



The Apache Junction Rock & Gem Club, Inc.

# SMOKE SIGNALS

Oct 2012

## Officers of the Apache Junction Rock & Gem Club, Inc.

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The Club meets on the second Thursday of every month October thru April at 7:00 pm at the Carefree Manor RV Park, at the corner of Tepee & Delaware, Apache Junction, AZ

Club Dues - \$24 a year per member prorated to first of month of joining. This may be paid at the general meeting or by mail to Ron Ginn, 691 N. Velero St., Chandler, AZ 85225.

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Rim FR300/123	Chert/Fossils
Roberts Mesa	Chert/Fossils
Brenda	Jasper
Round Mountain	Fire Agate/ Chalcedony

There are a few more sites that I will add in the future. Please consider leading a trip to one of these sites or your favorite site. I am also looking for experienced rockhounds to open your unused rock pile for a local trip. First field trip of the year will be 10/20/12 to Diamond Point for crystals and fossils. We will meet at the McDonalds at the intersection of 87 and 260 in Payson at 9am. I will have 2/3 open seats for carpooling. Remember the up coming coalition field trips. I will be attending the 10/27/12 trip and will have 2 open seats.

Next Meeting – Nov 8, 2012

### Field Trips Planned

Dear Club members here are a few things that you requested. The following are collecting sites and the specimens you can find.

Table Mesa	Jasper/calcite
Sheeps Crossing	Saganite
7 Springs	Onyx/agate/jasper
Burro Creeek/Bagdad	Pastelite/agate/ jasper/apache tears
Perkinsville/Jerome	Agate/fossils/ Tavertine(onyx)
Kingman	Onyx/Serpentine
Globe	Crystals/Fossils
Diamond Point	Jasper
Black Canyon	

### Minutes of Oct. Mtg.

Apache Junction Rock & Gem Club-General Minutes Oct. 11, 2012,  
 Submitted by Barbara Bayer

The meeting was called to order at 7:10 pm by the President. She led the Pledge of Allegiance.

- President's report: Welcome back to the 2012-2013 season of the club. The electrician is working now on the lapidary shop and the plumber will start repairs soon. The property tax wavier has been denied as the building is not in current use. We can reapply for a tax wavier. We do need volunteer help-please see the club's email messages.
- The Secretary's report of April 2012 was accepted. The Summer Sunshine activity consisted of two cards. The VIII

amendment to our Articles of Corporation was accepted by the State of Arizona.

- The Treasurer's report is: Lapidary shop checking \$695.45, Lapidary savings \$58.53, General checking \$947.65, General savings \$121.30, Show checking \$6,678.95, Show savings \$7,022.03, CD#1- \$6,184.49, CD#2- \$8,628.57, and CD #3- \$10,271.
- Vice President requested that we bring our tools when working at the new Lapidary shop.
- Mr. Ginn (Membership) reported that we have 223 members in the club with 13 life members. He proposed that a "Pay Pal" function be used to pay membership fees and shop fees. Membership by Pay Pal is \$25/annually and \$24 by cash or check, plus shop fees by Pay Pal would be \$72/annually and \$70 by cash or check.
- The old Lapidary shop is still in use. Please contact Jerry Gervais, Tom Sundling, or Brian Fermoyle to make an appointment. We do need shop monitors and a shop manager for this season. Two suggestions for shop security included placing bars on the windows and covering the windows with film to occlude seeing in the building.
- Mr. Iverson (Show Chairman) reported the Rock shop vendor spaces have been sold out as of April of 2012.
- Natalie Kirmel (Hospitality Committee) wishes to welcome all back for the season
- Mr. Iverson (Newsletter) reported the October 2012 newsletter will be out soon.
- The Trustees reported that we need a fund raiser for the Lapidary shop remodeling and expenses. Suggestions included: charging for field trips (non members); raffles; open silversmith classes to the public; sell donations of slabs, cabs, equipment, jewelry; yard sales on private property (not allowed at lapidary shop); and field hunts at private property of those with large rock collections.
- Ms. Creiglow encourages volunteers to lead field trips to closed locations and to car pool to save gas expenses. She also encourages we participate in Collation field trips. She will compose a list of field trip sites for the newsletter. She also is planning two long weekend trips to the Round Mountain and Burro Creek areas.

Mr. Sundling won the 50:50 raffle for the amount of \$24.00.

Door prizes this month were provided by Mr. Phil Gadd.

#### Announcements

1. Mr. DeWitt requests the return of his new red-orange handled rake.
2. Mr. DeWitt requests volunteers and a truck/trailer to move an 18" saw- four members volunteered.
3. Please see the job list for volunteers needed to close the old Lapidary shop and open the new shop.
4. On October 26, 2012 between 8 to 10 pm, there will be a free presentation on meteorites and Mars at Arizona State University, free parking is available.

The meeting was adjourned at 8:00pm and was followed by the Silent Auction.

## Article of the Month

### Murph the Surf and the Jewel Heist of the Century

*by Andrew A. Sicree*

#### Murph the Surf

Diamonds are forever, but holding onto them that long can be challenging. In 1964, the American Museum of Natural History in New York City found this to be true when the famous jewel thief "Murph the Surf" plundered its gem and mineral collection.

Born Jack Roland Murphy in 1938, "Murph the Surf" picked up his unusual nickname because he'd won the 1963 National Hurricane Surfing Championship and several state contests in Florida. Murphy was an unusually talented young man. For instance, he was once offered a college tennis scholarship and he played the violin so well that he was invited to join the Pittsburgh Symphony while he was still a teen-ager. But, after falling in with the wrong crowd, Murphy took up a life of crime. Murphy's reason for his descent into thievery was apparently the thrill he got from the crimes.

#### The night of the crime

On the night of October 29<sup>th</sup>, 1964, along with two accomplices, Alan Kuhn and Roger Clark, Murphy climbed through an unlocked second-story window into the American Museum's jewel room. Non-operational burglar alarms guarded the museum's gems and the three thieves freely raided

display cases featuring the J. P. Morgan Gem Collection and made good their escape.

The night's haul included a number of uncut diamonds from North America and other, more famous gems including the *Star of India*, a star sapphire, and the *DeLong Star Ruby*. Labeled "The Jewel Heist of the Century," the take was valued at more than \$400,000. Fortunately, Murphy and his co-conspirators were quickly apprehended.

### The stars of the heist

The *Star of India* is the largest star sapphire in the world, weighing in at 563 carats (112.6 grams) – about the size of a racquetball. This almost flawless blue-gray gem came from Sri Lanka. The six-pointed star visible in the Star of India arises from fine fibrous inclusions of rutile within the stone.

The *DeLong Star Ruby* is a 100-carat (20 gram) cabochon-cut bright red ruby also displaying a six-pointed star. Discovered in Burma, it was sold for \$21,400 by the famous mineral dealer Martin Ehrmann to Edith Haggin DeLong. The stone was donated by DeLong to the American Museum in 1937.

After payment of a \$25,000 ransom, the DeLong ruby was recovered when the thieves left the stone in the coin-return slot of a pay phone in a telephone booth in Florida.

### The arrest of the Surf

Within three days of the robbery, police arrested Murphy and his accomplices, thanks to a tip from the bellhop of the Florida hotel in which the men had been staying. The *Star of India* was discovered in a locker at a Miami, Florida, bus station. Murphy and his accomplices received three-year prison sentences for the heist.

Released from prison, Murphy was later convicted of another robbery attempt and a separate murder and sentenced to two life prison terms. Murphy reformed himself in prison and, released in 1986, went on to become a prison evangelist.

Hollywood immortalized Murphy's "Jewel Heist of the Century" when, in 1975, director Marvin Chomsky released *Murph the Surf*, a movie starring Don Stroud (as Murphy), Burt Young, and Robert Conrad.

### Recovered stones

Most of the gems from the heist were returned to the museum with the exception of nine stones that had already been fenced. Unfortunately, the nine unrecovered stones included the museum's collection of uncut diamond specimens from the "Eastern" U.S (here I'm including the Great Lakes

Region glacial diamonds among the "Eastern" stones).

### The missing mineral specimens

The most famous of the missing diamonds was the Eagle Diamond, a yellowish 14-carat stone from the Eagle Moraine in Eagle, Wisconsin. Also missing were a 3.9-carat rhombic dodecahedral diamond from the Kettle Moraine near Oregon, Wisconsin; a yellow 4.5-carat octahedral diamond from Lee County, Alabama; and a yellowish-white hexoctahedral diamond found in the 1800s in Shelby County, about 30 miles south of Birmingham, Alabama.

Experts speculate that the Eagle Diamond has been cut into several smaller stones and thus no longer exists as a single stone. A similar fate may have met the other stones.

"Eastern" U. S. diamonds have an almost maddening habit of disappearing, whether through theft or by being sold to unknown persons. We are robbed of the opportunity to use modern analytical instruments to study the diamonds and gain clues about their origins. All we are left with are some photos, records, and a few fascinating stories about their discovery and their fate.

## *A Discourse on Gypsum*

Gypsum, a common mineral, is hydrated calcium sulfate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ , monoclinic). The name derives from the Greek word for "chalk," *gypsos*, perhaps because chalk and gypsum were not well differentiated in ancient times. Varieties of gypsum include *selenite*, which usually refers to distinct crystals and clear plates of gypsum; *satin spar*, composed of thin parallel acicular crystals matted together; and *alabaster*, a fine-grained, massive material.

### Alabaster

Confusion surrounds the identity of alabaster. Is it gypsum or is it calcite? You will find alabaster used to refer to either mineral. In general, many of the "alabaster" carvings sold today to tourists are massive gypsum. But most ancient Egyptian alabaster vessels, such as *canopic jars* (used to store the internal organs of mummified people) and other sepulchral objects, were carved from massive granular calcites. Fine calcite-alabaster was mined near the Egyptian town of Alabastron – it supplied grave goods to many an ancient Egyptian burial.

One fascinating and unusual property of gypsum is the fact that some (but by no means all) samples of satin spar with straight, un-kinked acicular crystals will display fiber-optic properties. In other words, light hitting one end of a polished satin spar

will be “piped” to the other end. Thus, if you place a fiber-optic satin spar directly on top of a piece of paper with words printed on it, the image of the words will be “piped” to the upper surface of the fiber-optic satin spar. This fiber optic effect is similar to the well-known behavior of ulexite, which is popularly known as “TV rock” or “television stone.”

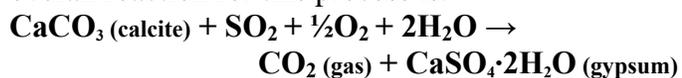
Gypsum is critical to producing plaster, and as such is widely used in the construction of interior walls and ceilings of houses and other buildings. Heating powdered gypsum drives off the water of hydration. Adding water to plaster powder allows the gypsum to re-precipitate, producing a solid.

### **Gypsum and acid rain**

Although gypsum is common and plentiful, acid rain has undermined gypsum mining in much of the developed world. Why mine gypsum when you can make it for free?

Most bituminous coals include small amounts of sulfur – some in the form of pyrite (FeS<sub>2</sub>), some incorporated within the make-up of the coal. Burning coal oxidizes the sulfur, producing unwanted sulfur dioxide gas. If sulfur dioxide gas is allowed to escape to the atmosphere, it produces sulfur-bearing acid, which drops into downwind lakes and streams in the form of “acid rain.”

Coal-fired power plants have “scrubbers” installed to prevent “acid rain.” These scrubbers remove the sulfur dioxide gas before it can cause a problem by reacting it with calcite (typically, they use high-grade limestone as the calcite source). The overall reaction for this process is:



Reaction of calcite (CaCO<sub>3</sub>), with sulfur dioxide (SO<sub>2</sub>), oxygen (O<sub>2</sub>), and water (H<sub>2</sub>O) produces carbon dioxide (CO<sub>2</sub>) and gypsum (CaSO<sub>4</sub>·2H<sub>2</sub>O). Gypsum generated by this process can be made into plaster for “gypsum board” or “wallboard” which is widely employed in the construction of houses.

### **Giants in the earth**

Gypsum is eminently collectible. Found in a variety of habits, well-formed crystals are common enough to be inexpensive. Gypsum also forms large, even giant, crystals. In a mine near Naica in Mexico, huge crystals of selenite occur. This remarkable pocket has gypsum mega-crystals that exceed 35 feet (11 meters) in length!

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### ***Opal: a Rainbow of Color***

Diffraction breaks white light into its component colors: red, orange, yellow, green, blue, indigo, and

violet. We are familiar with diffraction – we see it at work in the rainbow. Sunlight reflecting off the inside of raindrops high in the atmosphere breaks apart, producing the colors of the spectrum. A grating made up of many fine lines gives a similar effect. The rainbow-like iridescence appearing on a compact disk (CD) occurs because the spacings of the many data tracks on the disk are close enough to diffract light.

The “fire” of opal occurs through a similar diffraction mechanism. Opal is amorphous silica (SiO<sub>2</sub>). Glass is also amorphous silica but in opal the silica occurs in tiny spheres that also include a bit of water. These silica spheres are cemented together by more silica with a slightly different amount of water. Thus, the cement and the opal spheres possess slightly different indexes of refraction (i.e., they bend light slightly differently).

The tiny spheres of silica making up opals are about 250 nanometers (250 nm = approx. 0.00001 inch) across. (The wavelengths of visible light fall in a range of about 400 to 700 nm.) If you examine opal with an electron microscope, you’ll find these spheres are all about the same size and that they are arranged in a regular, three-dimensional array. Light hitting the spheres breaks apart (diffracts) into the colors of the rainbow. Layer after layer of silica spheres, separated by cement with a slightly different index of refraction, acts as a three-dimensional diffraction grating, producing the characteristic fiery colors. Water is critical for diffraction to occur. If an opal gets too dry, the differences in the indexes of refraction disappear, and its “fire” dies. Lapidaries who cut opals store their rough material in jars of water to prevent the dehydration of the stones and to enhance their appearance.

## **Helpful Articles**

### **Hanta Virus Precautions & Prevention**

As the weather gets warmer, many people begin cleaning garages, cabins or other outbuildings that have been closed for the winter and infested with rodents. The CDC and local Public Health Services recommend that the public follow simple precautions when entering and cleaning sheds, garages, campers, cabins, barns and other buildings where rodents may have been present. These precautions can help offer protection from hantavirus pulmonary syndrome (HPS), a rare, but often fatal disease spread by rodents.

With the wet weather during the winter, rodent populations may grow. This may result in increased rodent activity that may lead to an increased risk of exposure to HPS. The virus is carried by mice and some other small rodents and is contracted by exposure to mouse droppings, urine or saliva. The deer mouse or white footed mouse is believed to be the most common carrier of the virus. This particular mouse species is found throughout the United States.

Hantavirus causes a severe respiratory infection which can result in respiratory failure. Early symptoms include fever, headache, muscle aches, nausea, vomiting and diarrhea. A cough and shortness of breath may develop due to a fluid buildup in the lungs. The incubation period or time between exposure and onset of symptoms varies widely from 3 days to 6 weeks. There is no evidence the virus being contagious through person-to-person contact. Unfortunately, there is no effective drug treatment for hantavirus and the fatality rate is 44%.

*County and State Health Department representatives recommend the following steps to prevent hantavirus infection:*

Minimize food sources that attract rodents. Keep garbage covered and store pet food and bird feed in tightly sealed metal or heavy plastic containers. Do not leave uncovered pet food out overnight. Store foods such as cereal and grains in covered containers.

Limit mouse nesting sites in or near the home. Store firewood away from the dwelling. Clear brush and grass away from foundation.

Prevent rodent entrance into the home. Seal all small openings with steel wool, cement, wood filler or caulking.

Reduce mouse population by use of "snap traps."

Consult a licensed exterminator if a heavy mouse infestation is suspected. Snap traps can be placed on newspaper or in a paper grocery bag laid on its side so that the paper can be folded over and discarded in the trash without ever touching the mouse or trap.

**Clean-Up/Disinfection:**

Control rodents inside the home by placing spring-loaded "snap" traps in areas where rodents and their droppings have been observed. Bait the traps with peanut butter and/or oats and check them regularly.

When rodents are caught, spray the dead rodents with a disinfectant, such as Lysol or bleach and water, then wait at least 15 minutes. Put on rubber gloves and then seal the dead rodents in plastic bags before disposing of them in a trash can. The snap traps can be disinfected and re-used.

In areas above 4,500 feet in elevation, any dead rodents and rodent nests should be sprayed with a pesticide to kill fleas before disinfecting or disposing the carcasses. This is to prevent flea bites and possible exposure to another disease, the plague.

## Rock Shows

### Oct

**12-14—MOAB, UTAH:** Annual show; Moab Rock Club; Old Spanish Trail Arena; 3641 S. Hwy. 191; Fri. 10-7, Sat. 10-7, Sun. 10-4; free admission; dealers, field trips, demonstrations, displays; contact Jerry Hansen, PO Box 1459, Moab, UT 84532; e-mail: moabrockclub@live.com

**13-14—SIERRA VISTA, ARIZONA:** Annual show; Huachuca Mineral & Gem Club; Cochise Community College; 901 N. Columbo Ave.; Sat. 9-5, Sun. 10-4; free admission; demonstrations, educational displays, fluorescent display, gems, jewelry, raffles; contact Maudie Bailey, PO Box 1596, Sierra Vista, AZ 85635, (520) 378-6291; e-mail: gmbailey@msn.com; Web site: <http://huachucamineralandgemclub.info>

**20-21—SEDONA, ARIZONA:** Annual show; Sedona Gem & Mineral Club; Red Rock High School; 995 Upper Red Rock Loop Rd.; Sat. 10-5, Sun. 10-4; adults \$2, children free; more than 40 dealers, jewelry, rough and polished rocks, gems, minerals, states, Kids' Corner, raffles, grand prizes; contact Gayle Macklin, PO Box 3284, Sedona, AZ 86340, (520) 921-0100; e-mail: [gayleis@gmail.com](mailto:gayleis@gmail.com); Web site: [www.sedonagemandmineral.com](http://www.sedonagemandmineral.com)

### Nov

**2-4—BLACK CANYON CITY, ARIZONA:** 36th annual show & sale; Braggin Rock & High Desert Helpers; High Desert Park; 19001 Jacie Ln.; Fri. 9-4, Sat. 9-4, Sun. 9-4; free admission; dealers, demonstrators, minerals, gemstones, jewelry, fossils, crystals, tools, equipment, books, lapidary supplies, gold panning, cabbing, beading, wire-wrapping, faceting, stone carving, gem setting, raffle, rock identification; contact Don Ingalls, PO Box 212, Black Canyon City, AZ 85324-0212, (623) 374-0202; e-mail: [riverdiva@gmail.com](mailto:riverdiva@gmail.com)

**3—TUCSON, ARIZONA:** 11th annual silent auction; Old Pueblo Lapidary Club; clubhouse; 3118 N. Dale; Sat. 9-2; free admission; contact Danny Hamsen, 8160 E. Broadway, Apt. 12, Tucson, AZ 85710, (520) 721-8452; e-mail: [drock2000@gmail.com](mailto:drock2000@gmail.com); Web site: [www.lapidaryclub.org](http://www.lapidaryclub.org)

**3-4—PHOENIX, ARIZONA:** Retail show; Sharon Szymanski and Val Latham; El Zaribah Shriner's Auditorium; 552 N. 40th St.; Sat. 10-5, Sun. 10-4; adults \$3, children (under 12) free with adult; dealers, fine and costume jewelry, fossils, minerals, rough slabs, cabachons, crystals, copper, beads, lapidary equipment and supplies, wirewrappers; contact Sharon Szymanski,

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