

# THE ROCKHOUND RECORD

Vol. 72, Issue 8

Newsletter for the Mineralogical Society of Arizona, September 2006



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## Upcoming Program - Tuesday, September 12, 2006

### Tammy Pike - "Tread Lightly" Aware Outdoor Ethics In Relation to Mineral Collecting and Vehicle Use on Private and Public Lands

### MSA Members Receive the A. L. Flagg Distinguished Service Award from The Arizona Mineral and Mining Museum Foundation

Two of our MSA members, Marc Watson, who joined the MSA in January of 1963, and Ben Benham, who joined the MSA in January of 1948, were both awarded the A. L. Flagg Distinguished Service Award this year by the Arizona Mineral and Mining Museum Foundation (formerly the Flagg Foundation). Congratulations, Marc and Ben!

### REMINDER!

### New Tuesday Meeting Night to Be "Tested" for the Fall of 2006

The club will be trying out a different meeting night during the Fall of 2006 to see if it will accommodate our members' schedules. We are hoping to get some of the members, who cannot attend on Friday nights, to come to the meetings on Tuesday nights instead.

Starting in September the dates for the general meeting will be the following:  
**September 12, October 10, and November 14**

### HELP, HELP, HELP!!! - NEW OFFICERS NEEDED FOR 2007

*By Lois Splendoria*

For a number of years in the MSA, a small group of individuals has constantly changed officer positions in order to keep the club going. I have been the Secretary (several times), Vice President & Program Chairman (2 years), President (2 years), Hospitality Chairman in 1994, and Silent Auction Chairman for at least 10 years. Ever since the mid-90's, Shirley Fiske, Gilbert Flores, and I have all been rotating as President and Vice President. Tom Horton was the Newsletter Editor in 1998 and 1999, and then was President and Newsletter Editor for the next three years after that. We have had several long-term Treasurers. We are tired of playing musical chairs, a.k.a., musical "offices." It is time for the members, who have joined in the last few years, to get involved. In essence, this is our club; if we don't commit, we won't be able to have a club anymore.

Effective December 31, 2006, Sally Fiske will be finishing up her last term as the Treasurer of the MSA, and I will be finishing my last term as the Secretary of the MSA. I can no longer do the newsletter and be the secretary of the club.

If you want the club to continue, it is up to ALL of us to get involved, not to have it sustained by a few individuals. There is only one way to grow, and that is to extend yourselves. The rewards of involvement are ongoing, and we need your help.

## Show Calendar

### **Sept. 7 - 10 - Tucson, AZ**

#### **Gem & Lapidary Wholesalers, Inc.**

Holiday Inn/Holidome - 4550 S. Palo Verde Rd.

601-879-8832, Fax 601-879-3282

E-Mail: [info@glwshows.net](mailto:info@glwshows.net)

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

### **Sept. 7 - 10 - Tucson, AZ**

#### **Gem & Lapidary Wholesalers, Inc.**

Rodeway Inn/Grant Rd. - 1365 W. Grant Rd.

Thurs.-Sat. - 10 a.m.-6 p.m.; Sun. - 10 a.m.-3 p.m.

601-879-8832, Fax 601-879-3282

E-Mail: [info@glwshows.net](mailto:info@glwshows.net)

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

### **September 15 - 17 - Denver, CO**

#### **Denver Gem and Mineral Show**

Merchandise Mart - 451 East 58th Avenue

Sponsored by: The Greater Denver Area Gem & Mineral Council

Hours: Fri. - 9 a.m.-6 p.m.; Sat. - 10 a.m.-6 p.m.; Sun. - 10 a.m.-5 p.m.

Show Chair: Martin Hannu, 303-233-2516

E-Mail: [info@denvermineralshow.com](mailto:info@denvermineralshow.com)

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

### **September 30 - Sedona**

#### **Sedona Gem and Mineral Club - 5th Annual Show**

Sedona Red Rock High School Cafeteria

Highway 89A and Upper Red Rock Loop Road in West Sedona

Sponsored by: Sedona Gem and Mineral Club

Hours: 9 a.m. - 4 p.m.; Free Admission and Parking

For information call: 928-634-2404 or 928-203-9476

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

### **October 6, 7, 8 - Prescott, AZ**

#### **Prescott Gem & Mineral Show**

Yavapai County Fair Grounds - Coors Event Building

10401 N. Hwy. 89A, Prescott Valley, AZ, 86314

Sponsored by: Prescott Gem & Mineral Club

Hours: Fri. & Sat. - 9 a.m.-5 p.m., Sun. - 9 a.m.-4 p.m.

Admission: \$2.00, seniors \$2.00, Children under 12 free with adult, Free Parking

Show Chair: Larry Jackson, P. O. Box 3923, Chino Valley, AZ, 86323, 928-636-9188

E-Mail: [lpjack65@cableone.net](mailto:lpjack65@cableone.net)

### **Oct. 14 - 15 - Payson, AZ**

#### **Payson Rimstones Rock Club, 9th Annual Gem & Mineral Show**

Tonto Apache Reservation - Recreation Center on Hwy 87

Next to the Mazatzal Casino in Payson, AZ

Hours: Sat. - 9 a.m.-5 p.m. & Sun. - 10 a.m.-4 p.m.

Admission: \$3.00, Children under 12 FREE. Free Parking

Contact Lee Norman, 1102 E. Cedar Lane, Payson, AZ, 85541, 928-474-8777 or [rock2006@aol.com](mailto:rock2006@aol.com)

*(Show Calendar - Continued from Page 2)*

**Oct. 14 - 15 - Sierra Vista, AZ**

**32nd Annual Huachuca Gem, Mineral, & Jewelry Show**

Elks Lodge, on Wilcox Avenue (one block from Buffalo Soldier Trail)

Sierra Vista, AZ, 85635

Sponsored by the Huachuca Mineral & Gem Club and various businesses in the area

Hours: Sat. - 9 a.m.-6 p.m. & Sun. - 9 a.m.-4 p.m.

Free Admission and Parking

Show Chair: Larry Nelson, 6932 E. Conestoga Trail, Sierra Vista, AZ, 85635, 520-459-5211

Dealer Contact: Bill Jaeger, 3441 E. Astro St., Hereford, AZ, 85615, 520-803-6590

E-Mail: [hmgcshow06@c2i2.com](mailto:hmgcshow06@c2i2.com)

**Oct. 28 - Phoenix, AZ**

**Family Day at the Museum &**

**Arizona Mineral & Mining Museum Foundation Semi-Annual Sale**

Arizona Mining & Mineral Museum

1502 W. Washington, Phoenix, AZ, 85007

Hours: 10 a.m. - 4 p.m.

Admission: Free

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

For event information, contact: Sue Celestian - 602-255-3795

For dealer booths, contact: Darrell Dodd - 480-575-5214

**Oct. 29 - Scottsdale, AZ**

**Rings & Things - Wholesale Bead Show**

Chaparral Suites Resort/Scottsdale - Conference Center

5001 N. Scottsdale Rd.

Hours: 1-5 p.m.

800-366-2156, [www.rings-things.com](http://www.rings-things.com)

**Nov. 4 - Tucson, AZ**

**Fifth Annual Silent Auction**

Old Pueblo Lapidary Club, 3118 N. Dale

Sat. 9 a.m. - 2 p.m.

Free Admission

Contact Danny Harmsen, 520-323-9154

**Nov. 25 - 26 - Wickenburg, AZ**

**Sixth Annual WOWW Gem and Art Fair**

Wickenburg Community Center, 160 N. Valentine Street

Wickenburg, AZ, 85390

Sponsored by the Wickenburg Gem and Mineral Society

Admission: \$2.00

Raffle: Drawing on Sun. Nov. 26 - Tickets-\$2.00 each or 3 for \$5.00

Vendor/Show Information: Lucille Burroughs, 928-684-0099, E-Mail: [gmlu@w3az.net](mailto:gmlu@w3az.net)



## **SYNTHETIC RUBY AND SAPPHIRE**

### **Birthstone for September**

Ruby and sapphire have long been considered two of the most desired and valuable gems. Natural material has never been available in sufficient quantity to meet world demand. It is therefore not surprising that their synthesis would be considered a worthy goal. The earliest experiments were those of Marc Gaudin in France in the mid-19th Century, although gem quality corundum was not produced. In the mid 1880's, however, rubies appeared on the gem market that were initially thought to be natural, but with careful study showed to be manufactured products. Many of these rubies, known as "Geneva rubies," because it was thought that they were made near Geneva, Switzerland, were sold as natural. Just after the turn of the century another type of ruby appeared on the market. Termed "reconstructed ruby," this material was supposed to have been made by melting together bits of natural ruby. In recent years it has been demonstrated that such a process will not work, so these rubies must also have been synthesized from chemical raw materials.

A commercial process for manufacturing ruby was developed by Edmund Fremy of Paris. His rubies, however, were all in the form of thin plates. They could be manufactured cheaply in great quantity, and were sold widely for use in watch and instrument bearings. But they were too thin to provide large gems of fine color.

In the last decade of the 19th Century, one of Fremy's assistants, August Verneuil, developed a new and different technique for synthesizing ruby. Fremy's method involved dissolving aluminum oxide in a molten salt, and allowing ruby to crystallize from the melt by slow cooling. Verneuil's method, which he called "flame fusion," employs the direct melting of aluminum oxide in a flame. The powdered chemical is allowed to dribble from a hopper through a very hot flame. The powder melts in the flame and falls in the form of tiny droplets onto a rotating ceramic rod. Eventually a mass of material builds up which cools and crystallizes as a large single crystal. Ruby can be

made by adding a pinch of chromium to the aluminum oxide. Sapphire in various colors requires different combinations of metal oxides. It is interesting that the basic design of the Verneuil furnace hasn't changed much since the day it was first introduced in 1904.

The Verneuil process grows most synthetic gem ruby and sapphire today. The furnaces can be automated so a minimum of personnel can run many machines. Factories in Germany, France, and Switzerland may contain nearly 1000 furnaces running at the same time, night and day. The output of such factories is measured in tons, rather than carats, and the cost of rough synthetic corundum, can be as low as a few cents per carat. The crystals produced, called bolus, are cut in mass production shops, sometimes by machines, or by hand where labor is inexpensive.

A few companies use other techniques for manufacturing corundum. Ruby for lasers is grown by pulling crystals from a melt, in a way reminiscent of pulling taffy, although the procedure is complex and carefully controlled. A more refined version of Fremy's method is also used to a limited extent. Today the method is called flux infusion, and the process yields ruby of fine color and clarity, although it is far more expensive than the Verneuil process.

Synthetic sapphire and ruby appear in a variety of commercial jewelry, such as class rings and birthstone jewelry. Usually a ring sold as "alexandrite" or "amethyst," where the label includes the quotes, is a synthetic stone. The so-called "alexandrite" sold to tourists throughout the world for a few dollars per stone is a specially made corundum that has a color change reminiscent of true alexandrite. Colorless corundum, or "white sapphire" is manufactured in huge quantities for use as colorless gems and for bearings in electric meters, as well as for use in specialized electronic applications.

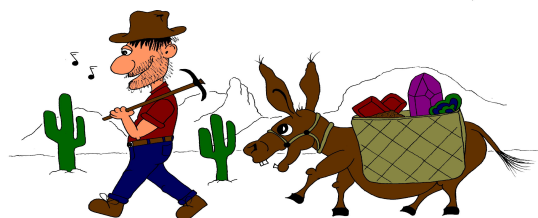
*(Continued on Page 5)*

(Continued from Page 4)

Star ruby and sapphire can be made by adding titanium oxide to the feed powder in a Verneuil furnace. As the corundum cools, the titanium oxide forms crystals of the mineral rutile within the host corundum. The rutile crystals are needle-like and orient themselves according to the symmetry of the corundum, which is hexagonal (six-sided). This produces a six-rayed star when such bolus are cut. The color range of synthetic star corundum is the same as that of faceted gems.

Synthetic corundum has distinguishing characteristics. The Verneuil process always produces curved growth lines which are visible under magnification and with the correct illumination. No natural mineral ever displays such curved lines, called striate, and their presence is a guarantee of synthetic origin. Another characteristic of synthetics is the presence of perfectly round bubbles, sometimes with a small tail like a tadpole. Flux-grown rubies may show characteristic inclusions of the flux. Other tests normally used in gem identification may not be helpful.

*Reprinted from the Aug./Sept. 2006  
Rimstones Review  
From Gems and Jewelry*



#### Need to Contact the Officers?

**President** - Gilbert Flores  
**(602) 300-4368**

**Treasurer** - Sally Fiske  
***xmasbelle@aol.com***

**Secretary** - Lois Splendoria  
***chimes@extremezone.com***

#### The Rhodochrosite Story

Also called Rose Del Inca, this rare and beautiful pink stone is almost exclusively mined in a remote Andean region of Argentina known as Capilita.

Its name comes from the Greek word "Rhodo" for rise and "Chros" for color. It is popularly known as Inca Rose because this semi-precious stone was discovered by the Inca civilization and treasured by them around the 12th century AD.

Generations later, a man named Franz Mansfiel rediscovered the mine and, during one of his explorations, found the Inca mummy that held in its hand an amulet carved out of this unique stone. Most unusual formations with a circular pattern of light and dark Rhodochrosite occur in this Argentine treasure chest.

Highly artistic pieces are hand carved out of the legendary Inca Rose, although due to its rarity and cost, smaller pieces are more often frequently cut today.

*Reprinted from the September 2006 Breccia  
via Rockhound Ramblings, August 2006*

#### Computer Terms What They Used to Mean

"Hard Drive" - Climbing a steep, muddy hill with a full load in your four-wheel drive.

"Keyboard" - Place to hang your keys.

"Window" - What we look out of to see what kind of day it is.

"Floppy" - When you run out of Polygrip.

"Modem" - How you got rid of your dandelions.

"Reboot" - What you do when the first pair gets covered with barnyard stuff.

"Network" - Activity meant to provide bait for your trot line.

*From the November 1997  
Rocky Mountain Federation Newsletter*

**Goofy Definitions**

**ARBITRATOR:** A cook that leaves Arby's to work at McDonald's.

**AVOIDABLE:** What a bullfighter tried to do.

**BERNADETTE:** The act of torching a mortgage.

**BURGLARIZE:** What a crook sees with.

**CONTROL:** A short, ugly inmate.

**COUNTERFEITERS:** Workers who put together kitchen cabinets.

**ECLIPSE:** What an English barber does for a living.

**EYEDROPPER:** A clumsy ophthalmologist.

**HEROES:** What a guy in a boat does.

**LEFTBANK:** What the robber did when his bag was full of money.

**MISTY:** How golfers create divots.

**PARADOX:** Two physicians.

**PARASITES:** What you see from the top of the Eiffel Tower.

**PHARMACIST:** A helper on the farm.

**POLARIZE:** What penguins see with.

**PRIMATE:** Removing your spouse from in front of the TV.

**RELIEF:** What trees do in the Spring.

*Source Unknown*

*Happy Grandparents Day  
Sunday  
September 10, 2006*

**Build A Safe Rock Garden**

Do not use any of the following rocks or minerals in your rock garden.

**ANTIMONY** - A bright, white mineral, contains arsenic.

**CINNABAR** - A vivid, red mineral, contains mercury.

**GALENA** - A silvery, shiny mineral, contains lead.

**FLUORITE** - A violet or yellow mineral, contains fluorine.

**REALGAR** - A vivid, red mineral, contains mercury.

**MALACHITE** - A green, banded mineral, contains copper.

**KAOLIN** - Smooth and white, absorbs water and then expands.

**OBSIDIAN** - A dark and glassy material, spalls off in sharp needles.

**ALABASTER** - A white or gray material, is water soluble.

**GYPSUM** - A clear and shiny material, is water soluble.

*Reprinted from the June 2006 Breccia  
via The Trilobite, May 2006*

**Tips and Hints**

Real or fake diamonds can be differentiated by using a magnet. Synthetic diamonds will stick to a magnet, but natural diamonds will not.

*Reprinted from the June 2006 Breccia  
via The Pick and Dop Stick, May 2006*

**General Meeting Minutes  
June 9, 2006**

*By Lois Splendoria, MSA Secretary*

The meeting was called to order by Past President Shirley Fiske. There were no visitors at tonight's meeting. Chris Davis introduced Maria Buendia. Shirley thanked Marc Watson for bringing the cookies.

**Coalition Field Trip** – Betty said that the Rimstones Rock Club will again this year lead a trip up to the area north of Payson to hunt for a variety of fossils, geodes/nodules and petrified corals. The plan has not been written up, but, like last year, they will meet in Payson, probably at around 9:00 a.m. on Saturday June 24. The usual meeting spot is at the intersection of Highway 87 & 260, NE corner behind Taco Bell. There is a notice about this in the June newsletter. Bob Holm said he had collected in this area. Gilbert said there may be some fire restrictions at the time of this field trip. He suggested that those attending the field trips exchange cell phone numbers so that they may contact each other while in the field.

The group discussed field trip possibilities for the summer. Chris Davis said he will contact the professor at the Museum of Northern Arizona in Flagstaff, where he visited several summers ago. Several of the members said they would be interested in going there. Les Wagner suggested the Lowell Observatory in Flagstaff as a place to visit.

**Meeting Night Change** – Shirley announced that starting in September, we will be meeting on the second Tuesday of the month. The club will test out this meeting night for September, October, and November 2006. The September speaker will from the Bureau of Land Management. More information will be forthcoming in the newsletters.

**Club Changes** – Shirley announced that our club will no longer sponsor the Arizona Rockfest. She asked everyone to give us ideas on how to reinvigorate the club. Gilbert announced that WR Russ had stepped down as the vice president. Shirley said she would take care of the speakers for the rest of 2006.

**Announcements** – Mary Bishop said she went to Tucson to visit Donna McCabe, who used to be a member of the MSA. They visited Harrison Yocum's back yard in Tucson, which is quite a mineral showcase. Shirley asked Mary to send Lois Splendoria more information about the place so that the club could plan to visit it in the future.

**(EDITOR'S NOTE:** Since learning about this, Harrison Yocum sent me some information about him. He is a horticulturist and the founder of the Tucson Botanical Gardens. There was an article about him in the May 2005 Arizona Highways.)

Gilbert acknowledged Barbara Atkinson for updating and improving the club's web site. He said that his father, Gil Flores, had not been feeling well. Gilbert made an announcement about the two yard sales this weekend in Tucson and Sierra Vista. Lois said there were copies of information about these sales on the front table for the members. Chris Davis acknowledged Lois for her work with the newsletter.

Shirley introduced our speaker for tonight, Dr. Madan M. Singh, Ph.D., P.E., who is the Director of the Department of Mines & Mineral Resources for the State of Arizona. His program was entitled, "Status of Mining Activity in Arizona."

After the program, the raffle was held, and refreshments were enjoyed by all.

**Interesting Tidbit**

**Petrified wood is a type of FOSSIL**, in which the tissues of a dead PLANT are replaced with MINERALS (most often a SILICATE, such as QUARTZ). The PETRIFICATION process occurs underground, when wood or woody materials suddenly become buried under sediment. Mineral-rich water, flowing through the sediment, deposits minerals in the plant's cells, and, as the plant's LIGNIN and CELLULOSE decays away, a STONE cast is left in its place.

*Reprinted from the April 2006 Quarry Quips  
via the SCFMS (South Central Federation  
of Mineralogical Societies) Newsletter  
March-April 2006*

## How Did People Over 35 Ever Survive?

- According to today's regulators and bureaucrats, those of us who were kids in the 40's, 50's, 60's, or even maybe the early 70's probably should not have survived.
- Our baby cribs were covered with bright colored lead-based paint.
- We had no childproof lids on medicine bottles, doors, or cabinets, and when we rode our bikes, we had no helmets. (Not to mention the risks we took hitchhiking.)
- As children, we would ride in cars with no seatbelts or air bags.
- Riding in the back of a pickup truck on a warm day was always a special treat.
- We drank water from the garden hose and not from a bottle.

Horrors!

- We ate cupcakes, bread and butter, and drank soda pop with sugar in it, but we were never overweight because we were always playing outside.
- We shared one soft drink with four friends, from one bottle, and no one actually died from this.
- We would spend hours building our go-carts out of scraps and then rode down the hill, only to find out we forgot the brakes. After running into the bushes a few times, we learned to solve the problem.
- We would leave home in the morning and play all day, as long as we were back when the street lights came on.
- No one was able to reach us all day.

NO CELL PHONES!!!  
Unthinkable!

- We did not have Playstations, Nintendo 64, X-Boxes, no video games at all, no 99 channels on cable, video tape movies, surround sound, personal cell phones, personal computers, or Internet chat rooms.
- We had friends!
- We went outside and found them.

- We played dodge ball, and sometimes, the ball would really hurt.
- We fell out of trees, got cut and broke bones and teeth, and there were no lawsuits from these accidents.

They were accidents.  
No one was to blame but us.  
Remember accidents?

- We had fights and punched each other and got black and blue and learned to get over it.
- We made up games with sticks and tennis balls and ate worms, and although we were told it would happen, we did not put out very many eyes, nor did the worms live inside us forever.
- We rode bikes or walked to a friend's home and knocked on the door, or rang the bell or just walked in and talked to them.
- Little League had tryouts and not everyone made the team. Those who didn't had to learn to deal with disappointment.
- Some students weren't as smart as others, so they failed a grade and were held back to repeat the same grade.

Horrors!

- Tests were not adjusted for any reason.
- Our actions were our own.
- Consequences were expected.
- The idea of a parent bailing us out if we broke a law was unheard of. They actually sided with the law. Imagine that!

This generation has produced some of the best risk-takers and problem solvers and inventors, ever. The past 50 years have been an explosion of innovation and new ideas. We had freedom, failure, success, and responsibility, and we learned how to deal with it all.

If you're one of them, congratulations!

*Shared with the Editor by Dr. Bland Giddings,  
of the Chandler Symphony Orchestra*



### 11 Ways to Become a Fossil

*Author Unknown*

**FREEZING** - This rare creature has suffered a minimum of change. His arteries may still contain dried blood, his stomach undigested food. Most common is the Ice-Age mammoth of Siberia and Alaska.

**DRYING OR DESSICATION** - If these organisms were thoroughly dried, they can be of high quality. Best known are the camels and sloths found in our Southwest caves.

**WAX AND ASPHALT** - Natural paraffin makes an excellent preservative, as proved by specimens found in Polish mines. The most famous asphalt fossils are still embedded in the La Brea Tar Pits in California.

**SIMPLE BURIAL** - English bogs are famous for their buried forests. Sand dollars, sea urchins, and mollusks have been preserved by this method for up to 75 million years.

**CARBONIZATION** - Incomplete decay of volatile substances leaves carbon behind, sometimes reducing organisms to paper-thin layers of shiny black film that reveal much detail.

**PETRIFICATION** - Our common stony fossils got that way by permineralization, the replacement of the structure by dissolved minerals, or secondary replacement, such as when limey fossils are dissolved and replaced by silica.

**MOLDS AND CASTS** - Natural molds in sediment remain after organisms decay. Sandstone beds reveal molds of shells and trees, and the finest molds are Northern European amber, which has perfectly preserved the forms of insects.

**IMPRINTS** - Sandstone, shale and tuff reveal external molds of very thin objects such as leaves. Best known of these are the Illinois Coal-Age plant imprints.

**TRACKS, TRAILS, BURROWS** - Dinosaur prints are the most famous of these. But Nebraska's "Devil's Corkscrew" once housed a beaver who dug an eight-foot spiral hole.

**CASTINGS & COPROLITES** - Ancient worms swallowed sand to help digest small organisms; they regurgitated these castings. Coprolite is a polite word for petrified "dung".

**GASTROLITHS** - Many ancient reptiles ground their food with these stones (as do our modern fowl). The stones are rounded, smooth, and even polished at times. Also known as "Gizzard Stones".

*Reprinted from the July 2006 Breccia  
via Shin Skinner News, June 2006*

### Sources of Information for Rockhounds

*By C.E. Johnson*

The U.S. Geologic Survey office publishes geologic maps, topographic maps and mineral maps, and reports and bulletins, on geology and minerals on any area in the country. Look in your phone book for the one nearest you and ask them what you need to do to order geologic maps and other information on the areas you are interested in. (They may be listed under the U.S. Dept. of the Interior). They will probably send you free information on what is available in those areas, along with their usual order forms and prices for the maps they sell.

If you have a computer, you may want to log onto the geologic survey's home page, **www.usgs.gov**, and follow the links to what you need.

**U.S. Bureau of Land Management** offices have maps and other publications handled in their "Lands & Minerals Dept." or "Minerals Resources Division", etc. Like the U.S.G.S., this BLM is under the jurisdiction of the U.S. Dept. of the Interior.

Many of the localities listed in the reports of these agencies and shown on their maps are not included in the usual rockhound guides and magazines. Also, many of them are not only mines but have not been followed up by proper investigation by anyone, so those minerals are overlooked and are still there waiting, even though the reports are easily available to the public.

A great deal of rockhounding is done on National Forest land, so the **U.S. Forest Service** maps are indispensable when driving or hiking the forests. These maps can be purchased at any U.S. Forest Service office for a nominal fee.

**Topographical Maps** are a great help in many ways, and in remote areas no responsible rockhound should be without one. They outline hills and valley in elevation "contour" lines, and they distinguish forest cover from bare areas and show all creeks in detail, and they show any known trails in the region.

They also usually show mines and prospect diggings, but are more exact in their locations than the forest service maps because of the greater topography detail, especially on the more "close-up" scales usually available in this type map. Another advantage is that you can transfer geologic information from your geologic map onto a topographic map of the same scale, and more easily pinpoint the most favorable parts of the area to examine.

These maps are sold by many U.S. Geologic Survey offices, and by some stationary stores and sportsman's supplies stores.

*Reprinted from the July 2006 Breccia  
via The Slate, April 2006*

**LOIS SPLENDORIA**

MINERALOGICAL SOCIETY OF ARIZONA  
1502 West Washington  
Phoenix, AZ 85007

**Address Correction Requested**



**EXCHANGE EDITORS:**  
Please send all newsletters to the return address listed above.

**Mineralogical Society of Arizona**  
Founded 1935  
A Non Profit Organization  
[www.azminerals.com](http://www.azminerals.com)

**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 West Washington, Phoenix, Arizona.

**Dues:** Families & Couples - \$20.00, Single Adults - \$12.00, Juniors (18 yrs. and under) - \$2.50. Please mail your dues to Sally Fiske, 42011 N. Astoria Way, Anthem, AZ, 85086.

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**First Class Mail**

<b>UPCOMING MEETINGS</b>	
<b>Temporary Change in Meeting Night Starting in September 2006</b>	
<b>Tuesday</b>	September 12
<b>Tuesday</b>	October 10
<b>Tuesday</b>	November 14

**AFFILIATIONS**

**Rocky Mountain Federation of Mineralogical Societies**  
[www.rmfmts.org](http://www.rmfmts.org)

**American Federation of Mineralogical Societies - [www.amfed.org](http://www.amfed.org)**