



The Apache Junction Rock & Gem Club, Inc.

SMOKE SIGNALS

April 2009

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

President:	Gene Christiansen	480-474-0484 gchris1033@yahoo.com
Vice-President:	Sharon Louros	480-983-5585 anthonysharon9@msn.com
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:	Vacant	

The Club meets on the second Thursday of every month October thru April at 7:00 pm at the Desert Methodist Chapel, 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.

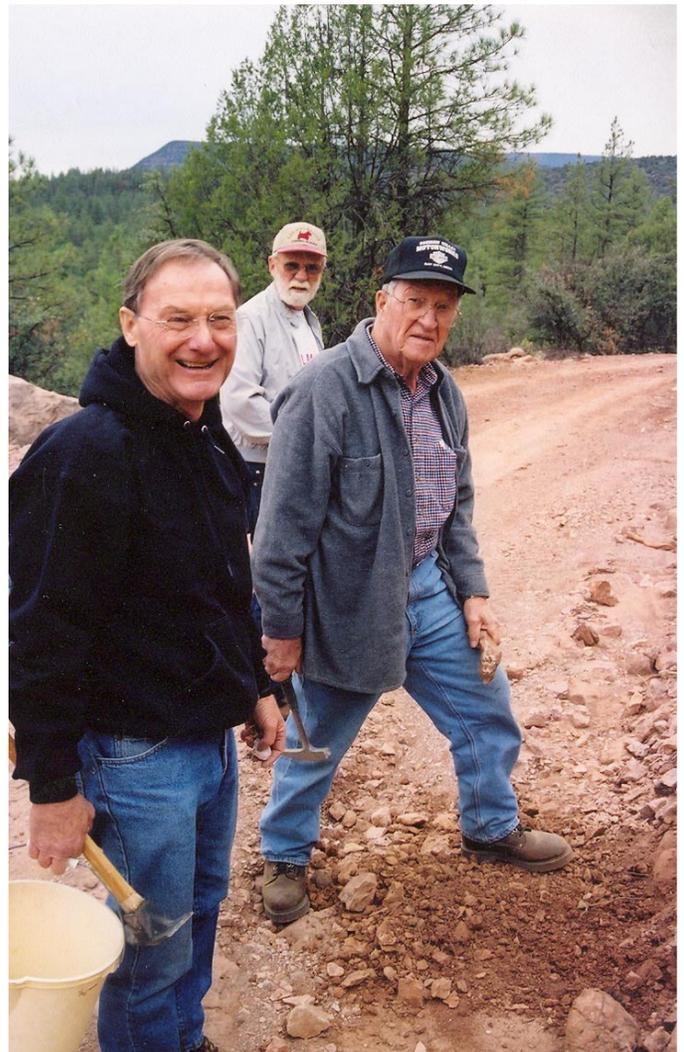
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Pictures From the Past



Kelly Iverson & Cub Scout pack on Mt. Baden-Powell, San Gabriel Mtns., So. California



Jerry Handley, Kelly Iverson, & Keith Albee lookin for crystals on Control Rd.

President's Message

We had a great response last Thursday to our "brainstorming" session. Many ideas were put onto the sheets on the wall. Now the Executive Board is compiling them and we'll see where we go from here.

If more activities are called for, we will be calling on you, the members, to pitch in and help out. As the old saying goes, "Many hands make light work." Together we can make this great club even better.

I want to thank Dale Clark for his years on the Board. Dale has been active in revising the by-laws and the other tasks involved in the club. We will miss him on the Board.

Now we will be nominating and electing a new Trustee to replace Dale. The election will be in October. So do your politicking now. The term is just until the end of 2009, but it will give someone a chance to get his/her feet wet.

The Board does a great job – they put in many hours that nobody knows about. They make some tough decisions, too. My thanks go out to them for their unselfish devotion.

Have a great and safe summer. We'll see you at the October meeting.

All my best,
Gene Christiansen

Next Meeting – October 8, 2009

Major topic yet to be decided.

Meeting Minutes April 2009

Apache Junction Rock & Gem Club Minutes for the General Meeting, April 9, 2009, (Submitted by B. Bayer, Secretary)

- The meeting was called to order by the President at 7 pm, followed by the Pledge of Allegiance.
- The minutes of the March 2009 General Meeting were read and approved.
- John Frary reported the outcomes of the 2009 Rock Show and had recommendations for the next show as follows: 1. The purpose of the Rock

Show is to provide scholarships for students with a college major in the earth sciences, 2. \$4000 was donated as scholarships and \$1000 was donated to the high school band, 3. the vendors were pleased with the 2009 show, 4. volunteers are the key to the show's success, 5. the School District forwards the club rental fee for show space toward scholarships, 6. parking was adequate, 7. more signs with printing on both sides are needed for parking, 8. more banners for the show are needed, 9. the club should consider purchasing 8 foot tables for the show over a period of 5 years to avoid costly table rental fees. Mr. Frary welcomes your suggestions for the show and can be contacted at 480-452-4870 prior to 7:30 pm.

- Mr. Frary also reported that the trailer needs repairs with the roof, seals, and paint. There are new keys on the trailer with keys distributed to the President, Treasurer, and Mr. Frary, who is responsible for the club property.
- There is one vacant club position: Trustee. An election for this position will be held in October of 2009.
- Mr. Iverson has volunteered to be the Website Master and Newsletter Editor.
- Professor Raymond Grant, retired from the Mesa Community College, had a presentation entitled "Basalt to Wulfenite or How Arizona Got So Many Minerals".
- The President requested an Ad Hoc Committee to investigate a permanent building and property for the club. Mr. DeWitt Wright volunteered to chair the committee. Materials regarding manufactured buildings were given to Mr. Wright. It is desired to have an area of 700 sq. feet for the lapidary shop and adequate room for the silversmith shop, plus a meeting hall (with a bathroom).
- A "Brain Storming" session requesting members' suggestions for the club focused on the following topics" Lapidary Shop, Programs, Outreach, Rock Show, Finances, and Other. A summary report will be prepared using these recommendations and suggestions.
- Wally Frlich had two recommendations for publicity regarding the 2009 Rock

Show which included a Val Pack coupon and a show program with advertisements. He requests volunteers to assist with publicity.

- Butch Brooker reported that approximately 29 persons used the shop in the last month with 11 persons one day at the shop.
- Harry Warren announced the next field trip will be April 11th for fossils in the Payson area. The area for onyx near Mayer will be investigated for access. Please check your email for other trips.
- There were fines imposed on the club members who went on a recent trip to the National Forest to collect petrified wood. A collection was taken to help pay the fines.
- The meeting was adjourned at 9:00 pm.

Article of the Month

The Phosphate Mineral from the Grave - by Andrew A. Sicree Out of the grunge

If you've ever had the pleasure of poking your nose into an old sewer, you may have noticed thin crusts of minerals clinging to the inside of sewage drain pipes. Perhaps you've even gone so far as to sample the grungy stuff and add it to your collection. But what do name you write on the label? Among the various candidates to consider is struvite, a less-known ammonium magnesium phosphate ($\text{NH}_4\text{MgPO}_4 \cdot 6\text{H}_2\text{O}$) mineral.

First described from crusts recovered in 1845 from a medieval sewer encountered during construction of the Nikolai Church in Hamburg, Germany, struvite was named for the geologist Heinrich Christian Gottfried von Struve (1772-1851), the Russian minister of mining, who was born in Hamburg.

Struvite tends to occur as yellow to brownish pyramidal crystals. If white when found, crystals tend to yellow upon exposure to light. It is also found as platy, almost mica-like, crystals. Belonging to the orthorhombic crystal system, it is of low density and soft. (Mohs hardness = 1.5-2, similar to gypsum.)

Clogging up the system

Struvite is an annoying mineral. It may be found in tinned seafood in sliver-like crystals

that look like shards of glass. It doesn't present a health hazard, but who wants to eat a bunch of crystals with one's sardines? In wastewater treatment systems it presents a bigger problem. When anaerobic digesters process sewage, phosphate and ammonia are produced. Struvite will then form as a scale on the inside of outlet or transfer pipes, and may even clog the lines. Struvite can be recovered and used as a fertilizer.

Struvite is soluble under acidic conditions, but only sparingly soluble in alkaline (basic) solutions.

This chemical behavior can cause the formation of struvite stones in the urinary tract. Most urinary tract stones in dogs are struvite, and struvite may also make up urinary tract stones in humans and cats. These "uroliths" block the passage of urine and can lead to extremely painful conditions necessitating surgery to remove the crystals. (If you have to undergo this, ask the surgeon if you can keep the crystals and add them to your collection.)

Struvite forms when urinary tract bacterial infections raise the pH of urine, making it alkaline. Some bacteria hydrolyze (split) urea to release ammonium ions, which then facilitate the precipitation of struvite stones. Intestinal stones (enteroliths) in horses are also made up of struvite.

Struvite from the grave

Struvite shows up in other odd places. It has been found on the surface of old ivory and on the fossilized teeth of a mammoth. It occurs in dung.

And it shows up in decomposed dead bodies, including, reportedly, in the beard of an ancient Viking.

Struvite thus has some importance as a forensic tool because it can be used to determine the approximate date of a burial.

Is struvite a mineral?

Some critics might claim that because struvite frequently has somewhat dubious anthropogenic origins, as described above, it fails to meet the "sniff test" (i.e., the strict definition) for a mineral. But struvite is found in non-anthropogenic settings, too. For instance, it has been reported from the Skipton lava caves, in Corangmire Shire, Victoria, Australia. It should be noted that these lava caves were once inhabited by colonies of bats, and the phosphate that makes up the struvite most probably came originally from bat guano.

In these caves it is also possible to find newberyite (MgHPO₄·3H₂O) formed from the alteration of struvite. Another struvite-related mineral, struvite-K (KMgPO₄·6H₂O), the potassium analog of struvite, is found in Austria and Switzerland.

Ref: Bridge, P. J., 1971, "Analyses of altered struvite from Skipton, Victoria," *Mineralogical Magazine*, vol. 38, p. 381-382.

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*Dr. Andrew A. Sicree is a professional mineralogist and geochemist residing in Boalsburg, PA. This **Popular Mineralogy** newsletter supplement may not be copied in part or full without express permission of Andrew Sicree.*

Field Trip Reports

None

Rock Shows in April & May

April 17-19 in SAN DIEGO,

CALIFORNIA: Gem Faire, Inc. Show
Scottish Rite Center, 1895 Camino del Rio S.
Fri. 12-7, Sat. 10-7, Sun. 10-5; \$5 weekend pass

April 17-19 in STOCKTON,

CALIFORNIA:

"The New Jewelry, Gem, Bead & Mineral Show"

High Sierra Investment Group, Inc.
San Joaquin Co. Agritourism Conference
2101 E. Earhard Ave.
Fri. 12-6, Sat. 10-7, Sun. 10-5; adults \$6, seniors and students \$3, children free - Door prizes, gold panning specialist and certified gemologist and appraiser on hand
Contact: High Sierra Investment Group, Inc. 20385 Pahute Rd., Apple Valley, CA 92308 (702) 869-0269; E-mail: EFisher39@aol.com
Web site: www.HighSierraInvestments.net

April 24-26 in DENVER, COLORADO:

"Colorado Mineral & Fossil Show-Spring"

Martin Zinn Expositions
Holiday Inn-Denver Central,
4849 Bannock St.
Free admission; 80 wholesale and retail dealers, minerals, fossils, gems, jewelry;
Fri. 10-6, Sat. 10-6, Sun. 10-5;
Contact: Martin Zinn Expositions
P.O. Box 665, Bernalillo, NM 87004-0665
Fax (505) 867-0073
E-mail: mz0955@aol.com
Web site: www.mzexpos.com

April 24-26 in SALT LAKE CITY, UTAH: "2009 Spring Festival of Gems"

Wasatch Gem Society

115 North 10th West,
Utah State Fair Park, Zions Bldg.
Fri. 10-6, Sat. 10-6, Sun. 10-5; adults \$2, children, scouts and leaders in uniform free;
Member displays, craft and lapidary demonstrations, dealers, equipment, rocks, gems, kids' grab bags, Wheel of Fortune, silent auction, door prizes;
Contact: Jeffery Huefner, (801) 467-6850
E-mail: jeffjaneh@juno.com
Web site: www.wasatchgemsociety.com

April 24-26 in SANTA ROSA,

CALIFORNIA: Gem Faire

Sonoma County Fairgrounds/Grace Pavilion, 1350 Bennett Valley Rd.
Fri. 12-7, Sat. 10-6, Sun. 10-5
Admission \$5 (weekend pass);
Contact Yooy Nelson (503) 252-8300
E-mail: info@gemfaire.com
Web site: www.gemfaire.com

April 25-26 in SANTA CRUZ,

CALIFORNIA:

Annual Show- Santa Cruz Mineral & Gem Society

Santa Cruz Civic Auditorium, corner of Center St. and Church St.;
Sat. 10-5, Sun. 10-5; adults \$3
Treasure Wheel, demonstrations, more than 20 dealers, gems, minerals, beads, jewelry, fossils;
Contact: Dean Welder, P.O. Box 343, Santa Cruz, CA 95061, (408) 353-2675
E-mail: wdewanwelder@yahoo.com;
Web site: www.scmgs.org

May 23-24, 2009 Memorial Day

weekend Pinetop-Lakeside

White Mountain Gem & Mineral Show

Location to be announced

Sponsored by: White Mtn. Gem & Mineral Club

P.O. Box 3504, Show Low, AZ 85902

Admission: \$2.00, Students under 16 free

Parking: Free

Hours: Sat. 9-6, Sun. 9-4

Show and Dealer Chairperson: Nanz Marshall

928-537-2524