

Nittany Mineralogical Society Bulletin

Nittany Mineralogical Society, Inc.

P.O. Box 10664

State College PA 16805

Editor (see page 8):

David C. Glick

March, 2010

Visit our web site: www.ems.psu.edu/nms/

March 17th meeting: 6:00 p.m.

GEODE NIGHT! with A Program on the Geodes of Las Choyas

presented by
Jeff Smith, "The Geode Guy"

Our March meeting will be held Wednesday the 17th at a special starting time of 6:00 p.m., in the lobby of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps and directions are available through our web site, www.ems.psu.edu/nms/

6:00 to ~ 7:30 p.m.: Buying & cracking geodes

about 7:30 p.m.: featured program on geodes

The event has free admission and free parking,, and is open to all. No purchase is necessary; you can just watch geode cracking and attend the program. We don't plan to have refreshments or door prize drawings this month, but they will resume in April. **Geode Night is great fun for "kids of all ages," as they say. Don't be late! - - Editor**

NMS is very happy to welcome back Jeff Smith, "the Geode Guy," to present Geode Night to our club again. Starting at 6:00 p.m. in the lobby, several sizes of whole geodes will be available for purchase at \$5 and up. After you buy, Jeff will crack them open for you and you'll be the first person ever to see the crystals inside. If yours turns out to be solid, you can pick another at no charge.

Continued on page 2



An unusual geode with both solid and hollow sections.

Photo courtesy of Jeff Smith.

Junior Rockhounds Meeting March 25: Lapidary - Gemstone Carving and Polishing A Demonstration

by Dr. Robert Altamura

Junior Rockhounds meetings are scheduled for 7:00 p.m. on the fourth Thursday of the month, January through May. The location is room 118 of Earth & Engineering Sciences Building, on White Course Drive, Penn State's University Park "West Campus," with free parking.

Club member Robert Altamura will discuss and demonstrate the methods and art of gemstone carving and polishing at the March 25th meeting. The presentation will cover techniques for sawing rough mineral and rock samples, tumbling and carving to achieve the various shapes of gemstones and to achieve a high polish. A variety of minerals and rocks used for lapidary will be discussed and

Continued with color photos on page 3

Minerals Junior Education Day Set for Saturday, April 10

Co-sponsored by NMS and

Bald Eagle Chapter of Gold Prospectors Assoc.

Junior Museum of Central Pennsylvania

Penn State Earth & Mineral Sciences Museum

Location: Earth & Engineering Sciences Building at Penn State (White Course Dr., west of Atherton St.)
Directions & maps at www.ems.psu.edu/nms/

Starting times every half-hour 9 a.m to 1:30 p.m.

Registered students \$4 (see below)

Our annual Minerals Junior Education Day is fun and rewarding for kids and parents who attend, as well as NMS participants. Volunteers are needed (see page 2)!

Students in grades 1 -8 and their parents are invited to come and learn about minerals, crystals, gemstones, and fossils. At this event, kids get an empty egg carton when they check in, then go to a series of stations, each concerning a different aspect of mineral properties, rocks or fossils. They learn about the topic from a demonstration or discussion, and receive a properly labeled specimen related to the topic, so they gather a whole collection in their egg carton. Current plans include stations on:

Mineral hardness and gemstone carving

Light in gems: Chatoyancy and Asterism

Sphere grinding machine Microscopic minerals

Gold panning Fossils - shells and bones

– plus a sales table at kid-friendly prices.

Tell your friends and relatives and their kids!

Please register by April 2: continued on page 2

Geode Night, continued

Jeff will have Mexican geodes from three locations: Las Choyas and Trancas, which he has had for many years, as well as from a newer locality. These are slightly different and can have some good crystals. In addition, there will be polished halves for just \$3.00, and larger opened geodes from Indiana at prices up to \$15.00.

If you finish early with buying, cracking, and watching, you can watch mineral videos in the 114 auditorium until around 7:30 (whenever the geode cracking is finished). Then Jeff Smith will present a program on geodes in that room. He and his family have visited the geode mine in Mexico, and he has slides, good stories and video of the long trip out to the mine and then going underground to mine a few geodes themselves. It's fascinating! The program is family friendly and very interesting, even if you've seen parts of it before.

Brand new this year, watch for Jeff's article on the Las Choyas geode deposit in the March-April 2010 issue of *Rocks & Minerals* magazine. It includes many of Jeff's most interesting photographs from the site. *-Editor*

NEWS FROM THE FEDERATIONS

Nittany Mineralogical Society, Inc., is a member of EFMLS, the Eastern Federation of Mineralogical and Lapidary Societies, and therefore an affiliate of AFMS, the American Federation of Mineralogical Societies. We present brief summaries here in order to encourage readers to see the entire newsletters.

The **EFMLS Newsletter** is available through the link on our web site www.ems.psu.edu/nms/ or remind Dave Glick to bring a printed copy to a meeting for you to see.

The March issue, which contained information in advance of the early March EFMLS convention, was summarized here last month.

The **AFMS Newsletter** is available by the same methods. The March issue begins with a review of the Bulletin Editors' contest and the corresponding chairs in the various regional federations. President Emerson Tucker reviews the fascinating history of a fun fund-raising effort (you really should read this!), in which temporary ownership of a Reggie the Rockhound statue and display was auctioned off at many shows over about 30 years, raising as much as \$25,000 to \$30,000. Jim Brace-Thompson, Junior Activities Chair, seeks active promotion of the Future Rockhounds of America program <www.amfed.org/kids.htm> and ideas for new badges which it could include. The safety article has details about snakebite treatment. A review and some thoughts on the Judges Training Seminar at Wildacres is presented.

Please see the web sites for the complete Newsletters. There's a lot there!
- Editor

Minerals Junior Education Day, continued**Please register by April 2:**

Call Dave Glick at (814) 237-1094 between noon and 8 p.m. to reserve a starting time slot of your choice at the event (each half-hour from 9:00 a.m. to 1:30 p.m. on April 10). He will ask for names and addresses of the students so that checking in on-site will go quickly (we will also enter them in our door prize drawing and send them an announcement next year). **OR** see the web site to register by e-mail. Then send \$4.00 per student (check payable to "Nittany Mineral. Soc." or simply NMS) to:

Nittany Mineral. Soc.

2231 W. Whitehall Rd.

State College PA 16801

Registration is limited so that we may provide a collection of specimens for each student. Parents come along for free, but don't get the specimens. If there are spots open after April 2 (there might not be any!), the price will be \$6.

We are seeking volunteers for publicity, set-up and clean-up, and helping to present the stations. We welcome donations of minerals or fossils which can be sold at child-friendly prices.

For updates, directions and maps, see

www.ems.psu.edu/nms/

Web Sites of Interest

The Bald Eagle GeoEducational Services web site <http://www.baldeaglegeotec.com/BEgeoedHP.htm> by John Way, retired Lock Haven University professor, includes a section on Local GeoNotes in and around Clinton County, PA. Sections include Hyner View State Park, Red Hill fossils, *Arthropycus* trace fossils in Silurian sandstone with great photos, the bald spot (shaped like "Snoopy on skis") on Bald Eagle Mountain, A Citizen's Guide to Water Resources, and more to come.

One could say that the new web site at <http://www.geology-works.com> site has origins in central Pennsylvania because Mary Lou and Stan Paxton lived here in the early 80's while Stan worked on his PhD in Geology at Penn State. This site by Mary Lou has geology photomedia suitable for framing and for display on posters, coffee mugs, mouse pads, t-shirts, and book bags. It includes historical panoramic photos which have never been published before.

S.C.R.I.B.E. is the Special Congress Representing Involved Bulletin Editors of mineral clubs. Their web site, which recently moved to <http://scribe.rbnnet.net/>, provides information about the organization. Membership is a bargain at \$6.00 per year!
- Editor

Juniors Meeting: Lapidary, continued

exhibited along with finished gemstones. A brief Powerpoint presentation summarizing lapidary will open the meeting. This will be followed by a live demonstration that will include operating a tumbler and polishing a gemstone on a lapidary grinding wheel. The tumbler that will be used is a Lortone model which has an opening in the top of the drum that allows one to see into the tumbler while grinding is taking place. This will be an opportunity for members to become familiar with lapidary equipment and learn how it works along with some of the techniques of the hobby/trade. Both Juniors and regular members are welcome, along with questions and comments. We hope that you can make it.



Oolitic chert pendant necklace.



Gemstone pendants made using the equipment that will be demonstrated.

A polished serpentine gemstone will be given to each junior rockhound attending the March meeting.

Each month's Junior Rockhounds meeting has a new topic or topics with fun, hands-on learning. Youngsters who have not yet received their collection storage boxes courtesy of NMS should come to the meetings and pick one up. Those who already have them should bring them to the meetings to hold the specimens which will be given out.

We encourage those who attend to become NMS members, but it's not required. Just \$7.00 covers a whole year (through October 2010) of student membership. Parents may get a lot out of the meetings, too! Check the web site for news, or contact Dr. Andrew Sicree (see page 8).

Planning for Nittany Gem and Mineral Show

By David Glick

For the **Show on June 26-27**, we need donations for the silent auction, and volunteers for a wide variety of activities including table set-up on Friday morning, June 25, and food service. Please plan to enter the Best of PA specimen contest; details will be coming soon.

Please contact Dave Glick to volunteer or to get more information.

Dealers: Spaces are still available; contact David Glick, Show Chair (see page 8).

- Editor

Mexican Minerals on Display at Penn State's E&MS Museum

NMS recently installed a display of Mexican minerals in the Earth and Mineral Sciences Museum on the ground floor of Deike Building on Penn State's University Park campus. The specimens are on loan from members. Watch for more information and photographs in a future issue. The museum gallery is generally open during business hours on weekdays when the University is in session.

Mineral specimen photographs by NMS member John Passaneau are also on display in the hallway outside the museum galleries.

- Editor

Topics at Upcoming NMS Meetings

April 21: Tourmalines, by Bruce Fry

May 19: Seismic Exploration for the Marcellus Shale,
by John Peeples

June: no meeting, please help prepare for Show

NMS is on Facebook!

See our public Facebook page at
<<http://www.facebook.com/group.php?gid=293993550756>>

POPULAR MINERALOGY

Fascinating mineralogy and earth science for the amateur mineralogist and serious collector - #32

Rocks and Minerals Along the Via Porphyry

by Andrew A. Sicree, Ph.D.

Imperial porphyry in Rome

Porphyry. Imperial porphyry. The name evokes images of gladiators, temples, togas, and emperors. And indeed, the emperors of ancient Rome loved it: a stone of deep purple flecked with stars of white. Purple was the color reserved for royalty and nobility and here was an immutable stone that displayed royal purple, shot through with white crystalline "stars." Imperial desire for the stone drove masters and slaves deep into the most forbidding desert in the Roman Empire to quarry it from a mountainside in the Egyptian desert under the harshest of conditions.

Romans adorned the Pantheon with imperial porphyry, carved the robes of their statues and stone portraits from it, and built palaces and temples with pillars hewn from huge blocks of the precious stone. No stranger to excess, the Emperor Nero bathed in a huge, monolithic bathtub cut from a single block of imperial porphyry; the bathtub is today preserved in the Vatican Museums – the cost in silver and in the lives of slaves of dragging this huge block from its source is unrecorded, but tour guides tell you that it was worth more than its weight in gold.

Imperial porphyry in the East

Love of porphyry extended both east and west. In the Byzantine Empire, the Emperor Constantine erected a huge 100-foot (30 m) pillar in Constantinople consisting of nine porphyry drums, stacked one on top of the next. The importance of this pillar can be deduced from historical records that report that Constantine included a shrine at its base containing relics from the life of Christ, including baskets used in the miracle of the loaves and fishes and an alabaster ointment jar attributed to Mary Magdalene. Also included was the Palladium of ancient Rome, a legendary object – reputedly an image of the goddess Pallas (Athena or Minerva) removed from Troy during the Trojan War – upon which the safety of the city was thought to depend. This pillar, minus its top three segments, still stands in

Constantinople, the modern-day city of Istanbul. Today, it is called the "Burnt Pillar" because it survived a major fire that blackened the exterior of the ancient monument.

The importance of imperial porphyry is further emphasized by the fact that women of the imperial family gave birth in porphyry-veneered rooms called the *porphyra*, which guaranteed that royal children were, quite literally, *porphyrogenitos* or "born to the purple." Other uses of porphyry in Istanbul can be seen in the eight monolithic columns of porphyry that support Hagia Sophia's *exedrae*, or semicircular niches. (Hagia Sophia is one of the world's largest churches – it was turned into a mosque after the fall of Constantinople.)

The source

Treasured in ancient Rome, source of the remarkably unique imperial porphyry is reported by Pliny to have been discovered by a Roman legionnaire, Caius Cominius Leugas, in AD 18. The source was an exceptionally bleak and isolated deposit in the eastern desert of Egypt. A single quarry on the Mons Porphyry ("Porphyry Mountain" in Latin; it is now called *Gebel Dokhan* in Arabic) appears to be the source of all of the purple porphyry used in ancient Rome. The long desert road from the quarry to the Nile River is called the "Via Porphyrites" or Porphyry Road to this day. Wells necessary for watering the oxen that pulled carts loaded with huge rough-hewn blocks of porphyry mark the ancient track. The quarry was worked on and off from AD 29 through about AD 335, after which it was abandoned and its location lost.

With the loss of the supply, reuse became the watchword for imperial porphyry. When Roman palaces and temples were torn down, their porphyry pillars were reused in later palaces and churches throughout Europe. For instance, the Cathedral of Magdeburg contains a baptismal font carved from imperial porphyry and recycled Roman columns were used in the Cathedral of Aachen.

The allure of imperial porphyry persists. When his body was exhumed from its original grave on the island of St. Helena in 1840, plans called for Napoleon to be reinterred in Paris in a tomb built of imperial porphyry. An earlier, Napoleonic effort to locate the Roman quarry had failed, and, even though the quarry had been finally rediscovered in 1823, the French Emperor was entombed in a lesser rock from Russian Finland – one that was close in appearance to imperial porphyry (some reports call the rock “porphyry” but other say it is a reddish purple sandstone – I favor the latter).

The Mons Porphyry remained lost until 1823, when the Egyptologists James Burton and John Gardner Wilkinson rediscovered it near Hurgada, Egypt, an extremely remote site. Harsh conditions at the site have defeated attempts to reopen the Roman era quarry commercially, but archaeological investigations conducted at the site have yielded valuable insights into the lives of the Roman slaves and workers who lived and died quarrying imperial porphyry. Close-up images of imperial porphyry samples can be seen on the web at:

<http://www.eeescience.utoledo.edu/faculty/harrell/egypt/quarries/gd-nw-1.jpg>

What is a porphyry?

Geologically, a porphyry (pronounced POR-fer-ee) is an igneous rock with two textures. Porphyry has large crystal grains, called phenocrysts, imbedded in a relatively finer-grained matrix or groundmass. Typically, the phenocrysts are feldspar or quartz, although amphiboles, pyroxenes, and micas are among the possible phenocrysts. The groundmass is typically largely composed of feldspar with varying amounts of quartz, mica and other minerals.

It is important to note that the grains in the groundmass may be so fine that they cannot be distinguished with the unaided eye, or they may be larger – more than a centimeter or so. The key element that makes a rock a porphyry is the presence of some crystal grains, the phenocrysts, which are significantly larger than the grains of the groundmass. For igneous rocks, geologists use the term *aphanitic* for fine-grained “microscopic” textures and *phaneritic* to denote coarser-grained textures. A typical granite is phaneritic while basalts are aphanitic.

Properly, the word porphyry can be used as an adjective. Thus, for example, one can describe a rock as a “porphyritic

rhyolite” meaning that it is a rhyolite (which is fine-grained) with larger phenocrysts. More specifically, a “porphyritic plagioclase rhyolite” or a “plagioclase rhyolite porphyry” is a fine-grained volcanic rock, rhyolite, with larger phenocrysts of plagioclase feldspar crystals. A “porphyry granite” is a granite with some crystals (often feldspars) that are significantly larger than the already coarsely-crystalline groundmass. Imperial porphyry has been described as both a “purplish-red dacite porphyry” and a “purplish-red andesite porphyry.” Andesite is a volcanic rock intermediate in silica composition between rhyolite and basalt. Dacite is a volcanic rock that falls between rhyolite and andesite on the rhyolite-andesite-basalt continuum.

Scientific importance

For the petrologist (a scientist who studies rocks), porphyritic textures indicate that an igneous rock underwent a two-stage cooling process. Initially, the parent magma cooled slowly – this typically occurs far underground – and the slow cooling rate gave some crystals the time needed to grow to a large size. The bulk of the magma remained molten and these phenocryst crystals floated in the molten magma. The second stage began when this phenocryst-bearing magma was pushed upward toward the Earth’s surface. The magma might erupt onto the surface at a volcano, or it might cool and solidify in the shallow subsurface. In both scenarios, the cooling rate is significantly accelerated and the magma solidifies completely into a solid, a porphyry. The early, larger crystals form the porphyry’s phenocrysts, which are imbedded within the later-stage solid (the groundmass).

Decorative building stones

Today, porphyries find use in sculpture, tombstones, kitchen countertops, and facing stones for bank lobbies. They remain popular as decorative stones because of their attractive textures – but those same textures tell a scientific story as well.

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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. **Popular Mineralogy** newsletter supplements are available on a subscription basis to help mineral clubs produce better newsletters. Write to Andrew A. Sicree, Ph.D., P. O. Box 10664, State College PA 16805, or call (814) 867-6263 or email sicree@verizon.net for more info.*

**Sherlock Holmes
and the “Blue Carbuncle”**

It’s Christmastime and Sherlock Holmes, in Sir Arthur Conan Doyle’s “The Adventure of the Blue Carbuncle,” sets out to track down the origin of a valuable gemstone, a “blue carbuncle,” found in the crop of a Christmas goose. The master-sleuth Holmes discovers that one James Ryder stole the gemstone from the Countess of Morcar with help from the countess’s maid, Catherine Cusack, and framed the plumber, John Horner, for the theft. Holmes solves the case, and somewhat uncharacteristically lets the thief escape to the Continent – just because it’s Christmas. The case against Horner collapses, and all’s well that ends well, but the reader is left wondering “exactly what is a blue carbuncle?”

An archaic term, the word “carbuncle” formerly applied to any cabochon-cut red gemstone. Often a red garnet was the stone in question, typically almandine garnet (Fe₃Al₂(SiO₄)₃, cubic). But the difficulty with a garnet being Holmes’ “Blue Carbuncle” lies in the fact that garnets, although they occur in just about any possible color, rarely occur as strongly blue gemstones. Thus, a blue carbuncle would be quite a rare stone indeed – if it were a garnet. If one overlooks the illogical name (if a carbuncle is a red stone how can it be blue?), one can apply a bit of Holmesian logic to solving this mystery:

If a carbuncle is defined as any strongly red gemstone that is cut into a cabochon, then other, non-garnet, gemstones should also be considered. What is another red gem that is typically cut into a cabochon? The first and natural suspect is ruby – the red variety of corundum (hexagonal Al₂O₃) – which is often cabochon-cut. If we accept this possibility, then it quite logically follows that Holmes’ “Blue Carbuncle” was a sapphire – the blue variety of corundum – a much more likely gemstone than a large blue garnet.

Incidentally, the carbuncle is featured several places in the *Bible* as well. The word originates from St. Jerome’s *Vulgate* translation of the *Bible* where it was derived from the *Septuagint* (the Greek translation of the Hebrew scriptures). The Greek word was *anthrax*, meaning “coal” – its use referred to not to the black color of coal but rather to the red flame of a burning coal.

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Geo-Sudoku

by David Glick

This puzzle contains the letters ABEHILMOP, and one row or column spells out one of the typical phenocrysts in porphyry. Each block of 9 squares, each row, and each column must contain each of the nine letters exactly once. The solution is on page 8.

			E		B			H
B	I						L	
						O	E	
		O						
P	H	B	O					
	L			B				I
			M		H			L
		H				M	I	
	A	L				B		

Rochester Mineralogical Symposium
April 15-18, 2010

See this Bulletin’s February issue or
<http://www.rasny.org/MinSymposium/Registration Ltr 10.pdf>
<http://www.rasny.org/MinSymposium/Registration 10.pdf>

**The Monongahela Rockhounds
Gem, Mineral and Fossil Show**
from their web site

Monongahela Rockhounds, in the Pittsburgh area, will hold their show April 17 and 18 at West Mifflin Volunteer Fire Co., #4 - Skyview Hall, (air-conditioned), 640 Noble Drive, West Mifflin, PA 15122 (near Century III Mall and the Allegheny Co. Airport). Hours are Saturday, April 17, 10:00 a.m. - 6:00 p.m. and Sunday, April 18, 10:00 a.m. - 4:00 p.m. Show admission is free and there will be door prizes and a free grand prize drawing. The show features dealers of minerals, fossils, rough and cut gems, jewelry, beads, and lapidary items; a faceting demonstration and displays; children's activities; free mineral identification and gem identification; and food and beverages. See their web site for maps and more: <www.monogahelarockhounds.org>.

Crystal Matrix Crossword

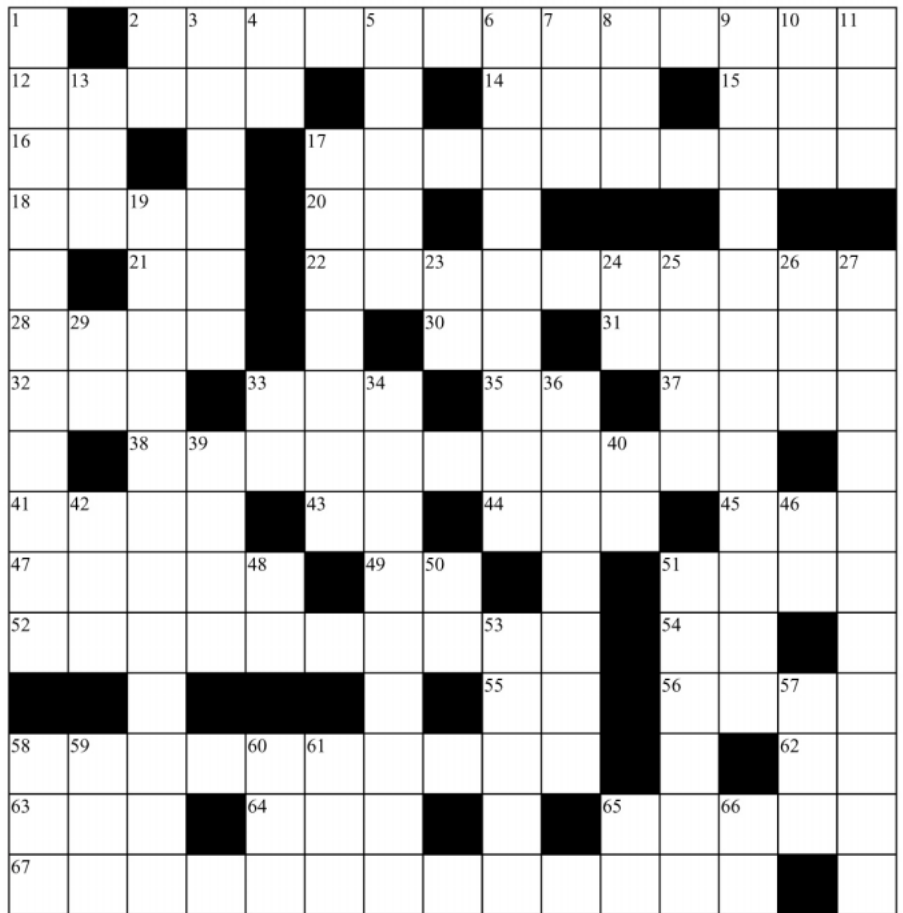
Iridium and Friends

ACROSS

- 2 a copper and iridium mineral
- 12 a favorite collecting site
- 14 American Geophysical Union
- 15 a spicule-like crystal
- 16 where selenite roses are found
- 17 an iridium iron mineral
- 18 town in Texas
- 20 smallest state
- 21 half a laugh
- 22 weapon made of cryptocrystalline quartz
- 28 academic (ab)
- 30 mouth noise when thinking
- 31 when collecting you go on _ _____
- 32 girl's nickname
- 33 to dump out ore
- 35 iridium
- 37 American Society of Agricultural Engineers (ab)
- 38 minerals collectors want
- 41 Greek for Chloe
- 43 365 days
- 44 near the Earth's surface
- 45 near infrared
- 47 to say it obliquely
- 49 used in rare earth magnet
- 51 feel of petroleum
- 52 study motion, time, space
- 54 extra tall
- 55 extra period of play
- 56 big hairy snowman
- 58 variety of osmium
- 62 where its ___
- 63 the boy king
- 64 Radio-Keith-Orpheum
- 65 ex-volcanic gas bubble
- 67 stone in the creek

DOWN

- 1 important for mineral display at mineral show
- 2 copper
- 3 eroding a mountain
- 4 platinum
- 5 Biblical gold source
- 6 sky-blue Cu iron sulfate
- 7 nickname for Ignatius
- 8 bad bomb
- 9 has iridium & ruthenium
- 10 tit for ___



- 11 ___ for eye
- 13 also known as (ab)
- 17 how Crazy Lace Agate's appear to move
- 19 copper iron sulfide
- 23 ruthenium
- 24 a snort
- 25 and others
- 26 diamond (ab)
- 27 platinum arsenides
- 29 found in cerianite
- 33 found in avicennite
- 34 fruit of the gods
- 36 to strike back verbally
- 39 lubricates
- 40 in Pepto-Bismol
- 42 flux (liter/meter/hr)
- 46 big fluorite area
- 48 an exclamation
- 50 not amiss
- 51 not found in Ir minerals
- 53 hammer and _____
- 57 a little bit
- 58 ___ a matter of faith
- 59 get out of your ___

- 60 a drowning person says
- 61 49'ers were fastest at this
- 65 ancient Chinese game
- 66 Old English (ab)

**LAST MONTH'S SOLUTION:
Miscellany**



Some Upcoming Shows and Meetings

Our web site <http://www.ems.psu.edu/nms/> has links to more complete lists and details on mineral shows and meetings around the country.

March 27-28, 2010: 41st Annual Che-Hanna Rock & Mineral Club Show sponsored by the Che-Hanna Rock & Mineral Club. Athens Twp. Volunteer Fire Hall, Sayre, PA

March 27- 28, 2010: Philadelphia Mineral Treasures and Fossil Fair sponsored by the Philadelphia Mineralogical Society. Lulu Temple, Plymouth Meeting, PA.

March 27-28, 2010: 32nd Annual Gem-Mineral & Jewelry Show sponsored by the Franklin County Rock & Mineral Club. Shalom Christian Academy, Chambersburg, PA.

April 15-18, 2010: Rochester Mineralogical Symposium.

April 17 - 18, 2010: Monongahela Rockhounds Gem Mineral and Fossil Show. West Mifflin PA . See page 6 and <www.monongahelarockhounds.org>

April 24-25, 2010: 38th Annual NJ Earth Science Gem & Mineral Show (with Outdoor Swap) Co-sponsored by the Franklin-Ogdensburg Mineralogical Society, New Jersey Earth Science Association and Sterling Hill Mining Museum. Franklin School, Franklin, NJ

May 1 - 2, 2010: "Treasures of the Earth" show and sale by Mineralogical Soc. of Northeastern PA; Oblates of St. Joseph, 1880 Hwy. 315, Pittston, PA. Sat. 10-5, Sun. 10-4.

June: 5, 2010: Spring Mineralfest sponsored by the Pennsylvania Earth Sciences Association. Macungie Memorial Park Building, Macungie, PA.

June 26 - 27, 2010: [Nittany Gem & Mineral Show](http://www.ems.psu.edu/nms/), State College, PA. <www.ems.psu.edu/nms/>

2011: EFMLS & AFMS July 7-10, Syracuse, NY

2012: EFMLS Sept.16-17, Harrisburg, PA ✧

For sale / trade: Equipment & Materials

For sale: Large mineral collection; will sell all or part. Tumble polisher with three 12-lb. and one 6-lb. drum plus grits, polishes and pellets. My phone number is (570) 672-2325. Leave a message if I'm not in.

For sale: Jade in various types & colors; mostly rough, plus some slabs; some fine Coober Pedy opal. Also equipment and jewelry making supplies from jewelry studio and production shop. Contact Daniel G. Reinhold in Mill Hall, PA; phone 570 726-8091 after lunch every day, or e-mail: dreinhold1@comcast.net ✧

L	O	P	E	A	B	I	M	H
B	I	E	H	M	O	P	L	A
H	M	A	L	P	I	O	E	B
I	E	O	A	H	M	L	B	P
P	H	B	O	I	L	E	A	M
A	L	M	P	B	E	H	O	I
E	B	I	M	O	H	A	P	L
O	P	H	B	L	A	M	I	E
M	A	L	I	E	P	B	H	O

GeoSudoku Solution from page 6

INVITE A FRIEND TO JOIN THE SOCIETY

The Nittany Mineralogical Society prides itself on having among the finest line-up of speakers of any earth sciences club in the nation. Everyone is welcome at our meetings. If you'd like to be part of our Society, dues are \$20 (regular member), \$7 (student rate), \$15 (seniors), \$30 (family of two or more members, names listed). Your dues are used for programs and speakers, refreshments, educational activities, Bulletins, and mailing expenses. Please fill out a membership form (available on the web site), make checks payable to "Nittany Mineralogical Society, Inc." and send them to

Nittany Mineralogical Society, Inc.
P.O. Box 10664
State College, PA 16805

or bring your dues to the next meeting.

We want to welcome you!

SOCIETY OFFICERS

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Publicity: Volunteer Needed!

The Bulletin Editor will welcome your submissions of articles, photos, drawings, cartoons, etc., on minerals, fossils, collecting, lapidary, and club activity topics of interest to the members. Please contact:

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Newsletter submissions are appreciated by the first Wednesday of the month. If you include photographs or graphics, please do not embed them in word processor files; send them as separate graphics files (TIF, or good to highest quality JPEG files, about 1050 pixels wide, are preferred). Please provide captions and name of photographer or artist.