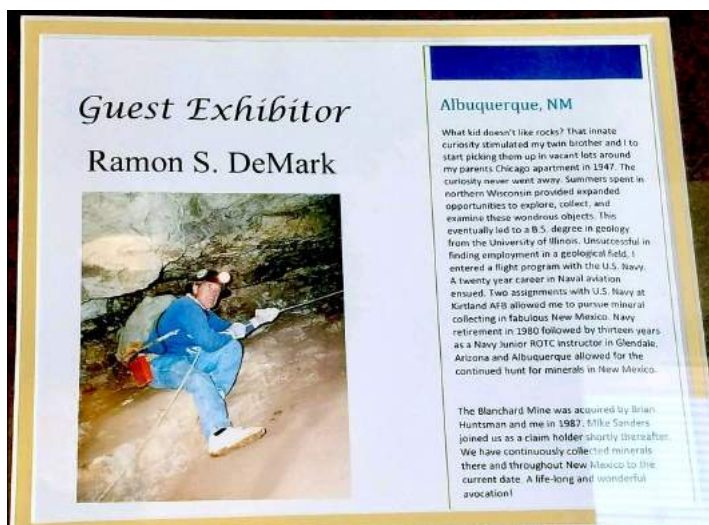




## MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

Page 47

By Cody Schwenk.



**Ray DeMark Guest Exhibitor** at New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**LINARITE**  $PbCu(SO_4)(OH)_2$  psd. **GALENA**  $PbS$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**WULFENITE**  $PbMoO_4$ , Stephenson-Bennett Mine, Organ District, Dona Ana County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**MSA Members speaking with Dr. Virgil W. Lueth, Director of New Mexico Tech Mineral Museum, Nicole Craig Photo.**



**ZIPPEITE**  $K_3(UO_2)_4(SO_4)_2(OH) \cdot 3H_2O$ , Grants District, Cibola County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



**WULFENITE**  $PbMoO_4$ , Red Cloud Mine, Trigo Mountains, La Paz County, Arizona, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



# MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

By Cody Schwenk.

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Jeff Craig checking out mining exhibits at New Mexico Tech Mineral Museum, Nicole Craig Photo.



**SMITHSONITE**  $\text{ZnCO}_3$ , Magdalena, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



**PYRITE**  $\text{FeS}_2$ , Brush Heap Mine, Kingston District, Sierra County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**SMITHSONITE**  $\text{ZnCO}_3$ , Kelly Mine, Magdalena, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



**MUSCOVITE var. TRIGON**  $\text{KAl}_2(\text{AlSi}_3\text{O}_{10}(\text{OH})_2$ , Petaca District, Rio Arriba County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**CYANOTRICHITE**  $\text{Cu}_4\text{Al}_2\text{SO}_4(\text{OH})_{12} \cdot 2\text{H}_2\text{O}$ , Blanchard Mine, Hansonburg District, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



# MSA FIELD TRIP REPORT: New Mexico Field Trip - Continued.

By Cody Schwenk.

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**Cody Schwenk** at New Mexico Tech Mineral Museum, Jeff Craig Photo.



**FLUORITE**  $\text{CaF}_2$ , Surprise #1, Cooke's Peak District, Luna County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**MALACHITE**,  $\text{Cu}_2\text{CO}_3(\text{OH})_2$  psd. **LINARITE**  $\text{PbCu}(\text{SO}_4)(\text{OH})_2$ , Sunshine #4 Mine, Hansonburg District, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.

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**HEMATITE**  $\text{Fe}_2\text{O}_3$  psd. **PYRITE**  $\text{FeS}_2$ , Chino Mine, Santa Rita District, Grant County, New Mexico, USA; New Mexico Tech Mineral Museum, Joseph Philpott Jr. Photo.



**SMITHSONITE**  $\text{ZnCO}_3$  psd. **CERUSSITE**  $\text{PbCO}_3$ , Kelly Mine, Magdalena, Socorro County, New Mexico, USA; New Mexico Tech Mineral Museum Collection, Joseph Philpott Jr. Photo.



# Be Active - Be Safe!

By Staples Health & Safety

## Go Outside and BE ACTIVE!

Summer is a great time to get outside and increase your activity level! Some benefits of an active lifestyle include:

- Reduction or prevention of routine inflammation, which is now thought to underpin many chronic diseases
- If applied over the long-term, being active can greatly reduce your personal risk of chronic and terminal illnesses like Type II diabetes, heart disease, high blood pressure
- An active life style helps reduce and prevent depression and stress and also helps with weight management
- Any activity that gets our heart rate up counts—ride a bike, walk/run, swim, go kayaking or canoeing, fly a kite with your kids, walk the dog, or do some work around the back yard!

## Heat Exhaustion/Dehydration

- Intense activities of at least 15 minutes should be reduced in high heat and high humidity conditions.
- Allow for acclimatization to the heat.
- Ensure adequate hydration with either water or sports drinks both BEFORE and DURING (5 oz. for a child under 90 pounds and 9 oz for an adolescent weighing 130 pounds every 20 minutes); even if the child does not feel thirsty.
- Clothing should be light-colored and lightweight; one layer only to facilitate evaporation of sweat.

## Sun Safety: The Facts

Ultraviolet (UV) Radiation is the major risk factor for most skin cancers. Sunlight is the main source of UV Rays, which can damage the genes in your skin cells. There are three types of UV Rays:

- UVA Rays—these cause cells to age. They are linked to long-term skin damage such as wrinkles, but also play role in some skin cancers.
- UVB Rays—these can cause direct damage to the DNA and are the main rays that cause sunburns. They're also thought to cause most skin cancers, pre-cancerous and cancerous skin lesions, benign tumors, discoloration of the skin, fine and coarse wrinkles, freckles
- UVC Rays—these don't get through our atmosphere and are not present in sunlight; they're not normally a cause of skin cancer.





# Heat Exhaustion: Prevention.

By Mayo Clinic Staff

**You can take a number of precautions to prevent heat exhaustion and other heat-related illnesses. When temperatures climb, remember to:**

- **Wear loosefitting, lightweight, light-colored clothing.** Excess, dark or tight clothing holds in heat and doesn't let your body cool properly because it inhibits sweat evaporation.
- **Avoid sunburn.** If you're going to be outdoors, wear a lightweight, wide-brimmed hat or use an umbrella to protect yourself from the sun, and apply sunscreen to any exposed skin. Having a sunburn reduces your body's ability to rid itself of heat.
- **Seek a cooler place.** Being in an air-conditioned building, even for just a few hours, is one of the best ways to prevent heat exhaustion. If your home doesn't have an air conditioner, consider spending time at a library or shopping mall. At the very least, find a well-shaded spot. Fans alone aren't adequate to counter high heat and humidity.
- **Drink plenty of fluids.** Staying hydrated will help your body sweat and maintain a normal body temperature. If your doctor has told you to limit fluids because of a health condition, be sure to check with him or her about how much extra you need to drink when the temperature rises. Avoid alcoholic beverages.
- **Take extra precautions with certain medications.** Ask your doctor or pharmacist whether the medications you take make you more susceptible to heat exhaustion and, if so, what you can do to keep your body from overheating.
- **Avoid hot spots.** On a hot day, the temperature in your parked car can rise 20 F (11 C) in just 10 minutes. Let your car cool off before you drive it. Never leave children or anyone else in a parked car in hot weather for any period of time.
- **Let your body acclimate to the heat.** If you travel to somewhere hot, or the temperatures suddenly jump in your area, it can take several weeks for your body to get used to the heat. You'll still need to take precautions, but working or exercising in heat should become more tolerable. If you're on vacation, you probably don't have several weeks to wait, but it's a good idea to wait at least a few days before attempting vigorous activity in the heat.

It's best not to exercise or do any strenuous activity in hot weather, but if you must, follow the same precautions and rest frequently in a cool spot. Taking breaks and replenishing your fluids during that time will help your body regulate your temperature.



# Heat Exhaustion: First Aid.

By Mayo Clinic Staff

Heat exhaustion is one of the heat-related syndromes. Symptoms range in severity from mild heat cramps to heat exhaustion to potentially life-threatening heatstroke. Heat exhaustion can begin suddenly, usually after working or playing in the heat, perspiring heavily or being dehydrated.

## Heat exhaustion signs and symptoms include:

- Faintness or dizziness
- Nausea or vomiting
- Heavy sweating often accompanied by cold, clammy skin
- Weak, rapid pulse
- Pale or flushed face
- Muscle cramps
- Headache
- Weakness or fatigue

## If you suspect heat exhaustion

**Untreated, heat exhaustion can lead to heatstroke, which is a life-threatening condition. If you suspect heat exhaustion, take these steps immediately:**

- Move the person out of the heat and into a shady or air-conditioned place.
- Lay the person down and elevate the legs and feet slightly.
- Remove tight or heavy clothing.
- Have the person drink cool water or other nonalcoholic beverage without caffeine.
- Cool the person by spraying or sponging with cool water and fanning.
- Monitor the person carefully.

**Call 911 or your local emergency number** if the person's condition deteriorates, especially if he or she experiences:

- Fainting
- Confusion
- Seizures
- Fever of 104 F (40 C) or greater





# Heatstroke: First Aid.

By Mayo Clinic Staff

Heatstroke occurs when your body temperature rises rapidly and you're unable to cool down. It can be life-threatening by causing damage to your brain and other vital organs. It may be caused by strenuous activity in the heat or by being in a hot place for too long.

**Heatstroke can occur without any previous heat-related condition, such as heat exhaustion. Heatstroke signs and symptoms include:**

- Fever of 104 F (40 C) or greater
- Changes in mental status or behavior, such as confusion, agitation, slurred speech
- Hot, dry skin or heavy sweating
- Nausea and vomiting
- Flushed skin
- Rapid pulse
- Rapid breathing
- Headache
- Fainting, which may be the first sign in older adults

## Seek emergency medical care

**If you suspect heatstroke, call 911 or your local emergency number. Then immediately move the person out of the heat and cool him or her by whatever means available, for example:**

- Put the person in a cool tub of water or a cool shower.
- Spray with a garden hose.
- Sponge with cool water.
- Fan while misting with cool water.
- Place ice packs or cool wet towels on the neck, armpits and groin.
- Cover with cool damp sheets.

Let the person drink cool water or other nonalcoholic beverage without caffeine, if he or she is able.

Begin CPR if the person loses consciousness and shows no signs of circulation, such as breathing, coughing or movement.



## Upcoming Shows and Events

### Mohave County Gemstoners Annual Gem & Mineral Show

May 6-7, 2017

Saturday 9-5

Sunday 10-4

Free Admission

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

**WHITE MOUNTAIN GEM & MINERAL CLUB**  
PRESENTS  
**20th GEM, MINERAL & FOSSIL SHOW**  
Club website: <http://www.whitemountainazrockclub.org>

JEWELRY, GEMS, MINERALS, FOSSILS, BEADS  
LAPIDARY EQUIPMENT and SUPPLIES, DISPLAY CASES,  
DOOR PRIZES, SILENT AUCTION, RAFFLE, WHEEL OF FORTUNE,  
CHILDREN ACTIVITIES, and MORE

**MAY 27-28, 2017**  
SATURDAY 9:00 am - 6:00 pm  
SUNDAY 10:00 am - 4:00 pm

**LOCATION**  
HON-DAH RESORT & CONFERENCE CENTER  
Junction of State Routes 73 & 260  
Pinetop, Arizona 85935

**SHOW COORDINATOR**  
Gary Alves  
(928) 679-3644  
[Garyalves.chairman@gmail.com](mailto:Garyalves.chairman@gmail.com)

**ADMISSION**  
ADULTS \$2.00  
JUNIORS (18 and under with Student ID) FREE (accompanied by an adult)  
SENIORS 70 & Over \$1.00  
Sponsor is a Non-Profit Organization

### Bisbee Annual Show

May 27-28, 2017

Sat. 9-5, Sun. 9-5

Free Admission

Queen Mine  
478 N Dart Rd  
Bisbee, AZ

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

June 2-4, 2017

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

Free Admission

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

### Prescott Gem and Mineral Club Prescott Gem & Mineral Show

August 4-6, 2017

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

### West Valley Rock & Mineral Club Helzarockin' Gem & Mineral Show

October 6-8, 2017

Fri-Sat 9-4

Sun 9-2

Adult's \$3 kinds under 13 free

Helzapoppin' Arena  
802 N. 1st St (Miller Road)  
Buckeye, AZ

### Huachuca Mineral and Gem Club 43rd Annual Huachuca Gem, Mineral & Jewelry Show

October 14-15, 2017

Sat. 9-5

Sun. 10-4

Free Admission and parking

Cochise College  
901 N. Colombo Ave.  
Sierra Vista, AZ

### Sedona Gem and Mineral Club 18th Annual Show and Sale

October 21-22, 2017

Sat. 9-5

Sun. 10-4

Admission \$3, Under 12 free

Sedona Red Rock H.S.  
Hwy 89A and Upper Red Rock Loop Rd  
Sedona, AZ

### 41st Annual Rock-a-Rama Gem & Mineral Show

November 3-5, 2017

Fri. 9-4

Sat. 9-5

Sun. 10-4

Free Admission

High Desert Park  
19001 E. Jacie Lane  
Black Canyon City, AZ

### 38th Annual New Mexico Mineral Sym- posium

November 11-12, 2017

Registration Fees: General \$40.00 and  
Students \$20.00 (with student ID).

Registration includes a copy of the abstracts, two continental breakfasts, and coffee breaks. A cocktail hour and dinner will be held on Saturday, November 12, 2016. A cash bar will be available. The cost for the dinner is \$30.00 for adults, \$10.00 for children (2-12 years old). An auction to benefit the symposium will conclude the evening's activities.

Macey Center  
New Mexico Institute of Mining & Technology,  
Socorro, New Mexico

### Payson Rimstones Rock Club Annual Gem & Mineral Show

November 18-19, 2017

Payson High School  
Longhorn Gymnasium  
301 S. McLane Rd.,  
Payson, AZ

### Wickenburg Gem & Mineral Society Wickenburg Gem & Mineral Show

November 25-26, 2017

Sat 9-5

Sun 10-4

Free Admission

Wrangler Event Center  
251 S. Tegner St.  
Wickenburg, AZ





## 14th Annual Prescott Gem & Mineral Club Show & Sale

August 4th, 5th & 6th, 2017

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### DATE:

Friday-Sunday,  
August 4th-6th, 2017

### TIME:

Fri-Sat: 9am – 5pm  
Sun: 9am – 4pm

### LOCATION:

Prescott Valley Event Center  
3201 N. Main Street  
Prescott Valley, AZ 86314

### ADMISSION:

Adults 13 years+	\$5.00
Seniors, Vets and Students	\$4.00
Children 12 & Under	Free (with paid Adult)
Parking	Free

### SHOW CONTACT:

Melanie Capps  
PH: 208-818-2363  
EM: [melaniecapps123@gmail.com](mailto:melaniecapps123@gmail.com)



### SHOW DETAILS:

- Over 60 vendors will be offering a large variety of gem & mineral related products.
- Vendors will feature fine mineral specimens, crystals, gemstones, jewelry, beads, fossils, lapidary equipment, jewelry, tools, findings and much more.
- We will have demonstrators again this year, demonstrating wire wrapping, Genie Equipment, geode splitting, gold panning, and face painting.
- Our Junior Rock Hounds will exhibit their collection of minerals.
- Also a spinning wheel to win samples of the minerals they have collected.
- Every paid admission will be given a raffle ticket for one of the wonderful prizes. Every 30 minutes a winning raffle ticket will be drawn for prizes donated by our vendors and members.
- Fluorescent Rock & Mineral tent will be available where you can marvel at that a plain looking rock looks like under a black light.
- Exhibitions from our members will be available for viewing.
- Each day at 3pm a special Grand Prize will be drawn also for some lucky winner.

## ANNOUNCEMENT: Wirewrapping Classes

### WIREWAPPING CLASS

#### INSTRUCTOR:

Joanne Hesterman

#### LOCATION:

Fuddruckers  
8941 N Black Canyon Hwy,  
Phoenix, AZ 85021  
(SE Corner of I-17 & Dunlap)

#### CLASS DATES:

3rd Saturday every Month.

#### TIME:

Fuddruckers OPENS: 11:00AM  
CLASS HOURS: 11:30AM – 4:00PM (+/-)

#### COST:

Buy lunch at Fuddruckers.  
Great food and good variety.

#### SUPPLIES:

- \* **Bring** jewelry tools if you have them.
- \* Joanne will sell wire or bring your own

**\* No Contact Info, just show up.**



**Joanne Hesterman** displaying wire-wrapping crafts.  
Photo courtesy of FRIENDS of the ARIZONA MINING &  
MINERAL MUSEUM , Volume 3 Issue 1, 1st Quarter 2006.



Examples of wirewrapping;  
Chris Whitney-Smith Collection & Photo.



Examples of wirewrapping by MSA Member Sharleen Harvey;  
On Exhibit at Rice Museum of Rocks & Minerals,  
© Chris Whitney-Smith.



## ANNOUNCEMENT: Lapidary Shop and Lapidary & Silversmithing Classes



### LAPIDARY WORK SHOP

#### INSTRUCTOR:

Doug Duffy

Doug advised they are in planning stages for a Lapidary Workshop at North Mountain Visitor Center in Phoenix. They have not received all of the machines and have not finalized class and per hour charges yet. He is planning classes for Wed. mornings from 9-12 when they get up and running and that all users will have to be certified by Doug as to proper use of the equipment. Doug expects shop to have 3 Kingsley North stainless steel lapidary machines with 6-6" diamond wheels (pictured) and only one trim saw. No slab saw. Doug will have his Ringleader available that has two 6" wheels; one a 60 grit and one a 600 grit. More info later.



Doug Duffy,  
Wei Chen Photo.

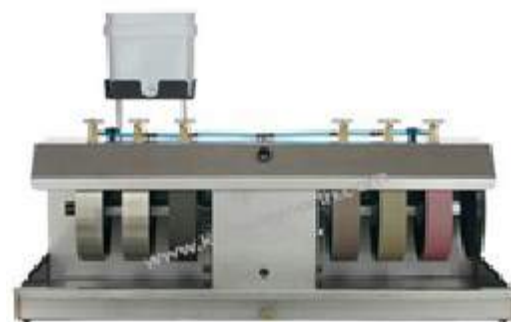
### LAPIDARY CLASSES

In The Art of Making Cabochon. Lapidary is the art of cutting and polishing of rocks. In this four week class, you will learn the steps in making a cabochon (a domed stone).

**DAY/TIME:** Wednesday's from 9AM to 12PM.

**COST:** \$60 for 12 hours of instruction

**(Students limit per class 4)**



Kingsley North stainless steel lapidary machine with 6-6" diamond wheels; photo courtesy Doug Duffy.

### SILVERSMITHING CLASSES

In the four week class, you will learn to make a ring and a pendant.

**DAY/TIME:** Saturday's from 8AM to 12PM.

**COST:** \$150 for 15 hours of Instruction.

**(Students limit per class 4)**

#### LOCATION:

NORTH MOUNTAIN VISITOR CENTER

12950 N. 7th ST, Phoenix, AZ 85022

**For more information and sign up, please call**

**DOUG DUFFY, INSTRUCTOR**

**(602) 973-4291 after 2PM or leave message.**



Examples of Silversmithing;  
photo courtesy Doug Duffy.

## MSA Members News: Lynne & Terry Dyer



This is a small display case of minerals and fossils Lynne put in the lodge of the Camp Lo Mia in Pine, AZ. All specimens are from the Mogollon Rim area. Lynne also put a MSA card in the bottom of the case! Lynne Dyer Photo.

MSA Members Lynne & Terry Dyer are volunteering this summer at a LDS girl's camp in Pine, Arizona. They are senior seasonal service missionaries doing mostly custodial work. They have been involved with picking up dead wood, trimming trees, repairing broken water pipes, doing drywall work and painting. Other projects will include labeling of trees, bushes, poison ivy and other botanicals. Lynne placed a display case of local rocks, minerals and fossils in the main lodge of the camp. They are also enjoying all the elk, deer, and other wildlife in the area.



Lynne Dyer with King Snake; Terry Dyer Photo.



Lynne & Terry Dyer taught 59 Webelos Cub Scouts and 38 leaders for a total of 97, March 4, 2017; Lynne Dyer Photo.





## 2017 MSA MEETING SCHEDULE & MAP



### MSA 2017 Meeting Schedule

#### MEETING DATE

#### ROOM NAME

#### START TIME

May 11<sup>th</sup>

Padre Serra

7:30 PM

June 8<sup>th</sup>

Padre Serra

7:30 PM

**July**

**NO MEETING**

\* \* \* \* \*

**August**

**NO MEETING**

\* \* \* \* \*

September 14<sup>th</sup>

Padre Serra

7:30 PM

October 12<sup>th</sup>

Padre Serra

7:30 PM

November 9<sup>th</sup>

Padre Serra

7:30 PM

**Saturday, December 16<sup>th</sup>**

**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](http://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](http://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](mailto:MSAClub1935@msaaz.org).

## Mineralogical Society of Arizona

**Field Trips**  
Monthly Educational Programs  
Raffle Prizes: Junior, Adult, Visitor & MSA Name Badge  
The Rockhound Record Newsletter  
Mineral & Lapidary Competitions  
Mineral Collection  
Flagg Gem & Mineral Show  
Earth Science Events  
Future Rockhounds of America Junior Badge Program  
Education & Outreach

**Join Us!**  
Explore  
<>  
Share  
<>  
Inspire

**MSA Purpose:** "to provide popular interest and education in earth science, and natural history (mineralogy, geology, paleontology, and lapidary arts). To foster a community among enthusiasts. Encourage its efforts members also assist our members to further study minerals we collect and how to display or further promote their material. To look at geoscience about rocks, minerals, fossils and what can be done with them and to be conversant in community of groups with similar interests to our Society."

web: [msaaz.org](http://msaaz.org) email: [MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org)

**WEBSITE:** [msaaz.org](http://msaaz.org)

**JUNIORS / FRA:**  
[MSAFRA@msaaz.org](mailto:MSAFRA@msaaz.org)

**FIELD TRIPS:**  
[FieldTrips@msaaz.org](mailto:FieldTrips@msaaz.org)

**PHOTOGRAPHY SPOTLIGHT:**  
[Spotlight@msaaz.org](mailto:Spotlight@msaaz.org)

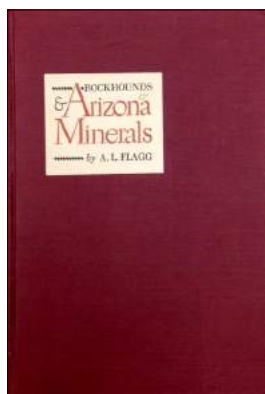
**MAIN CONTACT:**  
[MSAClub1935@msaaz.org](mailto:MSAClub1935@msaaz.org)

#### 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](mailto:MSAClub1935@msaaz.org).

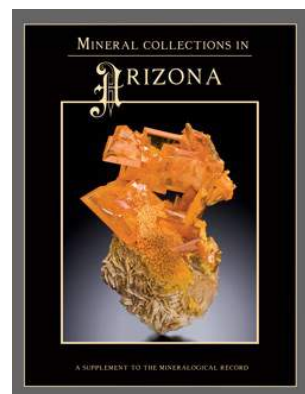
**MSA Name badges are \$7.50.**



(1944) "Rockhounds and Arizona Minerals;" Published by The Whispering Wind Press, Photo Chris Whitney-Smith.



(1958) "Mineralogical Journeys in Arizona;" Published by Fred H. Bitner, Photo Chris Whitney-Smith.



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*A.L. Flagg*



MINERALOGICAL SOCIETY OF ARIZONA  
EDITOR, THE ROCKHOUND RECORD  
P.O. BOX 54307  
PHOENIX, AZ 85078



Mineralogical Society of Arizona members at Arizona Capitol on February 7, 2017 in support of HB2029 to make Wulfenite Official Mineral of Arizona; Molly Busby, Sam Busby, Wyatt Busby, Jennifer Campbell, Maggie Lyons, David Tibbits, John Tibbits, Alex Schauss;  
© Chris Whitney-Smith photo.

Governor Doug Ducey signed HB2092 into law on March 22, 2017 making Wulfenite Official Mineral of Arizona.

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## 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](http://msaaz.org).

**CONTACT US:** [MSAClub1935@msaaz.org](mailto: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](http://msaaz.org) and click on "MSA Club" tab.



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