



The Apache Junction Rock & Gem Club, Inc.

SMOKE SIGNALS

Dec 2009

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

President:	Gene Christiansen	480-474-0484 gchris1033@yahoo.com
Vice-President:	Vacant	
Secretary:	Barbara Bayer	480-832-3561 babrillhart@msn.com
Treasurer:	Kelly Iverson	480-325-2705 steameng@cox.net
Trustee:	Pat Wallace	480-598-8709 rosebud116@aol.com
Trustee:	Brent Staker	480-298-1359 gbstaker@yahoo.com
Trustee:	Bill Jonas	

The Club meets on the second Thursday of every month October thru April at 7:00 pm at the Desert Chapel United Methodist Church, 462 N. Palo Verde, Apache Junction, AZ

Club Dues - \$10 per new member with a \$10 one time fee for a badge. Renewals are \$10 per member. 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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Pictures from the Past

11-11-2009

Courtesy of Kathy Grunow





President's Message

The Board of Directors wishes you all a Happy Hanukah, Kwanzaa, Christmas and a New Year!

Next Meeting – January 8, 2010

Please save the date for January 8, 2010 (Friday) at 6 pm for a general meeting of the club and a buffet dinner to celebrate the "New Beginning" of the club. This meeting will also be held at the Desert Chapel United Methodist Church.

Meeting Minutes December 2009

Apache Junction
Rock & Gem Club General Meeting Minutes
December 10,
2009 Submitted by Barbara Bayer, secretary

- President Christiansen called the meeting to order at 7:00 pm. The Pledge of Allegiance was said by the membership.
- Harry Warren announced that the future field trips were sent to members by email and he had paper copies also for the trips. Mr. Warren showed examples of the rocks recently collected on field trips. He did remind the members the field trips are dependent on the weather. Mr. Warren distributed polished rocks to the members present.
- The minutes of the November 2009 general meeting were read. Mr. Bauman made the motion to accept the minutes; Laurie Jonas seconded the motion, the motion passed.
- The minutes of the December 2009 Executive Board meeting were read.
- The motion to hire a professional parliamentarian for a fee not to exceed \$300.00 was passed. This person would assist in the revision of the by-laws and constitution to be in alignment with the Articles of Incorporation.
- A motion was made by Barbara Bayer to expel Sharon Louros from the club membership for just cause. Jerry Gervais seconded the motion, the motion passed with 59 votes yes and 2 votes no.
- The motion was made by Barbara Bayer to expel Alan Jones from club membership for just cause. Kathy Tunnicliff seconded the motion, the motion passed with unanimous vote.
- The motion was made by Kelly Iverson to expel Kathryn Jones from club membership for just cause. Laurie Jonas seconded the motion, the motion passed with 59 votes yes and 2 votes no.
- The motion was made to adhere to the Articles of Incorporation for the annual

election of officers and trustees for the club which would include that of president, vice president, treasurer, secretary, and trustee. This motion passed.

- Ron Ginn, presented the white membership badge which costs the club \$00.30 each. They would be provided to new and renewing club members without fee.
He reported that we have 275 members, 145 renewed members, 17 life members, 4 new members, and 130 non-renewed prior members. The president thanked Mr. Ginn for his support of the club activities.
- New members of the club were introduced.
- The motion was made by Bill Jonas and seconded by Brent Staker to take \$3,600.00 from the maturing CD for lapidary shop maintenance and repairs. The motion passed with unanimous vote. Mr. Jonas read the list of the repairs and maintenance needs of the shop. Innovations for the lapidary shop include (1) a recycling oil system, (2) an orientation film for equipment use, (3) a computer program to track use and maintenance for lapidary equipment, (4) free classes for lapidary arts, (5) development of a monthly budget for the shop. Mr. Ginn has donated a computer for the lapidary shop.
- Funding suggestions for the lapidary shop included advertisements in the newsletter and on the website, plus donations of slabs for sale.
- The motion was made by Bill Jonas to rent a port-a-potty for the fee of \$55.00 per month to be placed near the lapidary shop. Brent Staker seconded the motion. The motion passed with unanimous vote.
- Norma Norwood, Chair of the Nominating Committee, introduced her committee members consisting of Harry Warren and Gene McGeorge. To date, the following nominees were introduced: for President-John Frary, for Vice President- Katy Tunnicliff, for Treasurer- Kelly Iverson, for Secretary- Barbara Bayer, for one Trustee position- Harry Warren and Bill Jonas. Please send

Ms. Norwood further nominations via email, verbal communication, or written communication by December 24, 2009. Other nominations will be taken at the January 8, 2010 meeting. Please remember you must be a member of the club with paid membership fees to vote in January 2010.

- John Frary, Show Chairman, reported the rock show will be held at Skyline High School in Mesa on February 20 and 21 of 2010. Wally Frlich requests volunteers to assist him with publicity. Mr. Frlich requests that he have a full time Arizona resident be a contact person for publicity. Charlee Carrig volunteered to be responsible for the Ming Trees this year. The vendors have booked their tables. There will be no show boxes this year. There was a call for polished rocks and slabs for the raffle and the wheel. Mr. Frary will ask for volunteers during the January 2010 meeting for setting up the show, taking down the show, silent auction, collecting fees at the door, etc. He reported that funds from the 2009 rock show were donated as scholarships for students in the earth sciences, plus \$1000 toward the Skyline High School Band.
- Volunteers are needed to man the table at the Flagg Show in Mesa, AZ on January 7, 8, and 9 of 2010. This year the college is encouraging exhibitors to set up their tables early the morning of January 6th.
- There will be a Silent Auction of cabochons, slabs, rough, and jewelry at the January 8, 2010 meeting to raise funds for the club. Dee Budde recommended these funds be directed to the lapidary shop.
- The Annual General Membership meeting will be held at 6 pm January 8, 2010 at the Desert Chapel Methodist Church in Apache Junction. The club will furnish the hams and turkey. Natalie Kirmiel passed a sign up list for side dishes, salads, and deserts for the dinner. She thanked persons who donated refreshment items this evening.
- The meeting was adjourned at 9:00 pm.

Membership Report for December 10, 2009

There are now 275 members in the club. There have been 145 renewals for 2010 and there are 130 members that have until the end of January to renew their membership.

There were four new membership applications received at the meeting, these will be presented to the Club Executive Board for approval at the next Board meeting scheduled for January 4, 2010.

There were 17 new members approved by the Club Executive Board on December 7, 2009, their names are : Michael Anderson, Shari Anderson, Kerry Bale, Carl Charette, Gloria Charette, John W Cline, Bruce Eliason, Mattie Gadd, Phil, Gadd, Fred Milenovich, Joyce Most, Terry Most, Gordon Nelson, Leoma Pontious, Doc Stratton, Wendy A. Talich, and William C. Talich.

A new Club badge was introduced at the meeting. Here is an example:



As you can see the left corner contains the Club Logo and the right corner contains the Arizona state flag. The top line shows the membership expiration date (Note: since life memberships do not expire, expiration is 12/31/2199); the next line shows year joined; and the next line shows a code to indicate if the member has paid the unlimited Lapidary Shop fee. The next two lines show the member name (Life members have ** shown after their last name). If the member is an elected officer or a committee head their office (s) are shown under their name. Regular and Life member names are printed in black ink. Officers and committee heads have their names and title

printed in red ink. This is done to make it easy for members to recognize Club Officials when they need assistance.

The cost of these new badges will be about \$.30 compared to the cost of \$10.00 for the hard plastic badges. These new badges will be distributed to each new and renewing member at no charge. To avoid mailing expenses (about 50 cents each) I am requesting that you pick up your new badge at the next Club Meeting. If you are unable to attend meetings please send an Email to wjinn3@gmail.com, send a note to Ron Ginn 691 N. Velero St.; Chandler, AZ 85225, or give me a call at 480-294-0731 and I will mail your badge.

Persons that renew or apply for membership through the mail are also requested to obtain their receipt at the next regular club meeting. If you are unable to attend meeting then please follow the process described for badges and I will send to you via USPS mail.

Happy Holidays and I hope to see you at the potluck meeting on January 8 !!!

Article of the Month

Diamonds, coal, and carbon: With all the coalfields in North America, why aren't more diamonds found here?

by Andrew A. Sicree

Both diamonds and coal are carbon, right?

Diamonds are pure carbon. *Coal*, however, is a complex mixture of large organic molecules consisting mainly of carbon, hydrogen, and oxygen with some nitrogen, sulfur and other elements. Coal beds formed from thick layers of plant matter that were buried, compacted, and lithified (turned to rock). Diamonds and coal are quite different.

Can we find diamonds in coal mines?

In nature, diamonds form in the Earth's mantle under very high pressures (54,000 times atmospheric pressure). In order to be

turned into diamond, coal would have to be pushed down to depths of at least 100 miles. None of our coals were ever buried anywhere that deep! Even the *anthracite*, or hard coal, from eastern Pennsylvania was never buried any deeper than about three to six miles. So don't go looking in the coalfields for diamonds.

You may hear the term “black diamond” used for shiny black anthracite coal; this is a miner’s nickname for coal, not a geological term. Dark or black diamonds are called *bort* or *carbonado*, but they have no relationship to coal. Most bort is from the Congo, and most carbonados are from Brazil or the Central African Republic.

Formation of diamonds

Diamonds are as interesting to the mineralogist as they are to the jeweler. They are important to earth scientists because they carry information about the nature of the Earth's mantle where they formed. [The mantle is that layer of the Earth's structure which lies between the Earth's crust and its core: under most continents it lies about 20 miles down and continues to 1800 miles in depth.] The most common way diamonds can be carried out of the mantle is during a volcanic eruption of a very unusual igneous rock called *kimberlite*.

Diamond host-rocks

Kimberlite is typically a gray or bluish rock with large crystals of a dark brown mica, the mineral *phlogopite*, visible in it. The fine-grained matrix is mostly *peridotite*, a blue- or green-gray rock made up mostly of the minerals *olivine* and *pyroxene*. Kimberlites may also contain small crystals of bright green *diopside*, blood-red *pyrope garnets*, and glossy black *ilmenite*, as well as other minerals. Fragments of other rocks from the Earth's mantle and crust in the form of *xenoliths* (i.e., “strange rocks”) may also be trapped in the kimberlite matrix.

Of course, the included mineral that really interests everyone is *diamond*. Sometimes, diamonds occur as crystals with octahedral shapes, reflecting their underlying cubic crystal structure. More often, diamonds are odd-shaped because they were fragmented or

partially redissolved before the kimberlitic host formed.

Diamonds are also found in another unusual mantle-derived igneous rock called *lamproite*. They also occur in meteorites and in rocks that have been shocked by the impact of large meteorites. Meteoritic diamonds are quite small and often imperfect, rather than large gem-grade, specimens. Carbonado diamonds are thought to have been formed in inter-stellar space and have been carried to Earth in meteorites.

Stability of diamond and graphite

Diamonds, with a cubic crystal structure, are crystals of pure carbon formed under high pressure. Temperature is also important: typically, diamonds form only in those parts of the mantle where the pressures are greater than about 54,000 atmospheres and the temperatures are less than 1300°C (2370°F).

The only truly stable form of pure carbon at the *surface* of the Earth is the mineral *graphite*. Like diamond, graphite is pure carbon, but graphite has a planar hexagonal crystal structure. Between the hexagonal layers of carbon weak bonds make graphite soft and slippery-feeling. Writing pencil “lead” is really graphite – used because it is so soft that it rubs off on paper and makes a black mark. Thus, the hardest mineral and one of the softest of minerals share the same chemical composition: crystal structure is what matters!

Because diamonds form in the mantle, the fact that we find them on the surface implies that rocks can escape from the Earth's mantle to its surface. The magma that solidifies to form kimberlite must move rapidly from the Earth's mantle to the surface, and cool quickly, if diamonds are to avoid conversion into graphite. It has been calculated that a kimberlite eruption may occur at twice the speed of sound! You wouldn't want to be nearby when one blew, but there have been no kimberlite eruptions during historic times.→

Mineral Expressions

On the meanings of some terms with mineralogical connections:

Of the first water: Probably, it was Arab gem traders who originally used “water” to describe the brilliancy of diamonds. Until the mid-1800s diamonds were graded as being of the first water, second water, or third water, with the first water stones being the highest quality, but this system is no longer used. The phrase “of the first water” lives on, however, and is used to describe anything with the highest degree of perfection.

To carry coals to Newcastle: I grew up thinking this phrase referred to the town of New Castle, in western Pennsylvania, but it really refers to Newcastle upon Tyne in England. Certainly, though, I still understood the phrase correctly: it means to do something foolishly unnecessary. Coal was mined in both New Castle, Pennsylvania, and in the original Newcastle. Only a fool would bring coal to an area where coal was plentiful, hence the phrase’s meaning.

Ref.: *Hog on Ice & Other Curious Expressions*, Charles Earle Funk (Harper & Row, New York, 1948).

Pseudomorphs after diamond

One of the most interesting, if not also among the most disappointing, of the *pseudomorphs* (pseudomorph = “false-form”) is that of graphite after diamond. Small octahedrons of graphite have been reported in rocks in North Africa. Because graphite is hexagonal and diamond is isometric (cubic), these are thought to have been diamonds, formed at great depths, but converted into graphite as they were carried upward slowly out of the Earth’s mantle by the process of *obduction*. Although they are now graphite, they retain the shape of the original octahedral diamond crystals: disappointing to the would-be miner, but interesting to the mineral collector.

Where are the kimberlites?

We all know of the great diamond mining districts in Africa and the more recent diamond

discoveries in northern Canada. Diamonds always seem to be exotic and far away. But kimberlites are more common in North America than many might suspect. Kimberlites and related rocks have been found in Arkansas, Kentucky, Wyoming, Colorado, New York, and elsewhere. Colorado and Arkansas have even produced some diamonds, but efforts to mine diamonds in those states have proven to be uneconomic.

Kimberlites even occur at three locations in Pennsylvania. Interestingly enough, two of these kimberlites were actually encountered in coal mines in Indiana County, Pennsylvania. They haven’t yet been detected on the surface. But the third kimberlite can be seen on the surface near Masontown in Fayette and Greene Counties. These kimberlites have been determined by Professor Michael Bikerman of the University of Pittsburgh to have been formed about 147 million years during the Late Jurassic Period.

While, in theory, any kimberlite could carry diamonds, only one kimberlite in a hundred is diamondiferous. No diamonds have yet been found in any kimberlite in the eastern United States, but we keep looking!

- A. A. Sicree

Dr. Andrew A. Sicree is a professional mineralogist and geochemist residing in Boalsburg, PA. [Popular Mineralogy](#) provides technical answers to your general mineral questions. If you have a question you’d like to have answered, please send email to sicree@verizon.net
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Field Trip Reports

Dec 16, Wednesday, Hewett Marble Quarry Trip, details to be sent out later.

Dec 19, Saturday, Date Creek Crystal trip, details to be sent later.

Dec 23, Wednesday, Sheep Crossing trip with details later.

Dec 30, Wednesday, Rodeo Flat area for onyx, agate and jasper and details later.

Trips for fossilized wood and opalized chrysocolla are being investigated.

Rock Shows in December & January

December 5-6, 2009 Green Valley
Green Valley Lapidary Arts & Crafts Fair
West Social Center, Green Valley, AZ
Sponsored by: Green Valley Lapidary and Silversmith Club
Hours: Fri. 9-4, Sat. 9-3
Admission: Free
www.gvrlapidaryclub.com/craftschedule.htm

December 11-13, 2009 Tombstone
Tombstone Gem Show's 1st Annual Miners' Mania
Tombstone Territories RV Resort, 2111 E. Hwy. 82
Sponsored by: Rhinestone Cowboy, 520-457-9505,
Website: www.tombstonegemshow.info
Admission & Parking: Free

January/February

January 1 - February 28, 2010 Quartzsite
Desert Gardens Intl. Rock & Gem Show
P. O. Box 2818, Quartzsite, AZ 85346
1155 Kuehn Street, ¼ mile east of exit 17
Hours: 9-6
Admission and parking: Free
Dealers Contact: Sandi McAllister, 928-927-6361
Website: www.desertgardensrvpark.net
E-mail: dggemshow@ureach.com

January 1-10, 2010 Quartzsite
Tyson Wells, Rock & Gem Show,
Tyson Wells Showgrounds
100 W. Kuehn St.
SW Corner I -10 Freeway & Hwy 95,
P. O. Box 60, Quartzsite, AZ 85346,
Quartzsite, AZ 928-927-6364,
Website: www.tysonwells.com
E-mail: tysonwells@tds.net
Admission and parking: Free

January 8-10, 2010 Mesa
Annual Flagg Gem & Mineral Show,
Mesa Community College, 1833 W. Southern Ave., west parking lot, Mesa, AZ
Sponsored by: Arizona Mineral and Mining Museum Foundation
Website: www.flagshow.info
Hours: Fri., Sat., Sun. 9-5

Admission and parking: Free
Show Chairperson: Ray Grant, 480-814-9086,
raycyn@cox.net
Dealers Contact: Darrel Dodd, 480-575-5214,
spinningarrow@cox.net
Free samples and activities for children

January 15-17, 2010 Globe
53rd Annual Gila County Gem & Mineral Society Show, Gila County Fair Building, Hwy. 60, 3 miles north of jct. U.S. 60-70, Globe, AZ, 5501, Show site phone: 928-425-5924
Sponsored by: Gila County Gem & Mineral Society
P.O. Box 487, Miami, AZ 85539
Hours: Fri., Sat. 9-5, Sun. 9-4
Admission: \$2.00 donation, children free
Parking: Free
Show Chairman: Val Latham 602-466-3060,
val65@cox.net

January 15-24, 2010 Quartzsite
Tyson Wells Sell-A-Rama, Rocks, Gem-Arts-Crafts. Tyson Wells Show Grounds, SW Corner of I-10 Freeway and Highway 95, Quartzsite, AZ
Website: www.tysonwells.com
Admission: Free
Show Chairperson: Kym Scott (At address below)
Dealers Contact: Tyson Wells Sell-A-Rama, P.O. Box 60, Quartzsite, AZ 85346, 928-927-6364 (mail 6-8 months ahead)

January 20-24, 2010 Quartzsite
Pow Wow Gem & Mineral Show
Located in the center of town on Mesquite & Ironwood Drives, Quartzsite, AZ
Website: www.qiaaz.org
Sponsored by: Quartzsite Improvement Assoc.
Dealers Contact: Donna Hiller, P.O. Box 881, Quartzsite, AZ 85346-0881, 928-927-6325, Fax, 928-927-4503
Admission and parking: Free

January/February

For a listing of the satellite Tucson shows that run from January through February, 2010:
Website: www.tucsonshowguide.com or www.VisitTucson.org

January/February

January 29 – February 7, 2010 Quartzsite

Tyson Wells Arts and Crafts Fair
P. O. Box 60, Quartzsite, AZ 85346,
928-927-6364, W. Corner I -10 Freeway &
Highway 95, Quartzsite, AZ
Website: www.tysonwells.com
Admission and parking: Free

Lapidary Shop

Location: 5130 E. Superstition, Apache
Junction, AZ

Manager: Bill Jonas 425-931-4432

MONITORS:

Monday: Walt Gasiorek 862-266-7349

Tuesday: Richard Porrett 248-760-9150

Wednesday: Jerry Gervais (call Bill Jonas)

Thursday: Scott Stevens 219-308-7965

Friday: Brent Staker 480-298-1359

Fill-in Monitors: Wally Frlich 480-982-7760

Tom Sundling 402-432-9790

DeWitt Wright 918-373-3863