



THE ROCKHOUND RECORD

MINERALOGICAL SOCIETY OF ARIZONA

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CALCITE & ARAGONITE CaCO_3 ,
5.3cm, Wenshan Mine, Wenshan Autono-
mous Prefecture, Yunnan Province, China;
“The Dragon of Yunnan Province,”
Chris Whitney-Smith Collection,
© Jeff Scovil.

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Seasons Greetings and Happy Thanksgiving!

Our October 12th program by Evan Jones about “**How Wulfenite Became Official Arizona Mineral**” was especially sweet as we had most of MSA’s grassroots Wulfenite is Loved campaigners in attendance to enjoy Evan’s accounts of the Arizona history they were a part of. Thank you, Evan, for quickly picking up baton to spread the news to Arizona clubs on wulfenite, our awesome new state mineral!

November 9th is a special evening dedicated to calcite with calcite as mineral of the month and with a program presented by **Mr. Chuck Houser “Got Calcite?”** Calcite makes up about 4% of the earth’s crust, so you can imagine calcite is a popular addition to most mineral collections. Chuck earned a bachelors degree in Geology and works as a hydrogeologist and project manager for SCS Engineers in San Diego. Chuck’s good friend Phil Richardson will display suite of calcite from his collection.

December 4th is MSA's 82nd Birthday! MSA will celebrate our Anniversary on **Saturday, December 16th at Holiday Jamboree/Christmas Party** with Adult & Junior TN Competitions, announcement of 2017 Rockhound of the Year and election of 2018 Officers and Board of Governors. Jamboree will be packed with food, fun, friends, silent auctions and raffles. **RSVP for Holiday Jamboree—see volunteer page for info.**

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.

2018 Dues are Due. Please see 2018 Membership Form on MSA website msaaz.org under MSA CLUB tab. You can also renew via PayPal on website or download form from website & bring with payment to January meeting. * **No dues will be collected at December meeting to allow treasurer to enjoy party.** *

WEARING MSA NAME BADGES PAYS OFF!! MSA members wearing their MSA Name Badges to general meetings will be issued a special raffle ticket and be eligible to participate in raffle to play Prize Drop game with opportunity to win one of four prizes! If you don't have an MSA Name Badge, see Membership Chair, Mr. Ron Ginn at meetings or email Ron at MSAClub1935@msaaz.org. MSA Name badges are \$10.00. It's not just about winning prizes, it's fellowship and getting to know each other.

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

♦ Bob Seitz	Several Flats of Minerals
♦ Bob Jones	Copies of Rock & Gem

WELCOME NEW MSA LEGACY LIFE MEMBERS

Thank you for supporting MSA for a lifetime and beyond!

- ◆ JAMES ROBB, Wilcox
- ◆ CHERIE ROBB, Wilcox
- ◆ BARB SCHISCHA, Scottsdale





2017 Committee Members

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

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

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MSAClub1935@msaaz.org

Social Coordinator At-Large: Joyce Hendrix
MSAClub1935@msaaz.org

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

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

Board Governors

Term Expires (2019)

Bob Holm
 David Lay

Term Expires (2018)

Don Boushelle
 Terry Dyer

Term Expires (2017)

Mike Williams
 Joyce Hendrix

Past President

Dr. Raymond Grant

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, 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

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>
November 9th	Serra	MR. CHUCK HOUSER "Got Calcite?"
December 16th	Serra	MSA HOLIDAY JAMBOREE / CHRISTMAS PARTY Election of 2018 Officers & TN Mineral Competition



President's Message - Continued / MINDAT.org.



WELCOME NEW MEMBERS TO MSA FAMILY TREE

Frank Foley	Tempe
Margaret Foley	Tempe
Robin Dunn	Phoenix
Heather Orman	Mesa
Diane Dougherty	Mesa

WELCOME BACK

Leslie Watson Scovil	Glendale
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EXPLORE <> SHARE <> INSPIRE

Cheers!

Chris Whitney-Smith



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

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

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

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

INTRODUCTION

Minerals

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

Localities (Mineral lists)

1. Standard Locality Display
2. Regional Report
3. Detail information about mineral at a locality
4. Recent Locality Changes

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



2018 Membership Dues are Due and Life Membership.

2018 DUES ARE DUE

RENEWING & NEW MEMBERS:

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

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

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

2018 ANNUAL DUES AND FEES:

Single Adult (18+):	\$24.00 (Annual: Jan 1 - Dec 31)
Couple:	\$36.00 (Annual: Jan 1 - Dec 31)
Junior (Under 18):	FREE
Legacy Life Members:	FREE (After Initial Payment)

BENEFITS OF MEMBERSHIP: Field Trips, (Monthly Programs include; Visitor, Junior & Adult Raffles, Future Rockhounds of America Junior Program, Refreshments, Silent Auctions, Buy/Sell/Trade Events), Flagg Gem & Mineral Show, Discounts at Minerals of Arizona Symposium and University of Arizona Gem & Mineral Museum, Pinal Gem & Mineral Show, Gilbert Mineral Sale, Arizona Coalition of Rock Clubs Field Trips, The Rockhound Record Newsletters email pdf copy, Holiday Jamboree and Mineralogical Society of Arizona, Flagg Gem & Mineral Show and Tucson Gem & Mineral Show® Thumbnail Mineral Competitions.

LIFE MEMBERSHIP

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

When you purchase a Flagg Legacy Life Membership, you are showing your commitment to MSA and our founder Mr. Arthur L. Flagg's mission to promote interest and education in the various Earth Sciences and you'll never have to worry about annual dues again.

As a life member, you'll receive the same benefits as annual members, plus the satisfaction of knowing that you're supporting MSA for a lifetime and beyond.

Benefits of Flagg Legacy Life Membership:

- Eliminate the need to pay annual membership dues to MSA.
- New Legacy Life members partner gets a one-year membership for free. After that, the partner would be responsible for his or her own annual membership dues.
- Secure your future membership at today's rates - rate increases will never affect you.
- Receive a special Life Member Name Badge. (Legacy Life Member only.)
- Current members can convert to a Flagg Legacy Life Membership anytime.
- New members can join as Flagg Legacy Life Members anytime!
- You can become a Flagg Legacy Life Member by completing MSA Membership Application. It's that easy!
- MSA was founded in 1935 and if you are 75+, you can become a life member for \$19.35.
- Questions about Flagg Legacy Life Membership can be directed to Membership Chair at MSAClub1935@msaaz.org.



2017 TN Competition, 2017 ROTY and 2018 Board Nominations Page 6



2018 MSA Nominating Committee for Officers & Board of Governors, Joseph Philpott Jr. (chair) is pleased to present 2018 candidates for election at December Holiday Jamboree:

Chris Whitney-Smith	President
Joseph Philpott Jr.	Vice President
Cody Schwenk	Secretary
Nathan Scholten	Treasurer

Mike Williams Board of Governors (Term Exp 2020)
Carlie Murphy Board of Governors (Term Exp 2020)
Steve Kaminski Board of Governors (Term Exp 2019)
Steve Kaminski to fulfill unexpired term for David Lay.

Additional nominations may be made from the floor as long as the nominee is present and accepts nomination.



Please review list of candidates for MSA 2017 Rockhound of the Year and be ready to cast your vote for one at November meeting. Our reigning ROTY is Dr. Nathan Scholten. MSA is hard at work contacting vendors and individuals for prize donations. *If you would like to donate or help, please contact Chris Whitney-Smith or Joey Philpott Jr.*

- ♦ **BOB HOLM**
- ♦ **DON BOUSHELLE**
- ♦ **MAGGIE LYONS**
- ♦ **CODY SCHWENK**
- ♦ **MIKE BROWN**
- ♦ **PHIL RICHARDSON**
- ♦ **JOYCE HENDRIX**
- ♦ **STEVE KAMINSKI**
- ♦ **CARLIE MURPHY**

*** Please **RSVP by November 10th** to Chris Whitney-Smith if you will enter MSA December 16, 2017 TN Mineral Competition at Holiday Jamboree to ensure reserved space. ***



2017 MR. ARTHUR L. FLAGG THUMBNAIL (TN) MINERAL COMPETITION FOR JUNIOR MEMBERS

This is a call to action for Junior Members to complete your TN selections and refine your labels and presentation for competition. JR. TN Competition will be held at December Holiday Jamboree and it will be here before you know it. MSA competition in December is a springboard for collection refinement and further challenge in Flagg Gem & Mineral Show JR TN competition in January and ultimate competitive entry in Tucson Gem & Mineral Show® in February.

See the rules below. Great prizes for every Junior member who enters, so start refining your TN choices and showmanship!

Rules

- ♦ Each junior member can enter (10-30) thumbnail specimens.
- ♦ They can be displayed in open TN perky boxes **or** on bases.
- ♦ They must be labeled as to what they are and where they are from.
- ♦ Juniors can collect specimens, trade for them, buy them, use specimens handed out at the meetings.
- ♦ They will be judged based on **TGMS rules** for presentation (label completeness & neatness) and what the specimens are.
- ♦ The competition will be held at the December Holiday Jamboree and prizes will be awarded for Champion, 1st Runner-up and 2nd Runner-Up.

2017 THUMBNAIL (TN) MINERAL COMPETITION FOR ADULT MEMBERS

Adult Members of MSA, this is a call to action for you to complete your TN selections and refine your labels and presentation for competition. Adult TN Competition will be held at December Holiday Jamboree along with Junior TN Competition. I encourage everyone to also consider competitive entry at Arizona State Fair in October.

MSA competition in December is a springboard for collection refinement and further challenge and ultimate competitive entry in Tucson Gem & Mineral Show® in February.

See the rules for Juniors (Only Difference is Adults should have minimum (30) TN specimens). Prizes will be awarded for Champion, 1st Runner-up and 2nd Runner-Up.

* Please **RSVP by November 10th** to Chris Whitney-Smith if you will enter MSA December 2017 TN Mineral Competition. *

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.

Dish Volunteer List MSA Holiday Jamboree

Saturday, December 16, 2017:

If your last name begins with the letters below, please
bring in a dish from list to MSA Holiday Jamboree.

MSA will supply the meats and drinks.

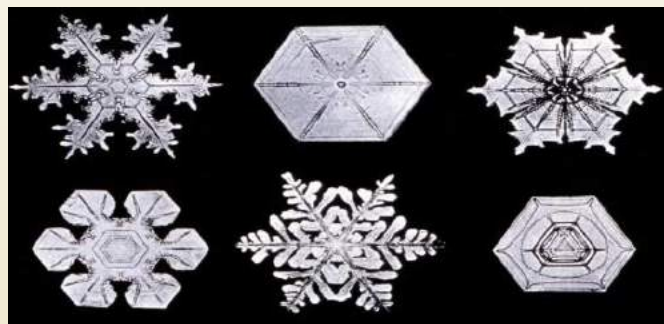
- A - F** Potato, Vegetable or Rolls
G - M Stuffing or some type of Salad
N - Z Dessert

The choice is yours as to what you would like to bring
from list.

Hope to see you at our Holiday Jamboree.

Thank you so much for your cooperation.

May you have a Safe and Happy Holiday Season!



Wilson Bentley, a Vermont farmer, took photographs of snowflakes under a microscope as a hobby. These photographs were published in the "Monthly Weather Review" in 1902.

Crystals are some of the most beautiful and fascinating objects around. Their symmetry and highly reflective faces are so perfect, it is sometimes hard to believe that they are the products of natural processes.

Snowflakes are just one example of common crystals. Those shown here are all nearly the same size, but crystals actually start out small and increase in size. Consider how each of these snowflake crystals might grow from a small grain into the distinctive shapes shown here.

© NOAA Photo Library.

RSVP

Dish you will bring to:

MSAClub1935@msaaz.org.



October 12, 2017 Mineralogical Society of Arizona General Meeting Minutes. By Dawn Boushelle

The meeting was called to order by MSA President Chris Whitney-Smith at 7:34 PM on Thursday, October 12, 2017 at Franciscan Renewal Center, Piper Hall, Padre Serra Room, Scottsdale, AZ.

Chris Whitney-Smith Opening Announcements:

- Visitors and New Members stood and introduced themselves and were welcomed by membership.
- One of the new members brought couple of flats of minerals for the free table of awesomeness.
- Adult & Junior Members and Visitors see Bob Holm for raffle tickets if you haven't received one.
- Chris thanked those who volunteered to bring refreshments.
- October Mineral of the Month is **CINNABAR**.
- November Mineral of the Month is **CALCITE**.
- MSA Name Badges were on front table for those who ordered name badges to pick up.
- Chris introduced program speaker **Mr. Evan Jones** for presentation on "**How Wulfenite became Official Mineral of Arizona.**" Evan gave a great talk about Wulfenite and how it became to state mineral.
- Chris presented Evan a Certificate of Appreciation for his presentation.
- Bob Jones had written an article on Wulfenite State Mineral of Arizona in the Sept 2017 Rock and Gem magazine. He donated auto-graphed editions for MSA junior members who helped with Wulfenite campaign to make Wulfenite Official Mineral of Arizona and Chris presented to members.
- Field Trips:

This Saturday Nathan will lead the club to Camp Verde. Chris made flyers that can be used to identify the different pseudomorphs found there.

- Coalition Field Trips:

Oct 28th is a trip to collect lizard stone.

Closing Announcements:

- Doug Duffy is offering Lapidary & Silver Smith classes at North Mountain Visitor Center, details in back of RR.
- Joanne Hesterman offering free wirewrapping classes 3rd Saturday monthly at Fuddruckers off I-17 & Dunlap, details in back of RR.
- There will be a special event on a Sunday, Nov 19th at the LGF Foundation gallery. A benefit auction & potluck will be held.
- The holiday jamboree is coming up.
- Chris encouraged the group to consider who to nominate for 2017 MSA Rockhound of the Year.
- For various reasons, the decision was made by MSA board to raise the annual membership dues for 2018.
- **Chuck Houser** to present November program "**Got Calcite?**"
- Chris reminded everyone Show season is fast approaching and MSA is springboard for TN Mineral competitions for juniors & adult members to refine their skills starting with December MSA TN Competition, January Flagg Gem & Mineral Show Junior TN competition and February Tucson Gem & Mineral Show®. MSA to put in members exhibit at 2018 TGMS show and encouraged members to participate, compete and exhibit.
- MSA Name Badges were on front table for those who ordered name badges to pick up.
- MSA Name Badge Raffle and General Raffles for Visitors, Juniors and Members held.
- Chris thanked everyone for attending meeting and bringing refreshments.

The meeting was adjourned at 9:26pm.

- Silent Auction was held & Refreshments served.



Volunteers Needed for MSA Spinning Wheel Booth at 2018 Flagg Gem & Mineral Show

Chris Whitney-Smith.

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Flagg Gem & Mineral Show
Friday, January 5, 2018
MSA Volunteers Sign-Up List
*** Need 3-4 People Each Time Slot ***

Need 3-4 people each TIME SLOT	NAME
8:30AM-10:30PM	Chris Whitney-Smith
	BOB HOLM
	MAGGIE LYONS
10:30PM-12:30PM	BOB HOLM
	MAGGIE LYONS
12:30PM-2:30PM	BOB HOLM
	MAGGIE LYONS
2:30PM-5:30PM	BOB HOLM
	MAGGIE LYONS
Floater Names if Needed	

Flagg Gem & Mineral Show
Saturday, January 6, 2018
MSA Volunteers Sign-Up List
*** Need 3-4 People Each Time Slot ***

Need 3-4 people each TIME SLOT	NAME
8:30AM-10:30PM	BOB HOLM
	MAGGIE LYONS
10:30PM-12:30PM	BOB HOLM
	MAGGIE LYONS
12:30PM-2:30PM	BOB HOLM
	MAGGIE LYONS
2:30PM-5:30PM	BOB HOLM
	MAGGIE LYONS
Floater Names if Needed	

Flagg Gem & Mineral Show
Sunday, January 7, 2018
MSA Volunteers Sign-Up List
*** Need 3-4 People Each Time Slot ***

TIME SLOT	NAME
8:30AM-10:30PM	MAGGIE LYONS
10:30PM-12:30PM	BOB HOLM
	MAGGIE LYONS
12:30PM-2:30PM	BOB HOLM
	MAGGIE LYONS
2:30PM-5:30PM	BOB HOLM
	MAGGIE LYONS
Floater Names if Needed	

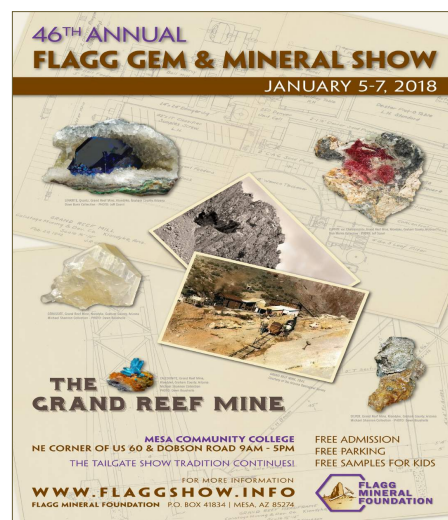
MSA "Spinning Wheel" Booth Volunteer Schedule at 2018 Flagg Gem and Mineral Show: January 5th, 6th & 7th 2018

Please review blank yellow Time Slots for available volunteer times.

Call, text or email me with questions or concerns. Thank You.
 Chris Whitney-Smith. Ask.ChrisWS@yahoo.com or (602) 405-1502.

Please RSVP your Days and Time Slots.

Volunteers receive raffle tickets for special prize drawing.



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

Dr. Nathan Scholten, MSA FRA/Juniors Program Chairman

Greetings Juniors!

Remember to arrive on time and I look forward to seeing you at the meeting!

See you all Thursday.

Nathan



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

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

MISSION STATEMENT

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

Check out new **JUNIORS** tab on MSA website; 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 & Flagstaff Mineral Foundation Mineral Collections on Exhibit at University of Arizona Gem & Mineral Museum. Page 11
Chris Whitney-Smith, Curator MSA Mineral Collection.

When in Tucson, plan to visit University of Arizona Gem & Mineral Museum to view Mineralogical Society of Arizona (MSA), Flagstaff 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 & FMF Members have FREE admission to UA Gem & Mineral Museum while our 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 Gem & Mineral Museum good through November 30, 2024.

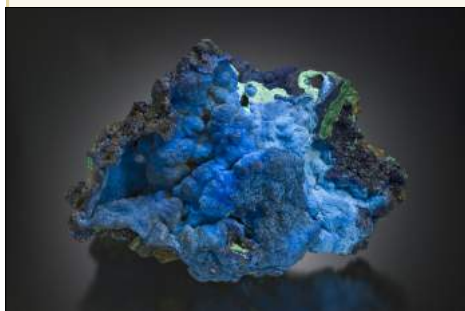
Visit UAMM and check out the many terrific collections on exhibit.

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
flandrau.org
uamineralmuseum.org
flaggmineralfoundation.org



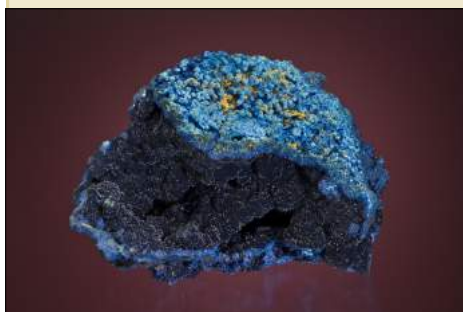
AZURITE, $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



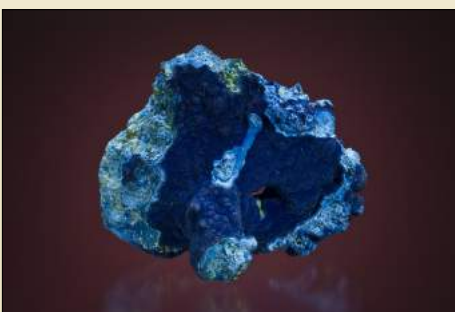
AZURITE, $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$, and **MALACHITE**, $\text{Cu}_2\text{CO}_3(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Chris Whitney-Smith.



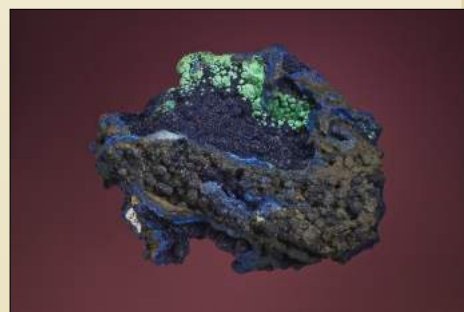
MALACHITE, $\text{Cu}_2\text{CO}_3(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.



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.

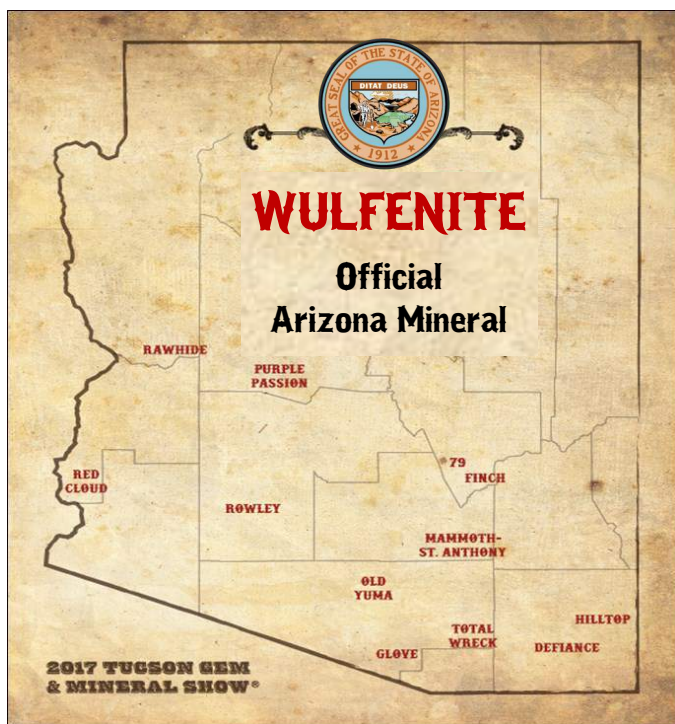


AZURITE, $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$, and **MALACHITE**, $\text{Cu}_2\text{CO}_3(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mineralogical Society of Arizona Collection, © Jeff Scovil.

THE UA MINERAL MUSEUM



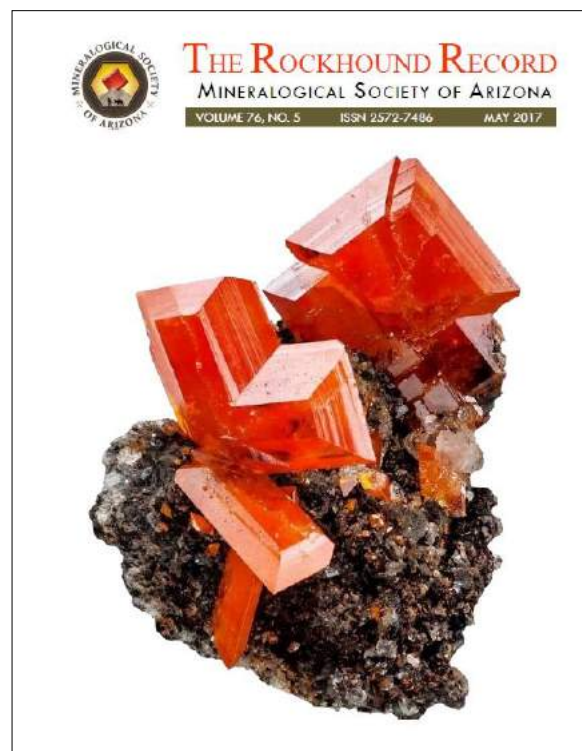
Wulfenite is Loved : Arizona Mineral. Chris Whitney-Smith.



**WULFENITE IS LOVED
ARIZONA MINERAL**



Bob Jones, Senior Consulting Editor Rock & Gem and MSA 1964 President, MSA Milestone Life Member and MSA 2014 Hall of Fame Inductee wrote articles in Volume 47, Issue 9, September 2017 Edition of Rock & Gem "A Surprising State Mineral: Why Wulfenite?" and how MSA members played key roles in HB2092 campaign helping make Wulfenite Official Mineral of Arizona on March 22, 2017, © Chris Whitney-Smith.



Evan Jones iconic Red Cloud Wulfenite, Jeff Scovil photo graced Volume 76, No. 5, May 2017 cover of Mineralogical Society of Arizona's The Rockhound Record.

MSA is honored to invite Evan Jones to present October 12th program "How Wulfenite Became Official Arizona Mineral."

Page 13 Editors Corner
Chris Whitney-Smith, Editor



Rice Museum of Rocks & Minerals

26385 NW Groveland Dr., Hillsboro, OR 97124

Phone: (503) 647-2418

<https://ricenorthwestmuseum.org/>

To learn more about origins of "The Alma Rose"
Rhodochrosite and Sweet Home Mine, please visit following:

<https://www.collectorsedge.com/t-sweethome1.aspx>



RHODOCROSITE MnCO_3 , calcite CaCO_3 , quartz SiO_2 , tetrahedrite $\text{Cu}_6[\text{Cu}_4(\text{Fe}, \text{Zn})_2]\text{Sb}_4\text{S}_{13}$, "The Alma Rose," 46.5cm, Sweet Home Mine, Alma, Park County, Colorado, USA; Rice Museum of Rocks & Minerals Collection, © Chris Whitney-Smith.

THE ROCKHOUND RECORD

Please send inquires regarding The Rockhound Record to:

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PHOENIX, AZ 85078

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(602) 405-1502

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

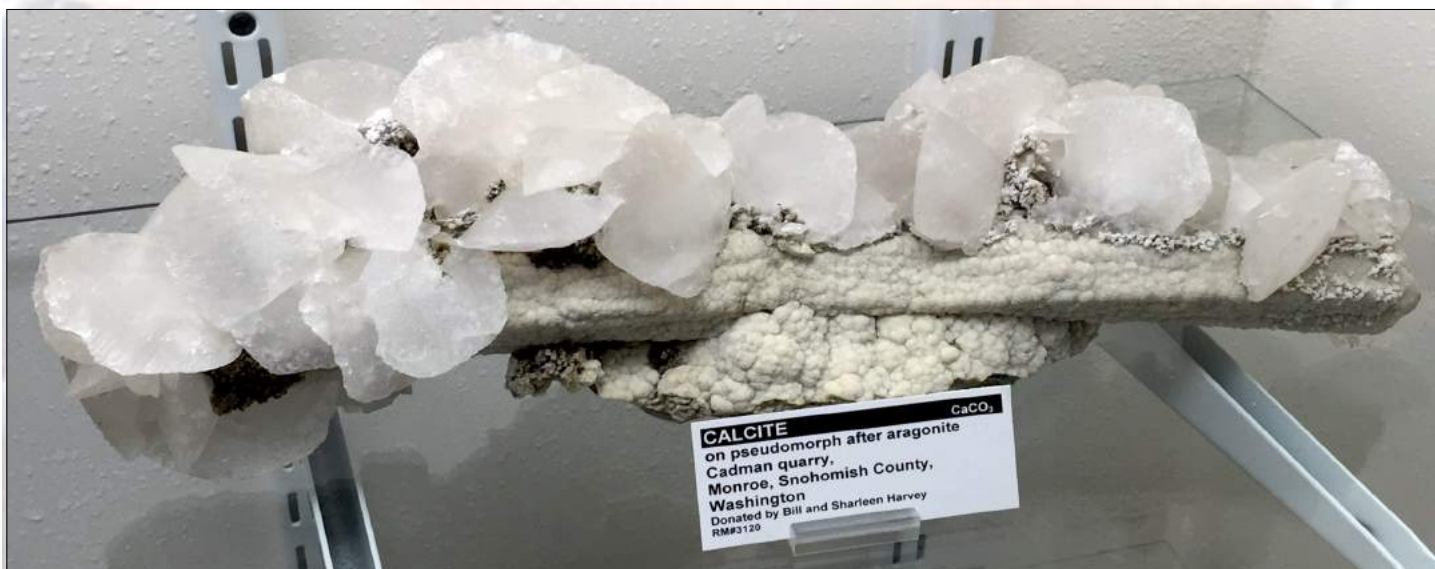
CALCITE

CaCO_3 (Calcium carbonate)

Calcite forms an array of different crystals forms, shapes, and colors in many different environments.

Calcite makes up the rocks limestone and marble used for floors and walls of buildings and sculptures.

Calcite is a very important mineral used to make cement and is a major source of calcium in foods and even makes up the antacids like "Tums".



CALCITE CaCO_3 , Cadman quarry, Monroe, Snohomish County, Washington, USA;
Rice Museum of Rocks & Minerals Collection; © Chris Whitney-Smith.

Arizona Mineral Collector – Number 202

By Dr. Raymond Grant.



BERYL Var. Aquamarine $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$, 7cm,
Sierrita Mts., Pima County, Arizona, USA;
Barb Muntyan Collection, © Jeff Scovil.



BERYL Var. Aquamarine $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$, 14cm,
Sierrita Mts., Pima County, Arizona, USA;
Barb Muntyan Collection, © Jeff Scovil.

As I am working on a new edition of the Mineralogy of Arizona, I am going back over the mineral descriptions from the last edition. After checking the mineral beryl, it seemed a good one to write about. Beryl is not a very common mineral in Arizona but there are some interesting localities given. One of them is the G and M pegmatite, 15 miles southwest of Wikieup as bluish green crystals up to 9 feet long and 18 inches in diameter (might need help getting it in the car). In the past, I tried to find this mine, but never found any mine after driving around the area. Another location given is the Monte Cristo pegmatite, 7 miles northwest of Yarnell, as green crystals up to 2 feet long and 14 inches in diameter. Searching for this mine, I got to a locked gate with no trespassing signs, so did not get there. This was years ago and before google earth so these might be places to look for again. Another beryl location given is 1.5 miles east of the Fortuna Mine in the Gila Mountains, Yuma County, as small lavender and rose-colored crystals. I have not looked for this one, but it sounds interesting.

A good example of the value of looking for these localities is the story of Barbara Muntyan and the Bella Donna Claim in the Sierrita Mountains. There were specimens of aquamarine from this locality in collections, even faceted stones, but the location was not known. Barbara spent weeks hiking around the Sierritas and eventually found a number of beryl localities and some the best beryl specimens recovered in Arizona (see photographs).

A new locality not in the old Mineralogy is the Santa Teresa Mountains where a small amount of aquamarine has been found including one amazing specimen. This locality is not a pegmatite like the others but pockets mainly with quartz crystals in granite.



BERYL Var. Aquamarine $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$, 7.5cm, Santa Teresa Mts.,
Graham County, Arizona, USA; Evan Jones Collection, © Jeff Scovil.



BERYL Var. Aquamarine $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$, 4.5cm,
Sierrita Mts., Pima County, Arizona, USA;
Barb Muntyan Collection, © Jeff Scovil.



BERYL Var. Aquamarine $\text{Be}_3\text{Al}_2(\text{Si}_6\text{O}_{18})$, 15mm, Sierrita Mts.,
Pima County, Arizona, USA; Dick Morris
Collection, © Chris
Whitney-Smith.

MSA October 12th Meeting Highlights.

Chris Whitney-Smith



LEFT: MSA Future Rockhounds of America Juniors. RIGHT: Micro minerals Dr. Nathan Scholten set out for juniors to build their collections; Chris Whitney-Smith Photos.



Wulfenite publications & calendar; © Chris Whitney-Smith.



Free Table of Awesomeness with several flats from Bob Seitz; © Chris Whitney-Smith.



Phil Richardson October Miner of the Month display with Cinnabar from around the world; © Steve Kaminski.



Flat of minerals Phil Richardson brought for sale; © Chris Whitney-Smith.

MSA October 12th Meeting Highlights - Continued.

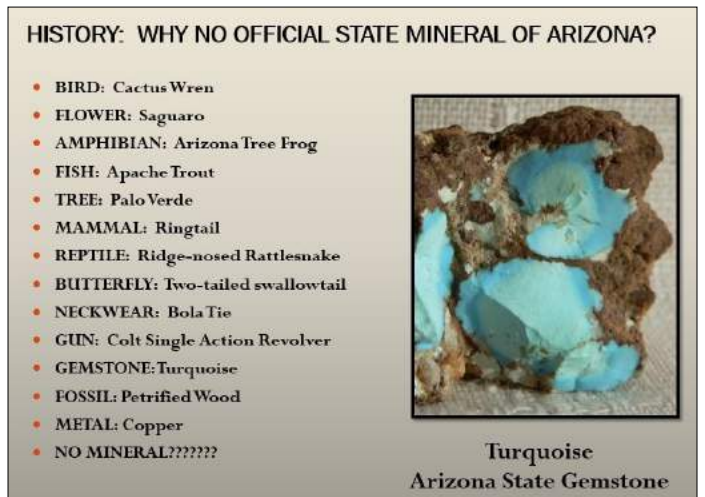
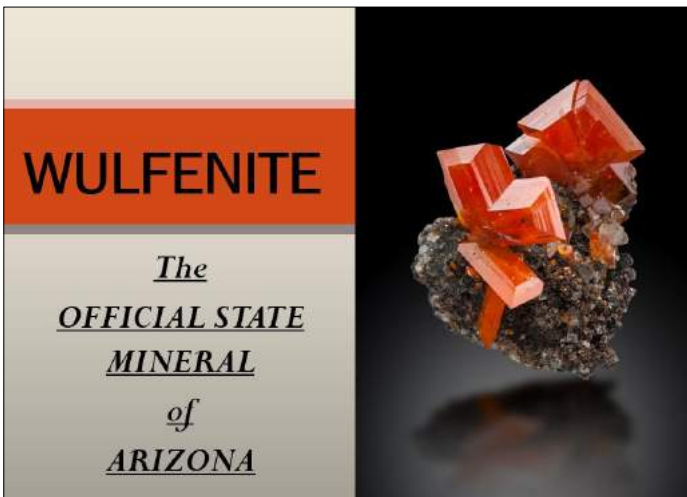
Chris Whitney-Smith.



MSA members ready for Evan Jones October Program on “How Wulfenite Became Official Mineral of Arizona;” Steve Kaminski photo.



MSA members & visitors enjoying the evening festivities; Steve Kaminski Photos.



Evan Jones program slides; Courtesy Evan Jones.

MSA October 12th Meeting Highlights - Continued. Chris Whitney-Smith.

ARIZONA STATE MINERAL - WHY WULFENITE?

- Arizona boasts more world-class wulfenite localities than any other place on earth.
- No other state has more wulfenite occurrences than Arizona (over 200 at last count)
- Wulfenite is a highly desirable and attractive mineral to specimen collectors worldwide.



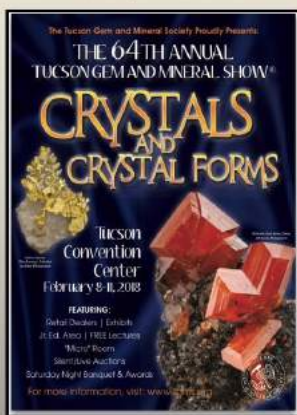
Wulfenite, 3 cm, Rowley Mine. Alex Schauss Collection, Scovil photo

THE BASICS: WHAT IS WULFENITE?

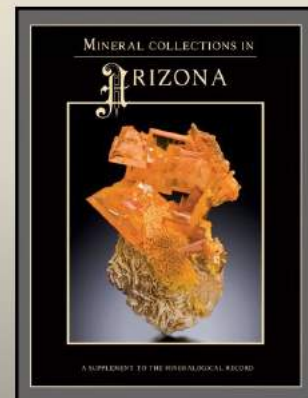
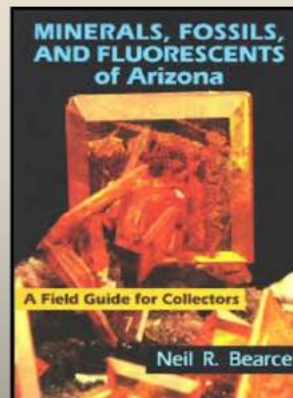
- **Chemical composition:** *Lead Molybdate, $PbMoO_4$*
- **Crystal System:** *Tetragonal (re: sulfur, anatase, zircon)*
- **Hardness:** 2.5-3.0
- **Luster:** *Adamantine, resinous*
- **Color:** *Orange-yellow, orange, red, yellow, brown, colorless*
- *Member of the Scheelite group, Stolzite-Wulfenite series*
- *Forms in oxidized (weathered) zones of hydrothermal lead deposits where molybdenum is present.*
- *Named in 1845 in honor of Franz Xavier von Wulfen (1728-1805), a Jesuit priest and mineralogist who authored a monograph on lead ores from Bleiberg, Karinthia, Austria, the type locality for wulfenite.*

Evan Jones program slides; Courtesy Evan Jones.

Arizona wulfenite specimens have been featured on numerous show posters...

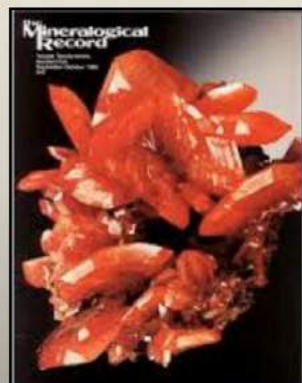


.....mineral books.....

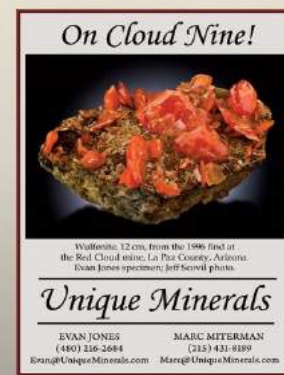
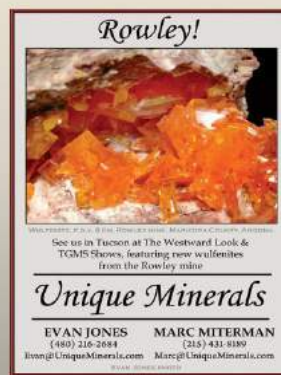


Evan Jones program slides; Courtesy Evan Jones.

...magazine covers....



...dealer advertisements...



Evan Jones program slides; Courtesy Evan Jones.

MSA October 12th Meeting Highlights - Continued. Chris Whitney-Smith.

...and mineral calendars!



How did SB 2092 come to be?

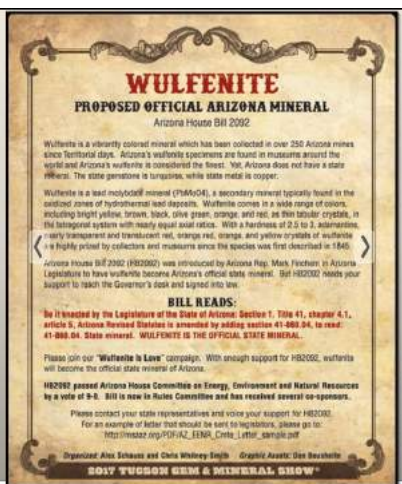
Dr. Alexander Schauss, well known mineral collector and Past-President of the Friends of Mineralogy, lives in Oro Valley, AZ.

Chris Whitney-Smith, President of the Mineralogical Society of Arizona, lives in Phoenix, AZ.



Evan Jones program slides; Courtesy Evan Jones.

HANDOUT
CREATED BY
Chris
Whitney-
Smith, Alex
Schauss &
Don
Boushelle
TO PROMOTE
PASSAGE OF
BILL



Alex and Chris with Mineralogical Society of Arizona
"Future Rockhounds of America" at the
Arizona State Capital February 7, 2017; Chris Whitney-Smith photos.



Evan Jones program slides; Courtesy Evan Jones.

Special wulfenite exhibit by Alex Schauss and Chris Whitney-Smith at 2017 TGMS Show to help promote passage of SB-2092



VICTORY AT LAST!



Evan Jones program slides; Courtesy Evan Jones.

MSA October 12th Meeting Highlights - Continued. Chris Whitney-Smith.

Timeline of HB 2092

- Feb 10, 2017 – Bill sent to Senate for consideration. Alex continues lobbying campaign to reach members who hadn't responded in the past. MSA joins effort, delivering more wulfenite calendars to all senate members.
- Feb. 12, 2017 - Rep. Finchem and Governor's representatives see wulfenite exhibit on final day of TGMS show. Case receives television coverage.
- Feb. 16, 2017 – Bill's second reading occurs in Senate. Lobbying effort focuses on committees. Committees have no objections
- Mar. 16, 2017 – Bill passes Senate by vote of 28-1. Bill transmitted to Governor Ducey for signature. Lobbying efforts directed toward Governor's office.
- Mar. 22, 2017 – Governor Ducey signs HB 2092 into law making WULFENITE the OFFICIAL STATE MINERAL OF ARIZONA!

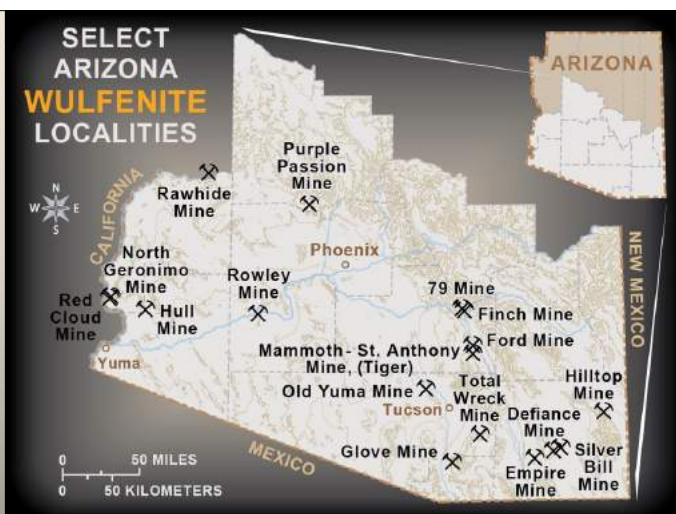
WULFENITE, MIMETITE, 5 CM. ROWLEY MINE, MARICOPA CO., AZ
Mark Hay Specimen, Jeff Scovil Photo



Evan Jones program slides; Courtesy Evan Jones.

SOME SIGNIFICANT SPECIMEN PRODUCING WULFENITE LOCALITIES IN ARIZONA

- COCHISE COUNTY - Hilltop Mine, Defiance Mine, Silver Bill/Mystery Mine, Tombstone District
- GILA COUNTY – 79 Mine, Finch Mine
- LA PAZ COUNTY – Red Cloud Mine, North Geronimo Mine, other Silver District mines
- MARICOPA COUNTY – Rowley Mine
- MOHAVE COUNTY – Rawhide Mine
- PIMA COUNTY – Old Yuma Mine, Total Wreck Mine
- PINAL COUNTY – Mammoth-St. Anthony Mine, Ford Mine
- SANTA CRUZ COUNTY – Glove Mine
- YAVAPAI COUNTY – Purple Passion Mine
- YUMA COUNTY – Puzzler Mine, Hull/Rialto Mine



Evan Jones program slides; Courtesy Evan Jones.



Evan Jones presented Certificate of Appreciation from
Chris Whitney-Smith; Steve Kaminski Photo.



Jeff Scovil offering 2018 Calendar for sale to
membership; Steve Kaminski Photo.

MSA October 12th Meeting Highlights - Continued.
Chris Whitney-Smith.



Chris Whitney-Smith presenting Bob Jones signed copies of Volume 47, Issue 9, September 2017 Edition of Rock & Gem "A Surprising State Mineral: Why Wulfenite?" to MSA Members who helped Wulfenite is Loved campaign. LEFT: Don Boushelle. RIGHT: Maggie Lyons. Steve Kaminski Photos.



Chris Whitney-Smith presenting Bob Jones signed copies of Volume 47, Issue 9, September 2017 Edition of Rock & Gem "A Surprising State Mineral: Why Wulfenite?" to MSA Members who helped Wulfenite is Loved campaign. LEFT: David Tibbits. RIGHT: Wyatt Busby. Steve Kaminski Photos.



Elyse Campbell won MSA Name Badge raffle opportunity to play and win a mineral prize; Steve Kaminski photo.

Elyse had a lucky night as she also won Jr. Raffle & Bob Holm offered her pick from a treasure box of designer stones; Steve Kaminski photo.

MSA October 12th Meeting Highlights - Continued.
Chris Whitney-Smith.



Loretta Meador and Dr. Bob Blake won MSA Name Badge raffle opportunity to play and win mineral prizes; Steve Kaminski photos.



LEFT: Calling All Juniors for free mystery mineral box and RIGHT: Joe Nychay wins a raffle prize; Steve Kaminski photos.



Cinnabar specimens members brought for show & tell; Steve Kaminski photo.



Denis Menard with a cinnabar specimen; Steve Kaminski photo.

November 9, 2017 Program: “Got Calcite?”

Presented by Mr. Chuck Houser

Page 22

Our November speaker is Mr. Chuck Houser and his program “Got Calcite?” Calcite makes up about 4% of the earth’s crust. The interesting thing about calcite is the sheer number of crystal forms and habits this mineral exhibits, as many as 3,500, depending on who you ask. Moreover, calcite forms twin crystals.... following FOUR twin laws! So, building a calcite collection offers virtually unlimited possibilities-crystal forms, twins, localities, associations, color....it is as close to a “bottomless pit” as any collecting possibility Chuck knows of. It also offers an interesting challenge: getting color into the collection. Calcite itself comes in two colors-white (actually colorless), and pale yellow. So, getting other than white and pale yellow in your display cabinet requires a little work, but that is part of the fun.

As for calcite localities, they are, like the crystal forms, varied and abundant. Calcite collections will include specimens from every major country (and a number of minor ones), and from a wide array of occurrences. And of course, there are those “classics,” occurrences and localities that anyone collecting this mineral must have to claim rights as a true calcite collector. This talk presents an expose of this mineral from the standpoint of mineral specimen collecting. We will discuss its crystal forms, twinning, the big challenge to calcite collecting, localities, classics, and finally we will see what happens when six calcite collectors get together and are allowed to have ideas unchecked by reasonable people.

By the way, as you recall from your mineralogy classes, calcite has a hardness of 3 on Mohs hardness scale, so you might consider removing your wedding ring before you handle your fine specimens of this abundant and varied mineral.

In the early 80’s, while a student at SDSU working toward a bachelor’s degree in geology, Chuck took a mineralogy class with Dr. Richard Berry. Shortly after taking that class, while on a driving trip from Missouri to California, Chuck encountered a mineral and rock shop somewhere in western Missouri. Perusing the fine mineral specimens in that shop, Chuck realized that he recognized many of the species, and so he purchased many of them (thanks Dr. Berry!). At that mineral shop began the Houser Mineral Collection.

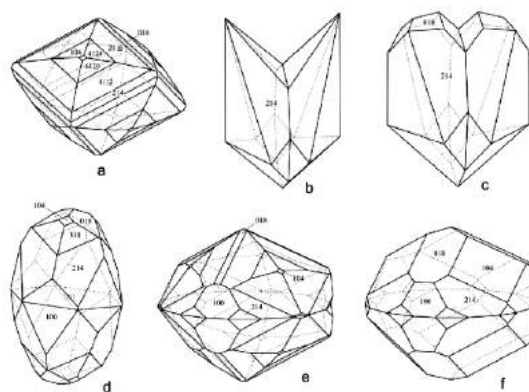
There can be a bit of an art to mineral collecting, and only the richest can afford to simply collect EVERYTHING that catches their eye. Most collectors specialize: a specific country, a mining district or even a specific mine, or a single mineral species.



CHUCK HOUSER with his Calcite Exhibit
2017 Tucson Gem & Mineral Show®;
Chris Whitney-Smith photo.

Due largely to the influence of a long time neighbor who collected calcite specimens, Chuck began to specialize in calcite from world-wide localities, a specialization that he has continued over a roughly 35 year collecting history, and through several other specializations including San Diego County minerals and minerals from the Elizabeth R Mine in Pala. At one point, Chuck even sold most of the calcite collection in order to fund the purchase of one kunzite specimen from the Pala Chief Mine. However, he kept the twins and some of the unusual and hard to find specimens, which became the basis for eventually re-building the calcite collection. Today that collection is around 250 pieces.

In his spare time, he is a hydrogeologist and project manager for SCS Engineers in San Diego. His full time job is being husband to Cindy (almost 31 years) and dad to Julianna (24) and Jennifer (20).



Crystal drawings of calcite habits from Mežica: (a) Crystal from Moring. (b, c) Twins from the 7 th level of Barget. (d) Twin from the Helena mine, Christmas tunnel. (e, f) Rhombohedral twins on (001).

© The Mineralogical Record, volume 45, September–October, 2014

Mineral of the Month - CALCITE

"GOT CALCITE, WHY CALCITE?"

By Mr. Phil Richardson

Photo Arrangement by Chris Whitney-Smith.

Mineral of the Month for November is Calcite. Yes, why calcite? Calcite, as a mineral specimen, may arguably be the most sought after and collected mineral species. It could be speculated that specimens of calcite reside in every collection, and by the way, some collections consist only of calcite, with maybe a few auxiliary, accessory minerals. How so? Calcite is almost as common, abundant, and as ubiquitous as quartz, rivals and exceeds the many crystal forms of pyrite, and comes close to the bright, vivid colors of fluorite. All three of these other minerals highly sought after, heavily collected, and well represented in collections.

What is calcite? It is a carbonate of calcium, with the chemical formula CaCO_3 , which crystallizes in the trigonal system. It has a low hardness of 3 on the Mohs scale and well developed rhombohedral cleavage; cleavage being the ability to split the crystalline material along three distinct planes creating blocky rhombohedrons, reflecting its threefold symmetry with each cleavage direction inclined at the same angle. Calcite's colors are spread across the wide rainbow spectrum, with the majority being clear, white, yellow, brown, or grey, and can be heavily influenced by other mineral inclusions and internal impurities. Calcite is found in virtually every geological environment and as a constituent in all three rock types; sedimentary, metamorphic, and igneous. As a collectible mineral, calcite does have three distinct drawbacks; its low hardness and vulnerability to surface scratching upon handling, its well-developed cleavage if mishandled or dropped, and as a carbonate, its susceptibility to a strong reaction with many acids. Despite these drawbacks, its attributes of a great variety of distinct shapes and colors makes it highly coveted as an aesthetic displayable mineral.

To further investigate the properties, associations, and relationships of calcite, as well as gain a better insight into this interesting mineral, one merely needs to go online to mindat.org. Click on the **Elements and Their Minerals** tab, then click on **Ca** on the Periodic Table, and finally click on **Calcite** found by clicking on **138 minerals with Ca and C** on the **Carbon** line within the **Element association of calcium in the Mineral World** table. You will be amazed at the enormous treasure chest of information that you have opened. As of November 2, 2017, there are 23,310 photographs specifically of calcite within the mindat photo archive. Within this body of photographs, 6,141 pictures are of US locality calcite specimens, with 499 being from Arizona.

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



CALCITE CaCO_3 on Fluorite CaF_2 , Yaogangxian, China; Fine Mineral International, © James Elliott.



CALCITE CaCO_3 , "cave pearls," 10cm, Robinson Mine, Tri-State District, Cherokee, Kansas, USA; George Witters Collection, © Jeff Scovil.



CALCITE CaCO_3 , included by aurichalcite $(\text{Zn,Cu})_5(\text{CO}_3)_2(\text{OH})_6$, 10.5cm, Ojuela Mine, Mapimi, Durango, Mexico; Green Mountain Minerals Collection, © Jeff Scovil.



Mineral of the Month - Continued.

By Mr. Phil Richardson and Photo Arrangement by Chris Whitney-Smith.



CALCITE CaCO_3 , 385 ct, Helgustadir, Iceland; Johan Maertens Collection, © Jeff Scovil.



CALCITE CaCO_3 , 373 ct, Duldhana District, Maharashtra, India; Johan Maertens Collection,

(Photographs are added daily to the mindat archive, sorted into the correct mineral categories, therefore the calcite number grows by participant submission, and sometimes daily.) Mindat also contains 29,189 photographs of calcite associated with ten other common minerals. Within this vast mineral archive, 96 significant world-wide locations for calcite are listed out of 28,113 known and recorded mineralized and documented localities. Within the *Crystallographic forms of Calcite* section, 29 rotating crystal models can be found by clicking on an image icon.

The rotating crystal models found on the mindat.org website were developed using a Shape Crystal Model program. These crystal forms were originally identified and documented in the *Atlas der Krystallformen, Volume II, Calaverit – Cyanochroit*, assembled by Victor Goldschmidt with his original printing in 1913. Within this crystal drawing treatise, calcite's vast forms and habits were first illustrated with 2,544 figures. A simply staggering number of possible crystalline shapes. The most of any one mineral studied for this endeavor. Some of these crystal drawings are shown herein.

Given all of this information, it is easy to see how some collectors can be driven to only collect calcite. One of the most prominent collectors to pursue this endeavor is Victor Yount. Victor, who resides in Virginia, has assembled a collection of calcite which numbers well over 11,000 specimens. Currently, he is compiling a Calcite Compendium based off of his personal collection, consisting of ten volumes, with the calcites divided into world locations; such as one volume on South American Calcite. In 2010, Victor exhibited but a small portion of his calcite collection at the Tucson Gem and Mineral Society show. Also contained within this exhibit were several gorgeous cut calcite samples. On one of the exhibit placards, Victor remarked "too soft to be considered a gemstone – it does make remarkable beautiful faceted stones." Victor's calcite collection has also been featured in both a Mineralogical Record magazine article, and described by Bob Jones in a Rocks & Gem issue.



CALCITE CaCO_3 on **Fluorite** CaF_2 , Elmwood Mine, Carthage, Smith County, Tennessee, USA; Stonestory photo.



CALCITE CaCO_3 , 4.4cm, Berry Materials Quarry, North Vernon, Jennings, Indiana, USA; Bruce Wadleigh Collection, © Jeff Scovil.

Mineral of the Month - Continued.

By Mr. Phil Richardson & Photo Arrangement by Chris Whitney-Smith.

Page 25

Written material has supported this vast appeal of calcite as a very collectible mineral. Bob Jones, in his wonderful book *The Frugal Collector*, from the Publishers of Rock & Gem magazine, devoted an entire chapter, **Chapter 5**, to *Calcite*. The German publisher, extraLapis, released a 114 page monograph *Calcite extraLapis English No.4: The Mineral with the Most Forms* in 2003. This monograph hits most major world-wide, notable calcite localities with stunning specimen photography, deposit information and history, and expands on the knowledge of calcite presented within the mindat.org site. If you are not yet sold on collecting calcite, this monograph should do it! An early, February 1939 Rock & Minerals magazine article introduced Tri-State area calcite to its readership. This article extolled the approximate 30 different crystal shapes found in individual crystals up to several feet in length, and from clear to yellow to lavender in color. Most recently, Rocks & Minerals magazine highlighted *Midwest Calcite* in their Jan/Feb 2017 Vol. 92 No. 1 issue. This is but a glimpse into how well calcite has been represented within the printed word.



CALCITE CaCO_3 , **Sphalerite** ZnS , 15.3cm, Elmwood Mine, Carthage, Smith County, Tennessee, USA; Wayne Sorensen Collection, © Jeff Scovil.



CHUCK HOUSER Calcite Exhibit 2017 Tucson Gem & Mineral Show®; Chris Whitney-Smith photo.



CALCITE "twin" CaCO_3 , 3.5cm, Thomasville quarry, Thomasville, York, Pennsylvania, USA; Bryon Brookmyer Collection, © Jeff Scovil.



CALCITE "twin" CaCO_3 , 12.3cm, Porvenir Mine, Mun. de Bocoyna, Chihuahua, Mexico; Terry Huizing Collection, © Jeff Scovil.

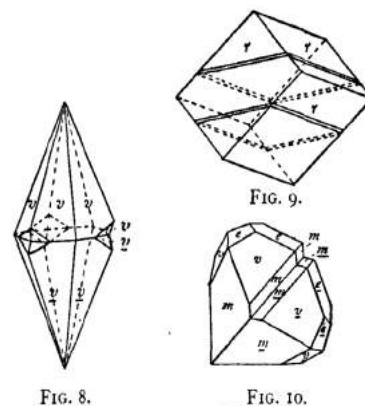


FIG. 8.

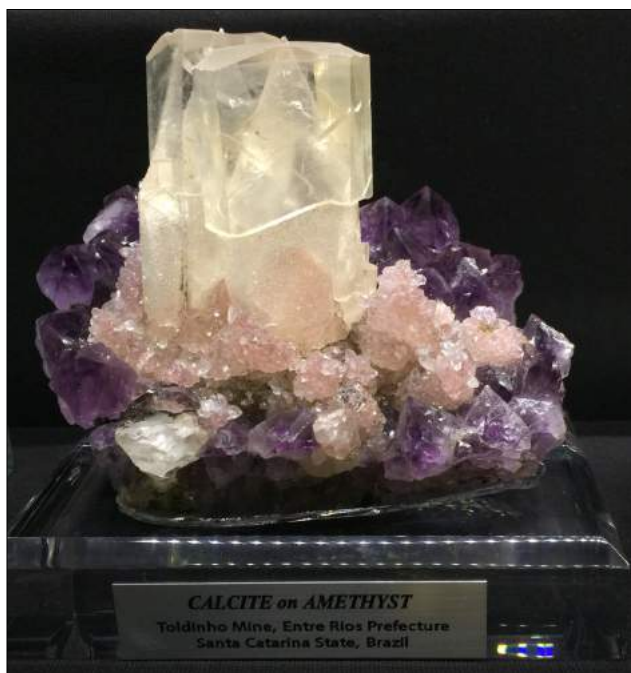
FIG. 10.

© Illustration from 1911 Encyclopædia Britannica, article CALCITE.



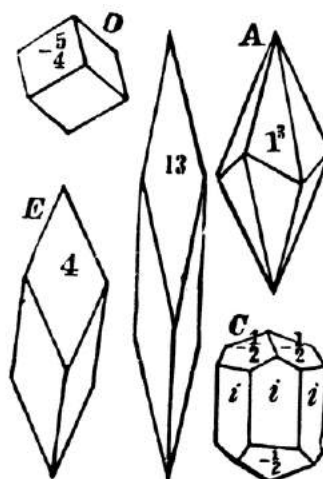
Mineral of the Month - Continued.

By Mr. Phil Richardson and Photo Arrangement by Chris Whitney-Smith.



CALCITE CaCO_3 , Quartz Var. Amethyst SiO_2 , Large Cabinet, Toldinho Mine, Entre Rios Prefecture, Santa Catarina State, Brazil, 2016 TGMS, © Chris Whitney-Smith.

To further support calcite's claim as one of the most coveted minerals, the International Calcite Collectors Association was formed, and active through the late 2000's. This organization even published a quarterly newsletter, *The Spar Box*. It appears that this association no longer exists, however this doesn't discount calcite's appeal. Calcite themed exhibits have routinely been incorporated into the annual Tucson Gem and Mineral Society show, through the support of myself, a fellow calcite devotee, with additional participation by Chuck Houser, MSA's November presenter of *Got Calcite?* Last year's TGMS show featured seven specialty cases; *Midwest Calcites*. For the 2018 TGMS show, Chuck is preparing an exhibit featuring *The Many Crystal Forms of Calcite*. If a fellow collector wanted to follow these leads, where would one start? The following is a list of reasonably available calcite localities that could form the basis of a calcite collection. (Of course this is based off of my personal opinion, not all inclusive, with a nod to affordability.)



Illustrations of calcite crystals;
© James D. Dana, New Text-book of
Geology (New York: Ivison, Blake-
man & Company, 1883)



CALCITE CaCO_3 , Big Rigg Mine, Big Rigg, Cumbria, England; Phil Gregory Collection, 2017 TGMS, © Chris Whitney-Smith.



CALCITE CaCO_3 , Sphalerite ZnS , Cumberland Mine, Smith County, Tennessee, USA; Karen Hruby Collection, Arizona Mineral Minions Exhibit 2017 TGMS, © Chris Whitney-Smith.



CALCITE CaCO_3 , 2.5cm, Kentucky Stone Quarry, Fleming Co., Kentucky, USA; Dan Carlson Collection, 2017 TGMS, © Chris Whitney-Smith.



CALCITE CaCO_3 , Cumbria, England; Natural History Museum Collection, 2017 TGMS, © Chris Whitney-Smith.



Mineral of the Month - Continued.

By Mr. Phil Richardson and Photo Arrangement by Chris Whitney-Smith.



CALCITE CaCO_3 , **chalcopyrite** CuFeS_2 , 11.4cm, Brushy Creek Mine, Reynolds, Missouri, USA; Mark Kielbaso Collection, © Jeff Scovil.



CALCITE CaCO_3 , **Mottramite** $\text{PbCu}(\text{VO}_4)(\text{OH})$, 11.7cm, Tsumeb Mine, Tsumeb, Otjikoto, Namibia; Sam Yung Collection; © Jeff Scovil.



CALCITE CaCO_3 , 18.5cm, Wenshan, Yunnan, China; Steve Smale Collection, © Jeff Scovil.



CALCITE CaCO_3 , 17.7cm, Wenshan, Yunnan, China; Steve Smale Collection, © Jeff Scovil.



CALCITE CaCO_3 , included by **Mottramite** $\text{PbCu}(\text{VO}_4)(\text{OH})$, 10.6cm, Tsumeb Mine, Tsumeb, Otjikoto, Namibia; Sam Yung Collection; © Jeff Scovil.



CALCITE CaCO_3 , included by **Copper** Cu , 4.5cm, Quincy Mine, Houghton County, Michigan, USA; J.T. Reeder Collection, © J. Jaszcak.



Mineral of the Month - Continued.

By Mr. Phil Richardson and Photo Arrangement by Chris Whitney-Smith.

World-wide Calcite Collection Basics:

- Limestone quarry calcites of the Midwest, (Indiana, US); Meshberger, Berry Materials, and Irving Materials quarry
- Pugh quarry, Wood County, Ohio, (US), (dolostone)
- Reynolds County, Missouri, (US); Brushy Creek mine and Sweetwater mine
- Elmwood mine, Smith County, Tennessee, (US)
- Schullsburg mine, Schullsburg area, Lafayette County, Wisconsin, (US)
- Bisbee area, Warren county, Arizona, (US), (including cave type formations from the underground workings)
- Rattlesnake Butte, Jackson County, South Dakota, (US), (sand calcites)
- Viburnum Trend area, Southeast Missouri Lead district, (US)
- Tri-State District, Kansas/Oklahoma/Missouri, (US)
- Copper Country, Keweenaw Peninsula, Michigan, (US), (particularly with copper inclusions)
- Tsumeb mine, Tsumeb, Otjikoto Region, Namibia
- Numerous Mexican localities; Guanajuato, Guanajuato; Charcas, San Luis Potosi; Concepcion Del Oro, Zacatecas; and others
- Numerous Chinese localities; mineral market currently awash with many available mines/sites
- Brazilian localities; Irai and Frederico Westphalen, Rio Grande do Sul
- Dalnegorsk, Primorskiy Kray, Russia
- Sokolovskoe Iron mine, Rudny, Kostanai Oblast, Kazakhstan
- Deccan Traps of India, (out of the basalts and associated with zeolites)
- Maramures District/County, Romania
- West Cumberland Iron Field, Cumbria, England

Arizona Calcite Collection Basics:

- Bisbee area, Warren District, Mule Mountains, Cochise County
- Portland mine, Pilgrim District, Black Mountains, Mohave County
- Twin Buttes mine, Mineral Hill District, Sierrita Mountains, Pima County
- Magma mine, Pioneer District, Pinal Mountains, Pinal County
- Camp Verde Salt mine, Camp Verde District, Yavapai County, (psuedomorphs)

Calcite Collection Holy Grail:

- Malmberget mine, Gallivare, Lappland, Sweden
- Bigrigg mine, West Cumberland Iron Field, Cumbria, England, (heart-shaped twin)
- Xionghuang Kuang, Guangxi Zhuang, China, (with stibnite)
- Ray mine, Mineral creek District, Dripping Springs Mountains, Pinal County, (yellow/reddish orange colored crystals with cuprite inclusions)

Got Calcite, Why Calcite; yes, let's get collecting that wonderful, plentiful carbonate!



CALCITE CaCO_3 , Hemimorphite $\text{Zn}_4\text{Si}_2\text{O}_7(\text{OH})_2 \cdot \text{H}_2\text{O}$, 5cm, El Potosi Mine, Santa Eulalia, Chihuahua, Mexico; Walt Lombardo Collection; © Jeff Scovil.



CALCITE CaCO_3 , "Iceland spar," polished, 4.7", Bolivia; © malformalady.tumblr.



CALCITE CaCO_3 , included by Cuprite Var. Chalcotrichite Cu_2O , Tsumeb Mine, Tsumeb, Otjikoto, Namibia; eBay photo.



Amazing Arizona Calcite

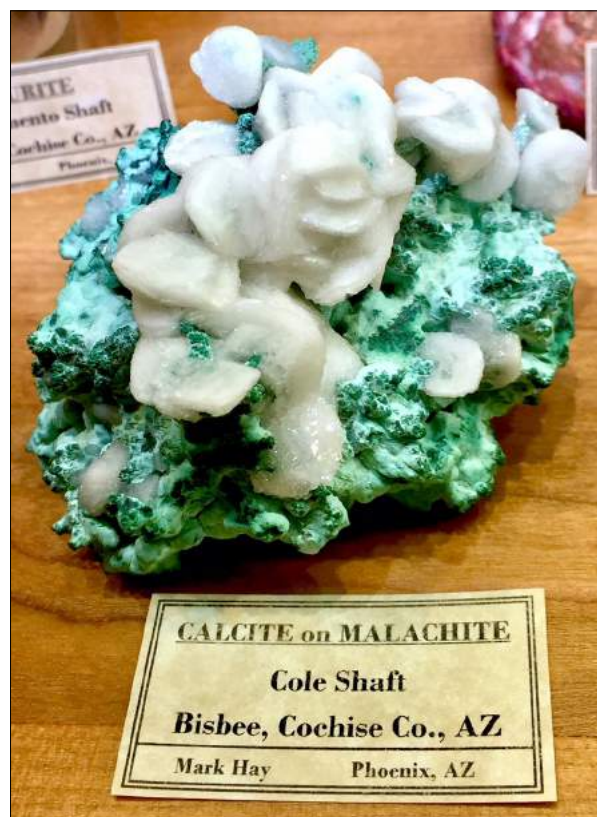
Chris Whitney-Smith



CALCITE CaCO_3 , Magma Mine, Superior, Pinal County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



CALCITE CaCO_3 , Magma Mine, Superior, Pinal County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



CALCITE CaCO_3 on **Malachite** $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



CALCITE CaCO_3 included by **Malachite** $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$, Bisbee, Cochise County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



Amazing Arizona Calcite - Continued.

Chris Whitney-Smith



CALCITE CaCO_3 , Portland Mine, Mohave County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



CALCITE CaCO_3 , Bagdad Mine, Yavapai County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.



CALCITE CaCO_3 , Portland Mine, Mohave County, Arizona, USA; Mark Hay Collection, © Chris Whitney-Smith.

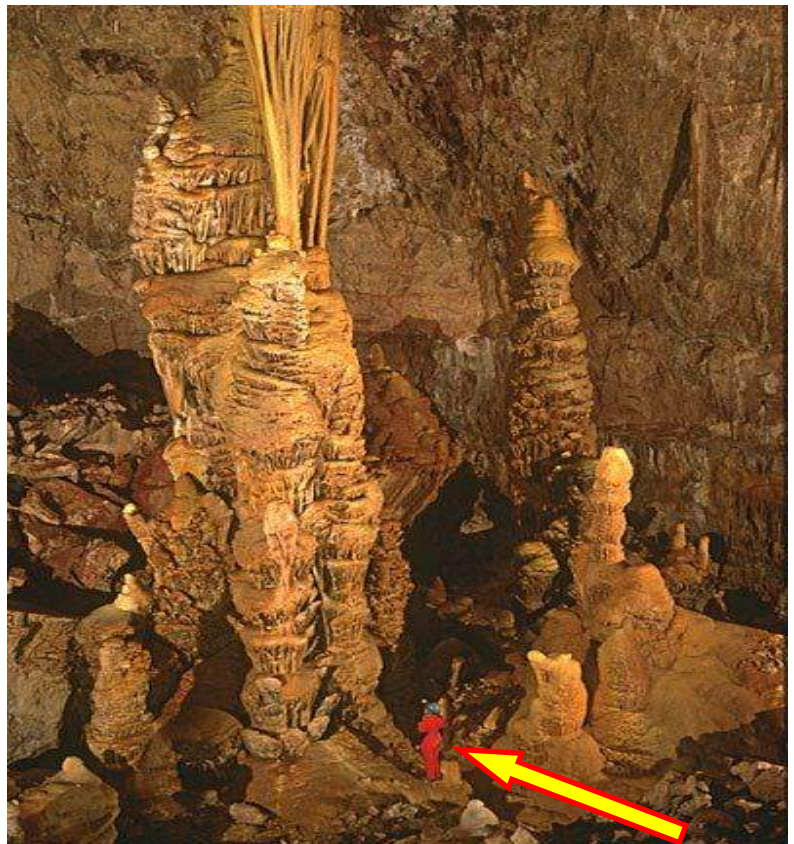
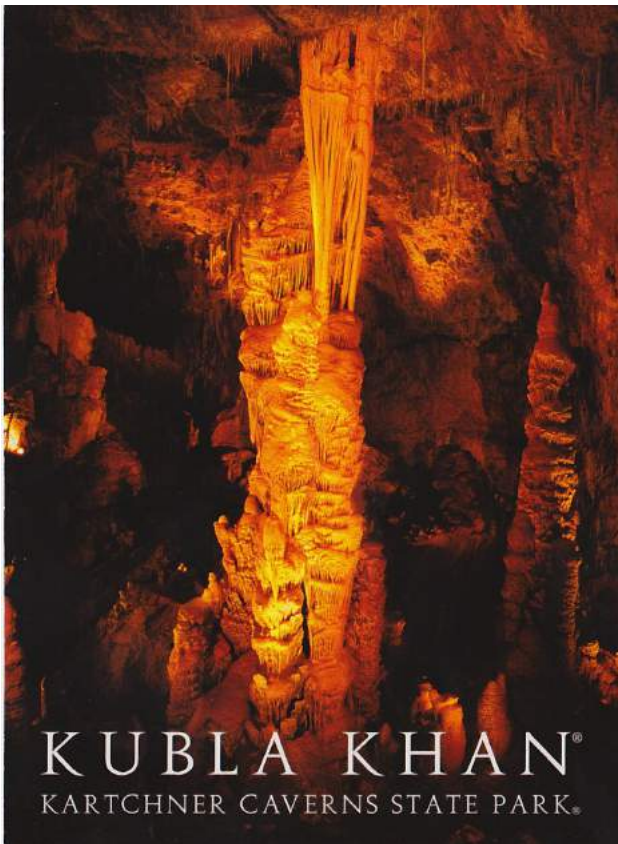


CALCITE CaCO_3 , included by Cuprite Var. Chalcotrichite Cu_2O , Bisbee, Cochise County, Arizona, USA; Les Presmyk Collection, © Chris Whitney-Smith.

KARTCHNER CAVERNS STATE PARK: Arizona Limestone Cave on Wonders.

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<https://azstateparks.com/kartchner/> and Photo Arrangement by Chris Whitney-Smith.



Kubla Khan at Kartchner Caverns State Park. Arrow points to woman standing at base of 58-foot-tall Kubla Khan Column in the Throne Room of Kartchner Caverns to illustrate size of the great limestone formations.

www.seattletimes.com/life/travel/arizonas-kartchner-caverns-xanadu-under-the-desert



Visitor experiencing Kubla Khan Column in the Throne Room of Kartchner Caverns.
<http://visit.sierravistaaz.gov>

Cavern Formation

It all began with a drop of water. A shallow inland sea covered this area 330 million years ago, depositing layers of sediment that eventually hardened into limestone. Millions of years later, this Escabrosa limestone, along with other rock layers, uplifted to form the Whetstone Mountains. The Escabrosa limestone, due to a type of tremor or fault, down-dropped thousands of feet relative to the mountains above.

Rainwater, made slightly acidic by absorbing carbon dioxide from the air and soil, penetrated cracks in the down-dropped limestone block and slowly dissolved passages in it. Later, lowering groundwater levels left behind vast, air-filled rooms.

Kartchner Caverns' wide variety of decorations, called "speleothems," began forming drop-by-drop over the next 200,000 years.

Water seeping from the surface dissolves minerals on its trip through the limestone. Once it reaches the cave, the trapped carbon dioxide escapes from the water. No longer able to hold the dissolved calcite, the drop deposits its tiny mineral load. Over time, these minerals have created the beautiful speleothems and variety of colors found in the cave. Kartchner Caverns is a "living" cave; the formations are still growing!

Paleontology of the cave

While exploring the cave, paleontologists, those who study prehistoric life, uncovered an 86,000-year record of the local faunal community. The finds included the following: skeletons of an 86,000-year-old Shasta ground sloth, a 34,000-year-old horse, and an 11,000-year-old bear, as well as terrestrial snails, a clam, a toad, lizards, rabbits, snakes, a coyote, a ring-tail, and many species of rodents. These discoveries have lead paleontologists to declare Kartchner Caverns a treasure house of information on the local fossil history of the uplands around the San Pedro River Valley.

Source: <https://azstateparks.com/kartchner/>

Pinal Gem & Mineral Society and Pinal Geology & Mineral Museum

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

Next Meeting: Wednesday, November 15, 2017 at 7 PM
Program: "Minerals of the Midwest, USA."
Speaker: Mr. Dana Slaughter "Mr. Mineral"

FUTURE MEETINGS

Date: Wednesday, December 20, 2017
Program: Arizona Minerals Topic To Be Announced
Speaker: Ron Gibbs



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

Phone: (520) 251-5419
Email: info@PinalGemandMineralSociety.org
Web: pinalgemandmineralsociety.org

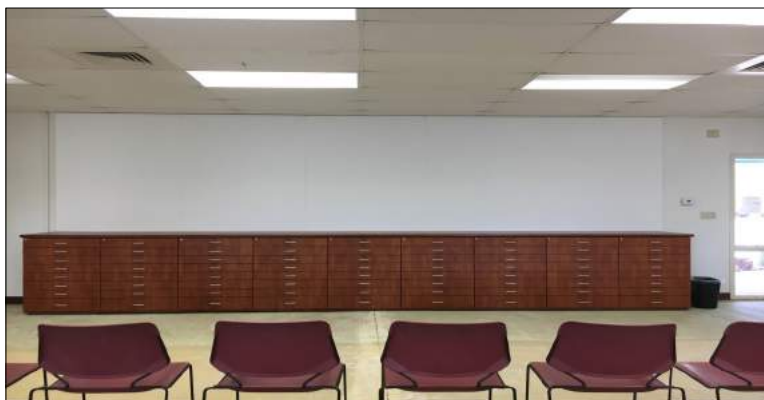
President: Dr. Ray Grant

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
Web: pinalgeologymuseum.org

Curator: Dr. Ray Grant

The Flagg Mineral Foundation has stepped up again. They have purchased a custom built drawer unit for the Museum. Arizona Correctional Industries, wood workshop at the Florence Prison, built the custom drawer unit to hold the Museum's reference collection. They did an outstanding job making the unit and volunteers have already placed over two thousand specimens in the drawers.



Flagg Mineral Foundation Donated Custom Built Collection Drawer Cases; Ray Grant Photos.

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.

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/>

Pinal Gem & Mineral Society

Arizona Mining, Mineral and Natural Resources Education Museum (AMMNRE) News

Museum Clean Up Day

By Harvey Jong

Arizona's Centennial has come and gone, and the remnants from the celebration were dumped in the old mining and mineral museum building. The clutter of vinyl banners, stage display panels, cardboard boxes, and wooden crates would hinder the renovation of the building, so MMNRE Museum curator, Catie Carter, organized a cleanup effort. She called for volunteers to help remove the discarded centennial materials in the main gallery along with debris in the second floor offices. Two morning sessions on October 19th and 20th were scheduled for this activity.



Volunteers began arriving before the Thursday 9 a.m. start time and immediately went to work hauling banners to a big green dumpster placed along the rear of the building.



Charlie Connell, Harvey Jong, George Busby, Catie Carter, Mardy and Dick Zimmermann, John & David Tibbits, and Ed Winbourne; Photo courtesy Earth Science Museum.

If you would like join in the next time there is a call for volunteers, please e-mail Catie Carter at the following:

Catie Carter
Curator, MMNRE Museum
UA Research, Discovery & Innovation
cscarter@email.arizona.edu



THE ARIZONA
GEOLOGICAL
SURVEY



Flagg Mineral Foundation and Earth Science Museum



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.

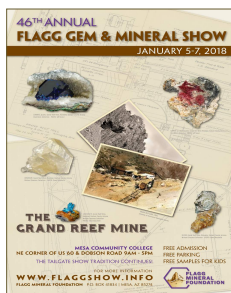
Call for Mineral and Fossil Donations.

The Foundation raises most of our funds through mineral sales, and we currently need donations of quality mineral or fossil specimens. So, if you're running out of space for your collection and/or have some extra specimens that you would like to donate, we would certainly be interested in receiving these items. All donations are tax deductible and a donation letter will be provided! In special cases the Foundation will purchase exceptional specimens or collections. While all contributions are appreciated, we do ask that you help us out by selecting materials that will be suitable for sale to the general public. The Foundation relies solely on volunteers, and with everyone's busy schedules it can be a bit difficult to go through heaps of unfamiliar, unsorted stuff to find saleable items. For more information on making a donation, please contact yedo@cox.net.

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



Mission

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

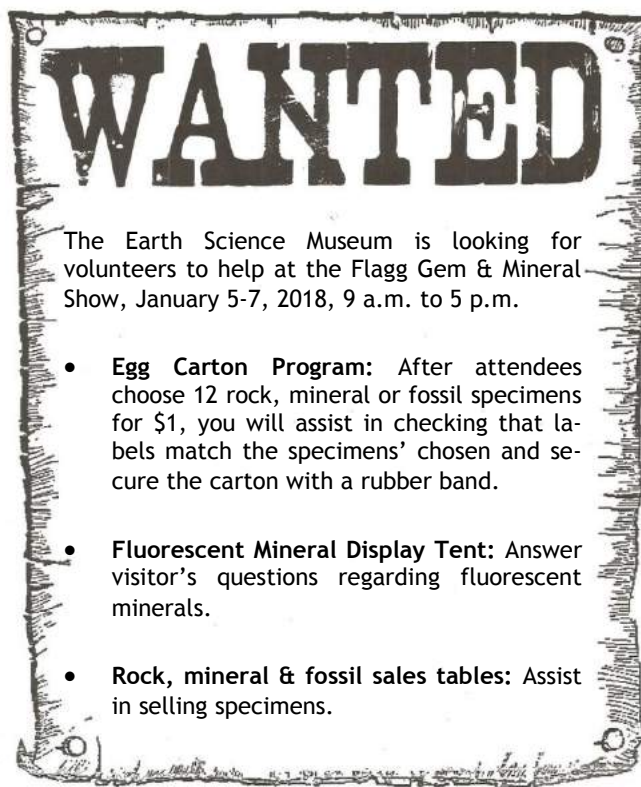
Vision

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



ESM Outreach Update

**By Mardy Zimmermann,
Outreach and Education Coordinator**



- **Egg Carton Program:** After attendees choose 12 rock, mineral or fossil specimens for \$1, you will assist in checking that labels match the specimens' chosen and secure the carton with a rubber band.
- **Fluorescent Mineral Display Tent:** Answer visitor's questions regarding fluorescent minerals.
- **Rock, mineral & fossil sales tables:** Assist in selling specimens.

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.





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

Liz Thomas

bthomas630@cox.net

Rocky Mountain Federation of Mineralogical Societies
RMFMS.org

Clubs and Members,

There are a few vacancies that need to be filled within Rocky Mountain Federation. I would like your input and any ideas of who you might have that would do a great job. Here are the areas we need to fill along with the job description. I really could use your help with finding some great people.

PUBLICATIONS CONTEST CHAIR: The Club Publications Chair shall be appointed by the President and shall direct the annual Bulletin Contest. An announcement of the contest is to be made each year, to each Bulletin Editor in the Federation. This announcement shall also be sent to the RMFMS Newsletter Editor for publication in the Rocky Mountain News at the same time, with periodic follow-up notices as reminders of the deadline date. Detailed information, entry blanks, probable judging sheets and other important data shall be included with the announcement, and be made available on the Federation web site.

The Bulletin Contest Classes will conform, as closely as possible, to the Contest Classes offered by the AFMS, i.e.: Mini Bulletin, Small Bulletin, Large Bulletin, Original Articles, etc. In addition to the a fore mentioned AFMS categories, poetry and photography entries will be accepted. The AFMS requirements and/or restrictions for each Contest Class will be in effect for the Federation Contest Classes, with the exception of the period of ineligibility for the bulletin classes. Additional classes may be added, at the discretion of the Club Publications Chair with approval by the Federation Executive Committee.

The Club Publications Chair shall secure qualified and impartial judges to grade the entries according to the judging sheets and the criteria provided. A First, Second, and Third Place ribbon will be awarded to the three best entries in each class. Honorable Mention ribbons will be awarded to the Fourth and Fifth Place entries in each class. A suitably engraved plaque will also be awarded to the First Place winner in each class. A Certificate of Participation will be given each participant, along with a letter of thanks from the Club Publications Chair. The plaques, ribbons and certificates for these Contest Classes are considered a Federation award and shall be furnished by the Federation. First Place winners in the Mini, Small, and Large Bulletin Classes will be ineligible for competition in the next two (2) annual contests. However, they will be eligible during this period to enter AFMS Bulletin Contest competition, subject to any restrictions set out by the AFMS contest information. Trophy Winners in the Articles, Features, Special Publications, Poem, Photo Stories and Photo of the Year Classes will also be ineligible for the same two (2) year period. New Editor Class is not affected by this ruling.

A Federation sponsored Editors/Webmasters Breakfast shall be held each year at the Convention. Announcements of the winners will be made at this time and awards presented. All interested persons are invited to attend the Editors/Webmasters Breakfast. The Host Society shall make all arrangements, including the sale of tickets, for the Editors/Webmasters Breakfast with the help of the Club Publications Chair. The Club Publications Chair will plan the program agenda.

Rocky Mountain Federation of Mineralogical Societies - Continued. Page 36

I do have a person who will mentor anyone wanting to take this committee on. She is Linda Jaeger. She has done this job in the past and will be more than happy to get you all set up and started.

SAFETY COMMITTEE: This is currently being held by Shain Diebold. Shain will hold the chair until we can get someone to take over. I do not have a description of the duties because there are none in the OP's. But at our next meeting we hope to have the duties of the safety committee in place.

CREDENTIALS: The Credentials Committee shall have the chair selected by the President at least four months before the annual convention. The Chair shall select two other members to help at the annual convention. This committee's job is to certify the Credentials of all delegates and alternates and the validity of all Proxies at the convening of the House of Delegates for use of the Federation Secretary and the President to determine valid voting officials.

The duties of this committee shall be as follows:

1. Receive and record all Delegate, Alternate and Proxy forms for the House of Delegates attendees. These forms may be mailed to the Chair prior to the Convention, or presented at the Convention at least one hour before the scheduled start of the House of Delegates meeting.

2. The Chair will obtain from the Federation Treasurer list of all member societies of the Federation in good standing. From this list the Chair will make up a form of which all registered Delegates, Alternates and Proxies will be recorded. Each club is allowed two votes, with one Delegate and one Alternate attending the meeting to cast votes. If one or both of these two representatives cannot attend, the club may submit their votes to one or two Proxies who are in attendance. The Proxy form must be certified by the Club.

3. The Chair plus two other people will recount and certify the forms immediately before the House of Delegates meeting starts, and present the list and numbers to the President and Secretary at the beginning of the House of Delegates meeting. In accordance with the Federation Articles of Incorporation, Article VI, paragraph 6, a quorum for the purpose of taking votes on business at the Delegates meeting is representation of one-third of the total number of societies.

4. The Chair and designated helpers should be prepared to maintain a check-in location, suggested to be set up at the Host hotel and/or the Show, for members to present their credentials. The Chair should also be prepared to maintain a check-in point just outside of the House of Delegates meeting location in order to get all late arrivals credentials turned in and counted.

5. The tally sheets and all forms submitted shall be given to the Secretary who will keep these as the official records.

6. Delegate, Alternate, and Proxy forms should be distributed in the RMFMS Newsletter, the official Information Packet from the Host Society, in the Delegates Packet sent out by the Federation Secretary, and on the RMFMS Website. These forms should be available at least three months prior to the Convention.

EDITOR: This is currently being held by Jim McGarvey. Jim will keep this up and is doing a fantastic job but he would like someone to take over this position. Again this is one of those committee chairs that I do not have anything in the op's for a job description. But I am very confident that you all know what putting together a bulletin is all about. Hard work and time but very rewarding.

I feel very confident that these positions will be filled with some great people. We just need to scratch our heads and look around at people to see what kind of talent is out there. I do want to thank you all for helping me out. I try to do a great job but I am only as great as the people that have surrounded me with their knowledge.

Thank you all so much.

Liz Thomas
RMFMS President
Bthomas630@cox.net





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.

Sandy Fuller
AFMS President
MWFtreas at rock-biz.biz

American Federation of Mineralogical Societies

AMFED.org



2017 MSA FIELDTRIPS

~~November 4-5 (CANCELED) NEVADA (Pegmatites) ** CANCELED **~~

November 19 (Sunday) LGF Museum of Natural History Scottsdale (Fossil, Pet Wood, Treasure & Minerals)

December 2-3 OVERNIGHT Red Cloud Mine / Blue Bird Mine (Wulfenite, Vanadinite, Kyanite, Fluorescent)

December 17 4x4 UFO Mine (Chrysocolla, Shattuckite)

**** DATES MAY CHANGE AND TRIPS MAY BE ADDED OR REMOVED ****

**** OVERNIGHT TRIPS COULD ALSO BE DAY TRIPS ****

**** PRINT OUT FIELD TRIP INFO & MAP TO BRING ON MSA FIELD TRIPS ****

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



MSA Field Trip, Blue Cube Claim; Jeff Craig Photos.



MSA Field Trip, Amethyst Hill Mine (Blue Owl Claim);
Chris Whitney-Smith Photo.

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

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

All trip leaders have access to this email account and it will get you the fastest response.

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

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

MSA Field Trip Inquiries? Please email fieldtrips@msaaz.org.



MSA MUSEUM TOUR: LGF Museum of Natural History November 19, 2017



Mineralogical Society of Arizona Member Event

You're Invited

Discover How the Past Can Change Our Future!

Tour Michael Fleeman's personal collection of artifacts, gems and minerals, petrified wood, and other amazing specimen's from our universe. Michael Fleeman is the visionary behind bringing a world-class natural history museum to the valley.



Date	Sunday, November 19th, 2017
Time	Noon to 1:30 PM
Tours	Begin at quarter past the hour



Paleontology



Physical Science



Petrified Wood



Anthropology




Geology/Minerals



16621 N. 91st St
Suite 105
Scottsdale, AZ 85260



MSA MUSEUM TOUR: LGF Museum of Natural History





LGF MUSEUM OFFICES
16621 N. 91st St
Suite 105
Scottsdale, AZ 85260


 **Access from Bahia Drive**

NORTHBOUND

- N on AZ-101 Loop to N. Pima Road in Scottsdale
- E on Bahia Drive past 91st Street to first drive
- Turn left (North) into complex
- Continue straight through first set of buildings then veer to the right, then then turn right and proceed to end of building.
- Office on right, 2nd door from the end suite 105

 **PARKING**

There are some spaces marked LGF immediately outside the Suite. Additional parking is available inside the complex or in the lot to the East of our building.

 **Access from Bell Road**

EASTBOUND

- E on AZ-101 Loop
- Exit 36.
- Continue North on Pima.
- E on Bell (NOT Frank Lloyd Wright)
- South on 91st Street
- Left into complex (before you reach Bahia)
- Continue East through first set of buildings then veer a bit to the right, then to the left and then turn right to end of building.
- Office on right, 2nd door from the end suite 105





LGF Museum of Natural History Teaser

Chris Whitney-Smith



CALCITE CaCO_3 , in Quartz Var. Amethyst SiO_2 , Prius size Geode,
note geode resting on moving pallet, Brazil;
LGF Museum of Natural History Collection, © Chris Whitney-Smith.

As large and magnificent as this specimen is,
these wondrous geodes can be as large as a two story house!



COALITION FIELD TRIP: “Calcite, Aragonite, Selenite after Glauberite

HOST CLUB: Verde River Rockhounds

December 2017 Coalition Trip

Verde River Rockhounds will be hosting the December Coalition Trip to Copper Canyon near Camp Verde for pseudomorphs (calcite, aragonite and selenite after glauberite).

Trip Leader: Nelson Avery
Date: Saturday, December 30th, 2017
Meeting Place: Intersection of I-17 & SR 260 at Burger King parking lot. (GPS 34 34'27.14N 11 52'57.75W).
Meeting Time: 9:00 AM
Depart Time: 9:30 AM

Directions: From I-17 take exit #287 for Cottonwood Payson and Camp Verde. Go east and next to the Shell gas station is the Burger King. We will proceed on SR 260 East, right onto Oasis Road to the bottom of the hill and right on Copper Canyon Trail. About .5 miles to cattle guard turn left. (on the right is a parking area and a latrine for the Copper Canyon hiking trail head). Turning left, .2 miles to the wash leading to the collecting area. This last .2 mile requires high clearance vehicle. Very rocky. There is also limited parking at the wash.

Attire & Tools: Please wear appropriate footwear as the wash is very rocky. The only tools necessary would be a rock pick as this material is either float or in the soft mud walls of the the wash.

Weather: if there is BAD WEATHER the day before or the day of the trip, we may have to cancel. The collecting area is reached via a rocky wash/Jeep trail and may not be passable. You can call 928-301-9591 before 7 a.m. on the day of the trip for a recorded message in the event of inclement weather.

Nelson Avery, President
Verde River Rockhounds
928-301-7147



LGF Museum of Natural History Hosts Dawn Boushelle Benefit Sunday, November 19, 2017

Page 43



Hosts

Friends and Family Benefit for
DAWN BOUSHELLE

You're Invited

To Potluck and Auction Benefit for Dawn Boushelle
to help with her ALS medical expenses and
kickstart her travel bucket list.



Date Sunday, November 19th, 2017

Time 1:30 – 4:30 PM

RSVP Ask.ChrisWS@yahoo.com

- Please RSVP if you can attend and would be interested in donating to Dawn's benefit auction?
- RSVP Donations & Dish you will bring to Potluck no later than 11/15/2017.



16621 N. 91st St
Suite 105
Scottsdale, AZ 85260



LGF Museum of Natural History Hosts Dawn Boushelle Benefit

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■ Access from Bahia Drive

NORTHBOUND

- N on AZ-101 Loop to N. Pima Road in Scottsdale
- E on Bahia Drive past 91st Street to first drive
- Turn left (North) into complex
- Continue straight through first set of buildings then veer to the right, then turn right and proceed to end of building.
- Office on right, 2nd door from the end suite 105

■ Access from Bell Road

EASTBOUND

- E on AZ-101 Loop
- Exit 36.
- Continue North on Pima.
- E on Bell (NOT Frank Lloyd Wright)
- South on 91st Street
- Left into complex (before you reach Bahia)
- Continue East through first set of buildings then veer a bit to the right, then to the left and then turn right to end of building.
- Office on right, 2nd door from the end suite 105

PARKING

There are some spaces marked LGF immediately outside the Suite. Additional parking is available inside the complex or in the lot to the East of our building.



2017 MSA MEETING SCHEDULE & MAP



MSA 2017 Meeting Schedule

MEETING DATE

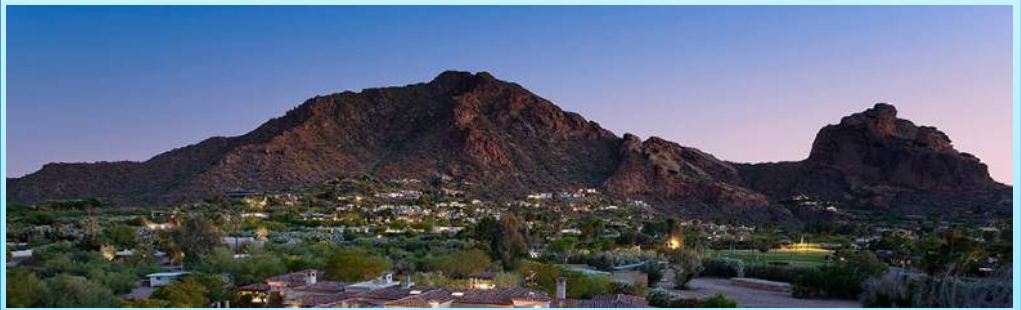
November 9th
Saturday, December 16th

ROOM NAME

Padre Serra
Padre Serra

START TIME

7:30 PM
5:00 PM



View of Camelback Mountain, Paradise Valley, Arizona; © Joan Levinson.



MSA MEETING PLACE

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

Arrive 7:00 PM
Meeting Starts 7:30 PM

MEETING ROOMS LOCATED INSIDE PIPER HALL

***** Parking Behind Piper Hall *****

***** Verify Room & Date Above *****



Upcoming Shows and Events

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 Symposium

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 Road

Payson, AZ

Apache Junction Rock & Gem Club Jewelry, Gem, & Rock Show

November 18-19, 2017

Saturday 9:00-5:00 Sunday 10:00-4:00

Adults \$3, Students \$1

Kids 12 and under free w/adult

Skyline High School

845 South Crismon Road

Mesa, AZ 85208

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

46th Flagg Gem & Mineral Show Flagg Mineral Foundation

January 5, 6, and 7, 2018

9-5 each day

Admission and Parking FREE

Mesa Community College

West parking lot on Dobson just north of the Superstition Freeway

(Rt. 60), Mesa AZ

Gila County Gem and Mineral Society Annual Rock & Gem Show

January 12-14, 2018

Fri. & Sat. 9-5

Sun. 9-4

Admission \$3 or \$5/couple

Students/children free

Gila County Fairgrounds

Highway 60, 3 mi. north of Globe, AZ

2nd Annual Gem & Mineral "Show & Sell"

Hosted by Gila County Gem & Mineral Society

Saturday, November 18, 2018



2nd ANNUAL GEM & MINERAL "SHOW & SELL"

We invite you to join the Gila County Gem and Mineral Society on **November 18th** in Miami, AZ for our second **Gem and Mineral "Show and Sell"**. This event will again be held in the parking lot of Oasis Insurance at 411 W. Live Oak (Highway 60), located in Miami from 10:00 am to 2:00 pm. Come and see what we have to offer for sale, make your own rock covered copper tree, grab some popcorn and a drink and visit with other rock hounds and jewelry makers.

We also offer tables for \$10 for you to set up and sell your own rock and mineral related items. (tables, chairs and shade will be provided)

For more information or to reserve a table contact President, Jodi Brewster (623)8109780 or jodibrewster66@gmail.com

Hope to see you on November 18th.

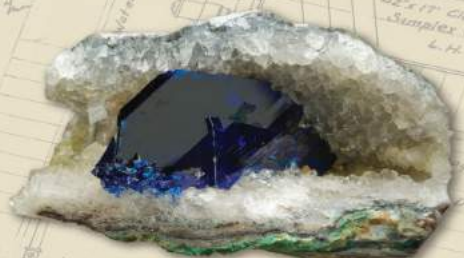


46th Annual Flagg Gem & Mineral Show

January 5-7, 2018

Poster By MSA/FMF Member Don Boushelle.

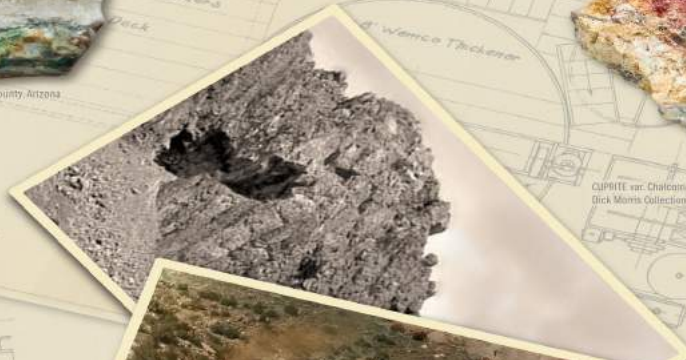
46TH ANNUAL FLAGG GEM & MINERAL SHOW JANUARY 5-7, 2018



LUNARITE, Quartz, Grand Reef Mine, Klondike, Graham County, Arizona
Dave Bank Collection - PHOTO: Jeff Scovill



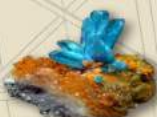
COPPERITE var. Chalcocite, Grand Reef Mine, Klondike, Graham County, Arizona
Dick Morris Collection - PHOTO: Jeff Scovill



CERUSSITE, Grand Reef Mine, Klondike, Graham County, Arizona
Michael Shannon Collection - PHOTO: Dawn Boushelle



GRAND REEF MINE, 1941
Courtesy of the Arizona Geological Survey



CELESTINE, Grand Reef Mine,
Klondike, Graham County, Arizona
Michael Shannon Collection
PHOTO: Dawn Boushelle



SILVER, Grand Reef Mine, Klondike, Graham County, Arizona
Michael Shannon Collection - PHOTO: Dawn Boushelle

THE GRAND REEF MINE

MESA COMMUNITY COLLEGE
NE CORNER OF US 60 & DOBSON ROAD 9AM - 5PM
THE TAILGATE SHOW TRADITION CONTINUES!

FREE ADMISSION
FREE PARKING
FREE SAMPLES FOR KIDS

FOR MORE INFORMATION
WWW.FLAGGSHOW.INFO
FLAGG MINERAL FOUNDATION P.O. BOX 41834 | MESA, AZ 85274



**FLAGG
MINERAL
FOUNDATION**



61st Annual Gila County Gem & Mineral Show

January 12th & 13th, 2018

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61st ANNUAL GILA COUNTY Donations: GEM & MINERAL \$3.00 Per Person SHOW \$5.00 Per Couple Students & Children -- FREE

LOTS OF CHILDREN'S ACTIVITIES ** DEMONSTRATORS AND VENDORS

LAPIDARY EQUIPMENT/TOOLS ** 40+ SPECIMEN DISPLAYS

HOURLY DOOR PRIZES ** AND MUCH, MUCH MORE!



Gila County Fairgrounds

January 12th & 13th: 9am—5pm

January 14th: 10am—4pm



FOR MORE INFORMATION:

Jodi Brewster, *President*

(623) 810-9780 OR

Val Latham, *Vendor Chairman*

(602) 466-3060

www.gilagem.org



Tucson's New Mineral Show

January 30th—February 5th, 2018

TUCSON'S NEW MINERAL SHOW
Jan. 30 - Feb. 5, 2018
1055 W. GRANT ROAD, TUCSON 85705

A map of Tucson, Arizona, showing the location of the Tucson's New Mineral Show (T.N.M.S.) at 1055 W. Grant Road. The map includes I-10, Speedway, St. Mary's, Grant, Oracle, Main, and Hotel City Center. A star icon marks the T.N.M.S. location. A north arrow is also present.

<http://www.tucsonsnnewmineralshow.com>





64th Annual Tucson Gem & Mineral Show®
February 8-11, 2018

Page 51

The Tucson Gem and Mineral Society Proudly Presents:

**THE 64TH ANNUAL
TUCSON GEM AND MINERAL SHOW®**

**CRYSTALS
AND
CRYSTAL FORMS**



Gold on Quartz
Giles Earinger Collection
Joe Budd, Photographer

**Tucson
Convention
Center**

February 8-11, 2018

FEATURING:

Retail Dealers | Exhibits
Jr. Ed. Area | FREE Lectures
"Micro" Room

Silent/Live Auctions

Saturday Night Banquet & Awards

For more information, visit: www.tgms.org



Wulfenite: Evan Jones, Owner
Jeff Scott, Photographer





64th Annual Tucson Gem & Mineral Show® Competitive Exhibits February 8-11, 2018

Page 52

By Les Presmyk, Competitive Exhibits Chairman, Tucson Gem & Mineral Show®

Dear Potential Competitive Exhibitor:

Please join us at the 64th Annual Tucson Gem and Mineral Show®, February 8-11, 2018. The numerous mineral collectors and visitors who enjoy viewing beautiful exhibits will appreciate your participation in the Show. Your competitive exhibit(s) will add greatly to the Show. The area for the competitive exhibits will be right at the center of the Exhibition Hall this year. This will really highlight your exhibit and the others who compete.

The Tucson Gem and Mineral Society and Show Committee are very interested in promoting interest in young exhibitors. Each junior age exhibitor, regardless of which exhibitor class they enter, will receive a \$100 check from Dr. Rob Lavinsky of The Arkenstone. He wishes to help encourage young collectors to exhibit and compete and this is his way of honoring those adults who helped him when he was a junior-age collector. The high point score by a junior-age exhibitor will receive a \$500 check and the second high point score will receive a \$300 check, regardless of the exhibitor category.

The various applications needed to enter competitively can be obtained from TGMS Office. If you need any additional information, please email or call the TGMS Office or contact me directly. You will also need a Display Case Information Sheet.

Applications must be submitted to the TGMS Office no later than December 4, 2017. Please include the Competitive Exhibitor Application, the signed Agreement and Show ID Form. Due to increasing security concerns, ALL competitive entries, including those for the Special Trophies and Best of Theme competitions, shall require a signed Competitive Exhibitor Agreement. No Agreement, No Entry.

The Tucson Gem and Mineral Show® theme for 2018 is “Crystals and Crystal Forms.” Trophies will be awarded for the best specimen in each of five size categories and lapidary/jewelry in the Best of Theme competition. An individual is eligible to enter a specimen in each category. **A new category has been added for self-collected specimens and this is separate from the other six categories.** This competition is open to all individuals and entries will be accepted between 4:00 pm and 6:00 p.m. on Wednesday, February 7, 2018.

The Show Committee awards five special trophies to honor those who have contributed to mineralogy and the collecting hobby. The Desautels Trophy is for the “Best Case of Minerals in the Show,” with the emphasis on quality and aesthetics of the specimens. The Lidstrom Trophy is awarded to the best single specimen contained within a competitive exhibit. The Yedlin Trophy is awarded to the best case of Master micromounts. The Bideaux Trophy is awarded to the best single Arizona specimen entered in this competition. The Romero Trophy is awarded to the best Mexican specimen or case in the Show. Any case or specimen to be judged for these trophies, except the Romero, must have a signed Competitive Exhibitor Agreement submitted.

If you have any questions or need more information, please contact me at (602) 370-0639 or email: presmyk@cox.net, or the Tucson Gem and Mineral Society office at 520-322-5773, or email: tgms@tgms.org.

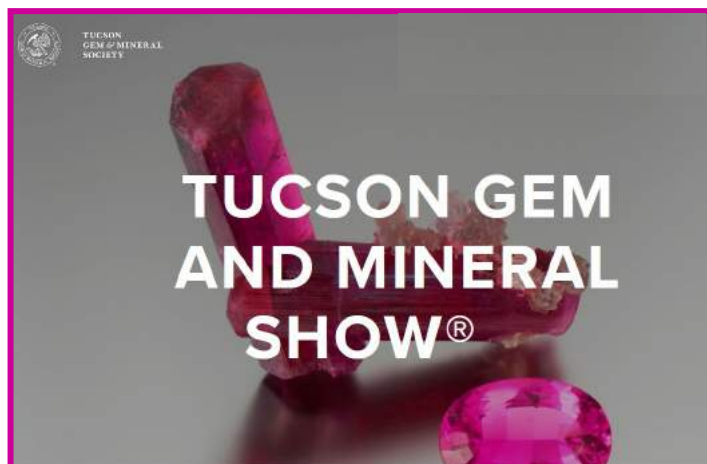
We look forward to receiving your application.

Sincerely,

Les Presmyk
Competitive Exhibits Chairman
Tucson Gem & Mineral Show®

The largest, oldest and most prestigious
gem and mineral show in the world.

The Tucson Gem and Mineral Show® has enjoyed international stature since the 1970s, and was the first gem and mineral show to bring the hobby enthusiast, the public, and the curator/professionals together for discovery and discussion.



Wirewrapping Classes

Joanne Hesterman

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.

Lapidary Shop and Lapidary & Silversmithing Classes

Doug Duffy



LAPIDARY WORK SHOP

INSTRUCTOR:

Doug Duffy



Doug Duffy,
Wei Chen Photo.

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.

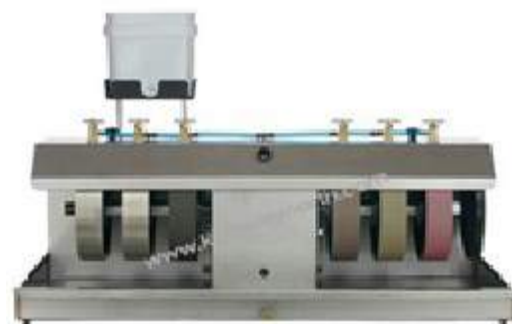
LAPIDARY CLASSES

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.

MEMBERSHIP CORNER: Dues, Name Badges and More...

MEMBERSHIP CORNER

RENEWING & NEW MEMBERS:

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

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

ANNUAL DUES AND FEES:

Single Adult (18+):	\$24.00 (Annual: Jan 1 - Dec 31)
Couple:	\$36.00 (Annual: Jan 1 - Dec 31)
Junior (Under 18):	FREE
Legacy Life Members:	FREE (After Initial Payment)
MSA Name Badge:	\$10.00
MSA 75th Pin:	\$ 3.00

LIFE MEMBERSHIP:

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

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

BENEFITS OF MEMBERSHIP: Field Trips, (Monthly Programs include; Visitor, Junior & Adult Raffles, Future Rockhounds of America Junior Program, Refreshments, Silent Auctions, Buy/Sell/Trade Events), Flagg Gem & Mineral Show, Discounts at Minerals of Arizona Symposium and University of Arizona Gem & Mineral Museum, Pinal Gem & Mineral Show, Gilbert Mineral Sale, Arizona Coalition of Rock Clubs Field Trips, Rockhound Record Newsletters email pdf copy, Holiday Jamboree and Mineralogical Society of Arizona, Flagg Gem & Mineral Show and Tucson Gem & Mineral Show® Thumbnail Mineral Competitions.

Membership questions can be emailed to Membership Chair, Mr. Ron Ginn at:
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 related fields (chemistry, meteorology, mineralogy, and lapidary arts). To foster a community among individuals interested in earth science and provide our members the ability to identify minerals we collect and how to display or further promote them abroad. To look at geoscience from earth, minerals, fossils and what can be done with them and to communicate in community of groups with similar interests to our Society."

web: msaaz.org email: MSAClub1935@msaaz.org

WEBSITE: msaaz.org

JUNIORS / FRA:
MSAFRA@msaaz.org

FIELD TRIPS:
FieldTrips@msaaz.org

PHOTOGRAPHY SPOTLIGHT:
Spotlight@msaaz.org

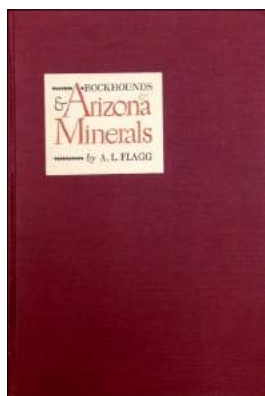
MAIN CONTACT:
MSAClub1935@msaaz.org

WEARING MSA NAME BADGES PAYS OFF!!

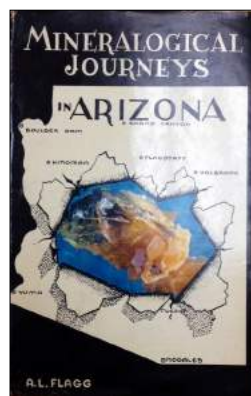
MSA members wearing their MSA Name Badges to general meeting will be issued a special raffle ticket and be eligible to participate in an additional prize drawing!

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

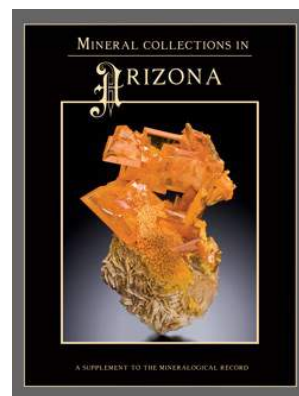
MSA Name badges are \$10.00.



(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.



Mineralogical Society of Arizona
Featured in
Mineral Collections in Arizona
(May-June 2013 Supplement)
The Mineralogical Record.

www.minrec.org to order copy.

A.L. Flagg

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



CALCITE CaCO_3 , on Cavansite $\text{Ca}(\text{VO})\text{Si}_4\text{O}_{10} \cdot 4\text{H}_2\text{O}$, Wagholi, Pune District, Maharashtra, India; Rocks & Minerals by MatildaMelinda photo.

ISSN 2572-7486

MINERALOGICAL SOCIETY OF ARIZONA

Established 1935
501(c)(3) Non-Profit Organization

EXPLORE <> SHARE <> INSPIRE

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

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

CONTACT US: MSAClub1935@msaaz.org

Annual Dues / Rates

Couple - \$36.00
Single Adults - \$24.00
Junior (Under 18), Honorary and MSA Milestone Life members - FREE

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

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



msaaz.org



Rocky Mountain Federation of Mineralogical Societies

rmfms.org



American Federation of Mineralogical Societies

amfed.org

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