

# THE ROCKHOUND RECORD

Volume 74, Issue 6 Newsletter for the Mineralogical Society of Arizona  
June 2008

**NEXT MEETING:**  
**FRIDAY, JUNE 13<sup>TH</sup>, 2008 AT 7:00 PM**

## **MEETING TOPIC & SPEAKER**



Our speaker for June is Frank Kimbler, a Mining Engineer who joined the Mines & Mineral Resources Department at the Arizona Mining and Mineral Museum on January 2<sup>nd</sup>.

His program will be on "GOLD DEPOSITS & MINERALS"

Kimbler is originally from Miami, Florida, and received a Bachelor of Science degree in Earth Science from Florida International University and his Masters in Geology from New Mexico Tech.

Since graduation, Kimbler has enjoyed a variety of mining and geology related activities. He worked for the National Oceanic and Atmospheric Administration core logging and evaluating shore sediments and mid-Atlantic ridge rocks brought back by the deep submersible Alvin. He worked on the New Mexico MILS project for the New Mexico Bureau of Mines. He wrote New Mexico Rocks and Minerals, the Collecting Guide. He has cut lazulite cabochons for Cartier and sorted diamonds for Field Diamonds. Kimbler has also done consulting work and claim staking on gold mines in New Mexico and northern Mexico.

Kimbler is married and has two teenaged sons. His leisure pursuits include astronomy, bio-electronics, light and optics, and exploring backcountry roads.



## **PRESIDENT'S MESSAGE**

By ED NICHOLS

I first want to thank Bob Jones for his presentation at our May Meeting. His photos and explanation of how these giant Selenite crystals could form on planet earth was truly fascinating. Great presentation Bob!

My thanks go also to Betty Deming our Treasurer who is also doing the chores of Vice President. She has been on the phone calling and getting several of our speakers and programs for our monthly meetings. Joanne Hesterman has done a wonderful job for our club. She has made sure we have access to the museum for our meetings and arranged the program for our June meeting. Thank you also for the beautiful program on agates Joanne. I need to give special credit to a gracious lady Lois Splendoria. She has been very helpful to Heather our present Newsletter Editor and to Betty Deming on the membership roster. Congratulations to Deanna Smith who will be the new editor for the Rocky Mountain Federation News. She will be excellent at that position.

Our June meeting will be the last until September. I wish all our members a safe and enjoyable summer. My wife and I plan on trips to the White Mountains and to Wyoming and Utah. We all hope gas prices go down.

Hope to see all of our members at the June meeting. We will have another great program.



## **ARIZONA MINERAL COLLECTOR**

### **NUMBER 111**

By Raymond Grant

Two additional minerals have been recently added to the Arizona mineral list. The total for Arizona is now 866 minerals reported from the state.

Michael Cline of Tucson found a boulder on the dumps of the Rowley mine, Maricopa County, which contained cumengeite, a lead copper chloride hydroxide. It occurs as small blue tetragonal crystals with boleite, and diaboite. The crystals are micros, but easily visible to the naked eye. It just shows that good things can be found on the old mine dumps with a little work.

Most of the wulfenite localities in Arizona are Mid-Tertiary in age (see columns 109 and 110). The Mid-Tertiary deposits are mainly lead and silver deposits.

The Rowley mine, the Red Cloud mine, and the Rawhide mine are examples. But they all have a little copper mineralization present.

The Silver district where the Red Cloud is located produced over two million pounds of lead, more than one million ounces of silver, but only two thousand pounds of copper. A number of secondary minerals containing both lead and copper are found at these mines. Cumengeite, boleite, diaboite, linarite and caledonite are examples.

The other new mineral is pharmacolite, a calcium hydrogen arsenate hydrate. It was found on specimens from Corkscrew Cave on the Hualapai Reservation in Mohave County. It is microscopic green crystals on nodular speleothems found in the cave.

Pharmacolite is found with hornesite and talmessite, also arsenate minerals. The source of the arsenic is a breccia pipe (see Arizona Mineral Collector – Number 103). Solutions from the breccia pipe located above the cave move into the cave and evaporate forming the new minerals. The primary arsenic minerals were sulfides with arsenic (gersdorffite, arsenopyrite and skutterudite) or arsenides (nickeline, parammelsbergite and rammelsbergite). When they are exposed to weathering and oxidation the arsenic is in solution and percolates down and when it evaporates new arsenic minerals with oxygen form (arsenates). Pharmacolite, hornesite and talmessite are examples.

## **SUMMER BIRTHSTONES**

*By Heather Hill*

### **JUNE**

The traditional birthstone for June is the Pearl, the only birthstone created by living organisms. Its crystal structure is orthorhombic and chemical composition of Aragonite (calcium carbonate) platelets held together by conchiolin. It has a hardness of 2.4 - 4.5 Mohs and a refractive index of 1.53-1.69. Pearls range in color from pure white to pink, tan, brown, yellow, gray, and black that has purple or green luster

When an irritant like a piece of grit, small parasite or fish lodges in the body of a shellfish such as oyster, mussel, or clam, "nacre" (aragonite), a protective substance, is produced. Over time, layers of shimmering nacre coats the intruder, creating a lustrous pearl. Natural pearls are quite rare; there is a process in which a piece of shell or bead is placed inside a mollusk to stimulate the production of nacre. This results in a cultured pearl, which accounts for about 90 per cent of the pearl industry. Natural pearls can be found in The Persian Gulf, the waters off Japan, the South Pacific Islands off northern Australia, and the coasts of Panama, Venezuela, and California. Most of the cultured pearl industry is in Japanese and Australian coastal waters.

Pearls have been ground up for use in cosmetics and as a medicine for treatment of heart and stomach conditions. The Ancient Greeks believed pearls were the hardened tears of joy that the goddess of love shook from her eyes as she was born from the sea. Arab legend tells that pearls were formed when oysters were lured from the depths of the ocean by the beautiful moon and then swallowed moonlit dewdrops, and the Ancient Chinese thought that pearls originated from the brains of dragons.

Care of pearls is very important as they can be easily discolored from skin oils. This is why properly strung pearls will have a knot between each pearl to keep them from rubbing together. The cultured pearl can be damaged by excessive wear that exposes the non-gem nucleus.

### **JULY**

The traditional birthstone for July is the Ruby, the most highly prized of gems throughout history. Fine rubies are probably among the world's rarest gems. Its crystal structure is hexagonal and chemical composition is corundum - aluminum oxide, the second hardest mineral known. It has a hardness of 9 Mohs and a refractive index of 1.762 to 1.77. Rubies are shades of red, orangey red to a purplish red and the best shade of red for ruby is often called "pigeon blood red", but ruby can be any shade of red up to almost pink. The red color in ruby is caused by trace amounts of the element chromium. Ruby got its name from the Latin word for red "rubicund", & was considered to have many magical powers, even worn by royalty as a talisman against evil.

Light reflecting off tiny rutile crystal inclusions, needles, called "silk," are oriented along the crystal faces and cause a three-ray, six-point star effect called asterism to form the popular Star Ruby.

Rubies come from all over the world and the most beautiful crystals are said to be from Burma. Quality rubies are also found in Sri Lanka, India, Madagascar, Tanzania, Zimbabwe, Kenya, Afghanistan, Pakistan, Thailand, Kampuchea, Australia, and in North Carolina here in the U.S.A. The history of ruby mining dates back more than 2,500 years.

Ancient tribes used rubies as bullets for blowguns, and it was said that a pot of water would boil instantly if a ruby was tossed into it. Ground to powder and placed on the tongue, rubies were once used as a cure for indigestion. The first lasers were made from artificial ruby crystals.

## **AUGUST**

The traditional birthstone for August is the Peridot, (pronounced pair-a-doe) a green gem formed as a result of volcanic activity of the variety of olivine, which many jewelers have nicknamed "evening emerald".

Its crystal structure is Orthorhombic and chemical composition is Chrysolite or Olivine - Magnesium/Iron Silicate. It has a hardness of 6 ½ to 7 Mohs and a refractive index of 1.654 to 1.690. Peridot are shades of transparent yellowish-green and bottle green, composed of olivine, getting its green color from its iron component. Peridot is Olivine, composed of two minerals: fayalite and forsterite. Fayalite is the iron rich member and forsterite is the magnesium rich member. Peridot is usually closer to forsterite than fayalite in composition although iron is the coloring agent for peridot. The best colored peridot has an iron percentage of less than 15% and includes nickel and chromium as trace elements that may also contribute to the best peridot color.

Peridot has been mined for an estimated four thousand years or more with the best quality peridot historically coming from either Myanmar (formerly known as Burma), or from the ancient source of Zagbargad (Zebirget) Island in the Red Sea off the coast of Egypt. Zagbargad Island has been known as St John's Island and was mined for centuries. Before World War I, the island was extensively mined, producing millions of dollars in gems. Also found in Pakistan, Brazil, Germany, Norway, Mexico, Ethiopia, the Congo, Australia and Hawaii. Many years ago, natives discovered Peridot crystals in the black sands of Hawaii, explaining their presence as tears shed by Pele, the volcano goddess.

The Myanmar, Pakistani and Egyptian gems are more rare and of better quality making them quite valuable approaching the per carat values of top gemstones.

Of course we know that peridot is also abundant at the San Carlos Apache Reservation in Gila County, Arizona. The Arizona gem material is of lesser quality, but much more affordable. An estimated 80 - 95% of all world production of peridot comes from Arizona.

There are a couple of theories about the origin of the word Peridot: perhaps derived from the French word "peridot" meaning "unclear", probably because of the inclusions and cloudy nature of the stones. Or, it could have been from the Arabic word "faridat" which means gem. Ancient Egyptians called them the "gem of the sun," because of their dazzling brilliance. It was believed that the Peridot glowed with light even as darkness fell, which is why miners were said to have scouted for these gems during the night, marking their location, and returning in the light of day to retrieve them. Perhaps this legendary mining method is the reason that the Peridot is sometimes called "evening emerald."

Throughout time, peridot has been confused with many other gemstones, even emerald. Emerald is a dark green as opposed to a yellow green and always contains inclusions. Other gemstones confused with peridot are apatite (much softer); green garnets (no double refraction), green tourmaline and green sinhalite (both of which are strongly pleochroic), moldavites (no double refraction) and green zircon (much heavier).

SOURCES: [www.galleries.com](http://www.galleries.com), [www.birthstone-gems.com](http://www.birthstone-gems.com), [www.about-birthstones.com](http://www.about-birthstones.com)

## **MSA JUNE FIELD TRIP**

**Saturday, June 21, 2008**

In 2008 I tried a plan of rotating field trips from lapidary (agate) locations to mines, to fossil locations. On one trip to the Bradshaw Mountain area we combined pegmatite and fluorescent calcite locations. I hope field trip participants were satisfied with the variety.

Some sites are not suitable for very young children. I must remember to specify on field trips those that are not suitable for children under probably the age of 10. That is a very arbitrary age and I realize with proper parent supervision and choice of sites younger children do just fine and have lots of fun. I will try to do some fall and winter trips that are suitable for our younger rockhounds and specify those trips in my write up prior to the trip. I am also aware that gas prices make long trips very hard on the budgets!

Every trip that I have been on has been more enjoyable because of the people who show up and are excited about getting out into the Arizona outback. I would like a break now and then with another club rockhound leading the field trip. I am not as familiar with mines in the state as some other club members. If another club member has some ideas I am all ears.



Back to another trip to the mountains. As I write this it is snowing in Flagstaff and the White Mountains. On our way back from the Pinetop, AZ, I would like to lead a field trip that a friend and club member from Snowflake, AZ wants to visit for fluorescent calcite. I have been to this site only once on the way back from Camp Geronimo (Boy Scout Camp). It is a beautiful area under the Mogollon Rim. The date of the field trip is June 21st, 2008

Map will be available at our meeting site at McDonald's in Payson at Hwy 260 and Hwy 87 junction in Payson at 10 am on June 21st. I need to have interested persons sign up at the June 13th meeting or call my home phone prior to June 15th when my wife and I leave for Pinetop, AZ. After June 15th my cell phone is the contact for those interested in the field trip. This site is good for all ages and is on a good gravel road all the way to the location. Usual tools, rock pick, pick, also lots of loose pieces for all to collect. Weather should be cool and a little ahead of the Monsoon.

Home phone is 480 636 1251.  
Cell is 480 370 6716.  
Ed Nichols, YeOlde Rockhound

## **SUMMER ROCK SHOWS**

*Time for a roadtrip!*

### **JUNE 2008**



June 21<sup>st</sup> - 22<sup>nd</sup>

2008 Wyoming State Mineral and Gem Society,  
Annual Show  
Norma Beers Memorial Show  
Torrington, WY



June 28<sup>th</sup> - 29<sup>th</sup>

Western Dakota Gem and Mineral Society 28th  
Annual Gem and Rock Show  
Rushmore Plaza Civic Center, Rapid City, South  
Dakota.

Hours: Saturday, June 28th, 9-6; Sunday, June  
29th, 10-4.

Club Address: WDG&MS, 2701 Mystic Mtn. Rd.,  
Rapid City, SD 57702.

Show Chairman: Don Rathert,  
605-348- 948/email:drathert@rap.midco.net



June 21<sup>st</sup> - 22<sup>nd</sup>

44th Annual Pikes Peak  
Gem & Mineral Show

Colorado Springs Mineralogical Society,  
*Gemstones of the United States* Museum Exhibits  
include a Smithsonian Exhibit from the American  
Jewelry Collection featuring American Gemstones  
Location: Phil Long Expo Center,  
1515 Auto Mall Loop

Colorado Springs, CO 80920

Times: Sat., June 21st 10:00 AM-6:00 PM, Sun.,  
June 22nd 10:00 AM-4:00 PM

Adults: \$5.00, Children (6-15): \$3.00, Children  
under 6: Free, Seniors: \$3.00

Active scouts and leaders in uniform: Free

### **JULY 2008**

July 11<sup>th</sup> - 12<sup>th</sup> - 13<sup>th</sup>

55th ANNUAL FOUR CORNERS  
GEM AND MINERAL SHOW

The Four Corners Gem & Mineral Club  
Admission is FREE!

La Plata County Fairgrounds  
2500 Main Ave., Durango, Colorado  
Friday 11:00 a.m. - 6:00 p.m.  
Saturday 10:00 a.m. - 6:00 p.m.  
Sunday 10:00 a.m. - 5:00 p.m.  
Email: [info@durangorocks.org](mailto:info@durangorocks.org)

### **AUGUST 2008**



August 1<sup>st</sup> - 2<sup>nd</sup> - 3<sup>rd</sup>

Prescott Gem & Mineral Club Show  
Embry Riddle Aeronautical University  
Activity Center

3700 Willow Creek Road Prescott, AZ  
Friday 9-5, Saturday 9-5, Sunday 9-4

\$2, children with adults; free  
Dealers, jewelry, beading, minerals, tools,  
equipment, Door prizes

[www.prescottgemmineral.org](http://www.prescottgemmineral.org)



August 15<sup>th</sup> - 17<sup>th</sup>

Annual Show at Lake George Colorado  
The Lake George Gem and Mineral Club will  
hold its annual show at Lake George Colorado  
on US Highway 24 next to the Post Office (less  
than an hour west of Colorado Springs).

Show Chairman: John Rakowski  
719-748-3861

Dealer Chair: Rebecca Blair  
719-748-3030.



August 15<sup>th</sup> - 16<sup>th</sup> - 17<sup>th</sup>

SOUTHEAST GEM & MINERAL  
Cartersville, GA

45 Miles North of Atlanta...Holiday Inn  
I-75 at Exit 293...65 Miles South of  
Chattanooga Free Parking Free Admission  
Minerals, Fossils, Meteorites, Gems & Jewelry  
- Conducted in cooperation with the new Tellus  
Science Museum (formerly Weinman Mineral  
Museum)

Martin Zinn Expositions, LLC P.O. Box 665  
Bernalillo, NM 87004 or Laura Delano  
[lldandrd@aol.com](mailto:lldandrd@aol.com)

**MARK YOUR CALENDARS!**

August 23–September 1

AGATE RENDEZVOUS 2008

The “Chaparral Rockhounds”  
of Roswell, NM

Annual ten-day, nine-night field trip campout through the Labor Day weekend held at Apache Creek, New Mexico, from August 23 to September 1, 2008.

This is an “Inter-Federation Campout & Fieldtrip Event” for the whole family with the Rocky Mountain, California and the South Central Federations (and all other Federation who wish to attend).

For any additional information about the Rendezvous, please contact Yonis Lone Eagle, RMFMS Vice President & New Mexico/Texas State Director at 505-860-2455 or via e-mail at: [rockymountainrockhounds@yahoo.com](mailto:rockymountainrockhounds@yahoo.com)

*All rockhounds that attend will abide by the American Federation of Mineralogical Societies “Code of Conduct”.*

**Arizona Mining  
and  
Mineral Museum**

**Saturday, October 18, 2008,**

**Phoenix Family Day  
at the Museum**

**Co-sponsored by the Arizona  
Mineral and Mining Museum  
Foundation**

**1502 W. Washington  
Phoenix, AZ 85007**

**Hours:**

**Sat. 10:00 a.m. to 4:00 p.m.**

**Free Admission and Parking**

**Demonstrations and activities  
for children will be sponsored  
by the Museum.**

**For event information call:  
602-771-1611**

**For dealer booths contact:  
Darrell Dodd at 480-575-5214**

FROM THE TREASURER

Thank you, Betty Deming, for submitting the following important information:

**MSA MINERALS**



Our minerals have been on display at the Glendale Public Main Library on 59<sup>th</sup> Avenue & West Brown Street for several years. Now they have other plans for that space & want the minerals moved. As it turns out, the Glendale Adult Center at 5970 West Brown Street, just across the road, said they would love to have them on display, so Bob Holm & I went over & transported them to the Adult Center. We were able to display those that were already on display, plus several that were stored in drawers at the Library. They are quite striking with many azurites & malachites from Bisbee. In fact, Bill Hornbuckle from California joined our club last month as a result of seeing our minerals at the Library. I don't know how many members have stopped by to view them; if you're ever over that way stop in & take a look.



**OUR NON-PROFIT STATUS**

**There was a misunderstanding recently about paying a member for services rendered. We could lose our non-profit status if we pay *any* member for *any* service. Just thought I would clear that up for anyone that might be interested.**

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I have a few crates of good rough rock, mostly red & some green jasper, along with other rocks my family & I have collected in AZ, mainly the Cave Creek area, over the past 2 decades. Need to sell it for dirt cheap or give away. Also have some tumbling items, specimens....nothing major; just stuff we can't use. Please email Heather: [sagegirl777@juno.com](mailto:sagegirl777@juno.com) if interested.

**MSA CONTACT INFO:**

President & Field Trip Coordinator  
(Club Trips) Ed Nichols  
(480) 636-1251

Treasurer and Coalition Field Trip  
Coordinator: Betty Deming  
(602) 242-1553  
Email address  
[bd\\_mac2003@yahoo.com](mailto:bd_mac2003@yahoo.com)

Secretary and Vice-President:  
Positions vacant. Interested?  
Contact Ed Nichols

Newsletter Editor: Heather Hill  
Email address:  
[sagegirl777@juno.com](mailto:sagegirl777@juno.com)

Mineral Curator: John McLaughlin  
(623) 979-5246

Librarian/Door Prizes/Hospitality  
Bob Holm (623) 247-1325

Refreshments: Lynne Dyer  
(480) 396-2393

**MSA BOARD OF GOVERNORS:**  
LYNNE DYER, TERRY DYER  
BOB HOLM, K.J. WERNER



**Say Hello to Our New Members!**

Kathleen Heitzmann

Daniel, Meaghan & Emmalia Swihart

Lisa Kline, Tom Marra,  
and Bailey & Conner Marra

# MSA PUZZLE OF THE MONTH

ONE PRIZE WILL BE GIVEN TO A JUNIOR AND AN ADULT CLUB MEMBER

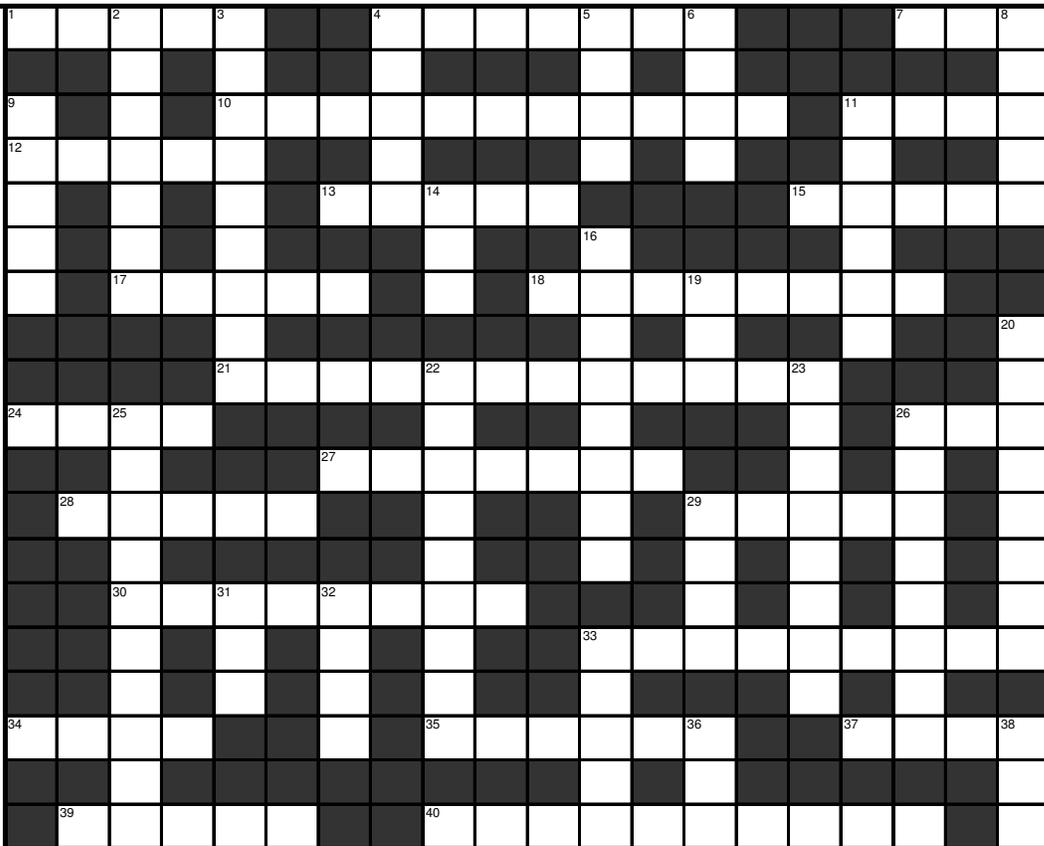
## M I N E T E R M S

### ACROSS

1. miner's lamp (eng.)
4. Ore furnace
7. tram, wagon, corve
10. testing location
11. seismogram wave that follows the source pulse
12. construct, make
- 13 the ore room
15. (sl) you catch my \_\_\_?
17. air movement
18. baby's bed(ing)
21. a process for metal
24. out\_\_\_\_, protrude
26. drilling assembly, abbr
27. airway, pipe or casing
28. ride the pine
29. "Are you on the \_\_\_?"
30. waste rock put back

### DOWN

2. to purify
3. cranial structure
4. vertical hole



5. consolidated pyroclastic rocks, generally
6. two or more minerals
8. \_\_\_\_ From The Past
9. steep sided vertical shaft opening at the surface
11. a drilling sample
14. a liquid that's mined
16. why you don't like to go to the dentist
19. be with you in a \_\_\_\_

20. midevil doctoring
22. even naked moles do it
23. mover
25. rock that covers the ore body
26. a type of crushing process
29. ore too low for profit
31. cover, to top
32. in a state of \_\_\_\_ (unrest)
33. \_\_\_\_ basket "file 13"
36. The \_\_\_\_ And The Pendulum
38. long steel wedge

Thanks to the following resource sites: EduMine.com, Dictionary.com, Thesaurus.com, Wikipedia.com, cmu.edu, Mindat.com and RocksandMinerals.com

**HEATHER HILL  
MINERALOGICAL SOCIETY OF ARIZONA  
1502 W. Washington Street  
Phoenix, AZ 85007**

**ADDRESS CORRECTION REQUESTED**

[www.azminerals.com](http://www.azminerals.com)



**FIRST CLASS MAIL**

**Exchange Editors:** Please send all newsletters to the return address listed above.

**Mineralogical Society of Arizona  
Founded 1935  
A Non Profit Organization**

The Mineralogical Society of Arizona is a member of the American Federation of Mineralogical Societies and the Rocky Mountain Federation of Mineralogical Societies.

**Purpose:** To promote popular interest in the various Earth Sciences, and particularly the fields of Geology, Lapidary, Mineralogy, and related subjects.

ID badges are available from the Treasurer.

**Meetings:** 7:00 p.m. at the Arizona Mining and Mineral Museum, 1502 W. Washington, Phoenix, AZ - on the second Friday of the month, September through June (*except February, which is the third Friday*).

**Dues:** Adults – Single Adults \$12.00, Juniors (18 yrs. and under) -\$2.50, Families & Couples - \$20.00.

**Mail dues to Betty Deming at  
2922 W. Claremont, Phoenix, AZ 85017**



[www.amfed.org](http://www.amfed.org)

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