



# Rocky Reader

The Monthly Newsletter Of The  
**Toledo Gem And Rockhound Club**

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It's Finally Summertime!

This month, I want to talk to you about connections. Anyone who has spent any time in the business world knows how valuable networking can be. You go to a seminar, convention or workshop, talk to your fellow attendees and find things in common. You have similar interests, similar problems and concerns and often through discussion find new ideas and ways to deal with situations and circumstances. It is no different in the rockhound business. You find a fellow rockhound, and start talking rock and you find new ways to cut or process, new places to dig etc.

One of the best things I have found about this hobby is that I rarely find a fellow rockhound that is unwilling to share. That was the case this past weekend when I spent Friday, Saturday and Sunday demonstrating for our neighboring club, the Midwest Michigan Lapidary Society.

I met June Downing who is the Field trip Chair of the Kalamazoo Club. She is taking on the Dealer Chair of their Show and asked for my help with dealer contracts, rules etc. We talked marketing strategies, display opportunities and more. Then we talked about field trips and I learned that she has connections to get into Duff Quarry, the Grand Rapids Gypsum Mine and much more. I was more than willing to share what I could and she was willing to share what she knew.

I also met E Z Manos, President of the Detroit Salt Company and his Public Relations Mgr, George Davis. Through them I may have a source for an evening program on salt mining, as well as a source for kid's kit specimens of salt.

I have two points to make. First, that talking to each other and fellow rockhounds from other clubs and parts of the country is a great way to network resources. Second, that we should all be willing to share information and ideas. "No club is an island" and we will benefit in so many ways from coordinating and sharing resources responsibly.

This club has several purposes: education, hobby and socializing being the primary ones. So don't be afraid to talk to one another and people from other clubs as well. We can do so much for each other and reap great benefits for our club as well!

Jerri Heer, President

## TG&RC MEETING MINUTES – May 18, 2011

President Jerri Heer called the meeting to order at 7:20 pm and began with the Pledge of Allegiance.

**Secretary's Report:** Moved to accept by Suzanne Shimatzki and seconded by Ed Reynolds, motion carried.

**Treasurer's Report:** Moved to accept by John Kalinoski and seconded by John Hull, motion carried.

**Old Business:** Craft Center Keys- three choices to solve outstanding key and security issues:

- Re-key current system
- New lock and keys
- Electronic Keypad, reprogrammable

**New Business:** Reminder that members can assist with bringing in snacks for meeting refreshments and that donations are gratefully accepted in receptacle provided to help cover costs.

**TBG Liaison:** Crosby Festival of the Arts June 25 & 26. Members can volunteer and earn hours for the club and attend the show.

Arts in the Gardens First Sunday in August.

Jazz in the Gardens on Thursdays from July 27 – August 8 and members can earn hours by assisting during these shows. Call Toni Moore via phone: 419-536-5592 or email: Toni.moore@toledogarden.org

### Group Reports

**Gemcrafters:** Thursdays 12 – 4 pm and Wednesdays 6:30 – 9 pm

**Metalcrafters:** check the Rocky Reader for the schedule

**Beaders:** Third Monday of the month at 6:30pm

**Extreme Beaders:** Extreme Beaders are NOT scheduled to meet June 3rd. Extreme Beaders will be starting all day beading, 9 AM to 5 PM on June 7th. X-Beaders will meet every Tuesday, all day, through August. First time attendees need to schedule their first day of attendance with the moderator, Linda Markowiak, to get a Materials List, and schedule their initial instruction.

**Faceteers II:** Class scheduled weekend of May 28 & 29

**Juniors:** Sunday, May 22<sup>nd</sup> finishing up Fossil Badge

**Rocky Reader:** Deadline Monday of week after meeting

**Membership:** 31 members

**Sunshine:** Mike Burcewicz had surgery– get well soon!

**Field Trips:**

- Several members were on the Bancroft trip
- Trip to Missouri is being planned for mid-October



**Crystals...Minerals  
Cutting Stock.....Tools  
New and Used  
Equipment  
Buying Used Equipment  
and Mineral Collections**

**R & E Rocks**

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Ed and Ruby Reynolds,  
Club members  
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**Show:** Eleven libraries have agreed to host a case in August. Three need members willing to set up a display and they include Maumee, Rossford and Washington.

**Open House:** A busy Saturday, a little slower on Sunday but a good time had by all and eight new membership applications were submitted! Some of those new members present at this meeting. Welcome.

With no further business the meeting was adjourned at 7:52 pm as moved by Ruth Jacobs and John Kalinoski

The business meeting was followed with a display of the auction items from Whalen Auction that will occur on Friday, September 9<sup>th</sup> that will be at 9:00 am. It will be held at 8020 Manore Rd., Neapolis, OH 43537. More information at [www.whalenreality.com](http://www.whalenreality.com)

Respectively submitted by Secretary, Mike Mayers

### POTLUCK JUNE 15

The June Club meeting begins with a potluck dinner. We will start dinner *promptly* at 6:10 so please arrive by 6:00 to set out your dish. Everybody who comes is asked to bring a meat dish plus a:

- dessert if your LAST name begins with A-J or
- vegetable dish if your LAST name begins with K-Z

Please remember to bring your own plates and utensils.

### 2011 SHOW & MWF CONVENTION

Next month will start sign-ups for donations in hospitality, collecting material donations for club sales, kid's games and kits etc. This will be our biggest Show yet as we celebrate our 50th Anniversary as an organization, 40th Anniversary for the Show and our 1st Hosting of the Midwest Federation Convention. We expect every member to play a part in this REALLY BIG SHOW!

### JUNIORS

Next Juniors Meeting Sunday, June 26 noon - 2 PM. We will start work on our Rocks and Minerals Badge, beginning with making and using a field test kit, and talking about mineral identification. Contact Jerri Heer for more info - 419-344.9999 or [jheerx6@aol.com](mailto:jheerx6@aol.com).

### DAYTIME GEMCRAFTERS

Every Thursday from Noon – 4 PM. This is a great opportunity to cut and polish as we are open for a four hour block of time, and often have fewer people working. We are open to the public for observation, so TBG may be advertising our availability. For more information, contact Jerri Heer, 419-344-9999.

### GEMCRAFTERS

All new members or existing members that need to work in the Gem-craft center to cut and polish cabochon **for the first time**, please call or email Elie or Chet to schedule a meeting slot for your training to complete your first cabochon AND PLEASE LEAVE YOUR FULL NAME AND CONTACT INFORMATION.

### METALCRAFTERS

The metalcrafters will meet June 5, 9 and 23. We will not meet on Father's Day, June 19. Sunday meetings are from 1:30-3:30 and Thursday meetings are from 6:30-8:30. If you HAVE NEVER ATTENDED, please call



or e-mail me ([debhoffmaster@gmail.com](mailto:debhoffmaster@gmail.com)) to schedule a three meeting slot to complete the instructional pendant. When you do so, please LEAVE YOUR FULL NAME AND CONTACT INFORMATION.

We are currently planning the 2012 class schedule. If you have suggestions for classes, please let me know.  
Deb Hoffmaster, Metalcraft moderator

## ROCKY READER

Submissions for the July Rocky Reader **must be received by Monday, June 20<sup>th</sup>**. If I do not receive a submission from your group or event, I will assume you have nothing to report. Submissions must be in writing and written as you wish it to be published. Email submissions to [editor@rockyreader.com](mailto:editor@rockyreader.com).

## CLASSES

The following schedule is a listing of upcoming classes. **To enroll, please send fees to the instructor three weeks prior to the class.**

### Your Local Source!

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**November 12, 2011 10AM.** Enameling. Instructor Harriet Nearing. Fee \$40.00 - payable to Debra Hoffmaster. Learn the scrolling technique to produce enamels with swirling patterns of color resembling marbled paper. Participants will produce several pieces suitable for use as pins or pendants. Copper blanks will be supplied.

## SUNSHINE

Wishing Mike Burcewicz a quick recovery after his surgery.

## 2011 TG&RC Cabochon Contest

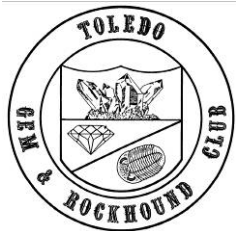
The club will be holding a cabochon contest during our club meeting on **Wednesday, June 15, 2011**. Submit cabs and completed contest forms to Steve Shimatzki. Entries will be accepted until the start of the meeting. Steve will number and record the entries to provide anonymous entries to the judges. Judging and awards presentation will be completed during the meeting.

1. Submit a completed entry form with each entry. Forms can be found in the April & May issues of the Rocky Reader (<http://rockyreader.com/rpdfs/>) or in the craft center.
2. Contestant can only apply in one of the following categories: Advance, Intermediate, Beginners, or Juniors
2. Judging will be based on the following: Cut, Finish, Colors & Patterns, Geometrical shape and balance for Freehand cuts, and Size for standard cuts
3. Please do not show your cabochon to any of the judges or your cab will be disqualified. This year judges are: Chet King, Jerri Heer, & Elie Ghanime

## Club Open House May 14-15, 2011







# Toledo Gem & Rockhound Club

TOLEDO, OHIO

## *EXHIBITOR'S RULES & ADVISORY*

1. **HOURS:** The Show will be open to the public as follows:  
Friday.....2 PM to 8 PM.....Sept. 9<sup>th</sup>  
Saturday.....10AM to 6 PM .....Sept. 10<sup>th</sup>  
Sunday .....11AM to 5 PM.....Sept. 11<sup>th</sup>
  
2. **REGISTRATION AND RIBBONS:** Exhibitor is to check in at the control desk to receive his/her display space location, number and exhibitor's ribbon. Exhibitor's Ribbon authorizes free admission to the show.
  
3. **JUDGING:** Competitive exhibits will be judged on Saturday by Federation judges under AFMS Rules, VIII Edition.
  
4. **DISPLAY SET UP AND REMOVAL:** Each exhibitor must have his/her display installed and in proper order before noon Friday, and preserve it intact until the show closes Sunday at 5 PM. Display may be set up after noon on Thursday, or after 8 AM Friday, and must be removed by 5:30 PM Sunday.
  
5. **RESTRICTIONS:** The Toledo Gem & Rockhound Club reserves the right to restrict any exhibit which for obvious reasons is objectionable, and also prohibit any exhibit which in the opinion of the display committee may hinder the general character and atmosphere of the Show. Distribution of advertising matter in any part of the Show is strictly forbidden without written authorization of the Show Committee.
  
6. **SECURITY AND LIABILITY:** The Toledo Gem & Rockhound Club and the Stranahan Theater Complex will furnish around-the-clock security and will take all reasonable and expected precautions to protect the property and person of each exhibitor. However, it is mutually agreed that the Toledo Gem & Rockhound Club, its members, its officers or its authorized agents shall not be liable to any exhibitor for any damage to or for the loss or destruction of any exhibit in whole or in part. This includes any property of any exhibitor or injury to his person from any cause. All claims for any such loss, damage or injury is expressly waived by the Exhibitor. Submission of this signed application for exhibitor's space constitutes acceptance of all the rules and regulations as outlined above.
  
7. **SUBMISSION: RETURN TO DISPLAY CHAIRPERSON:** Nancy Grove  
1200 Rawson Ave.  
Fremont, OH 43420  
(419) 332-3624

**PLEASE RETURN ALL CASE APPLICATIONS BY AUGUST 5TH**

## COMING EVENTS from Chetty King's Flyer Table

**June 3-5: Wauseon, OH.** State Line Gem and Mineral Society's 50<sup>th</sup> Annual Gem, Jewelry, Mineral and Rock Show/Sale, "Rockin' for 50 Years", Junior Fair Building, Fulton County Fairgrounds. FREE ADMISSION. Fri. 12-7, Sat. 10-7, Sun 11-4, Featuring a MSHA Mine Safety Class on Saturday from 10-3. MSHA Class cost is \$15 + an additional \$15 for the manual. Sandy Cline will teach a soap stone carving class on Saturday from 1-6. Soapstone class is \$15 with limited class size, so register early. For additional info, contact Doris Brzezicki at (517) 263-1669 or [rychard@tc3net.com](mailto:rychard@tc3net.com). Club website: <http://stateline.freewebspace.com>.

**June 10-12: Saginaw MI.** Midwest Faceter's Guild Seminar at Carrollton Middle School Classes offered: Introduction to Faceting: For the beginner, all equipment and material furnished by the guild. Cost \$95. Open faceting for the intermediate to the advanced, bring your machine, design, necessary supplies. Instructors available to help you work through any issues. \$50 GemCad: Hands on session to learn how to create your own faceting designs using your computer. \$95 For more information please see our website: [www.midwestfacetersguild.org](http://www.midwestfacetersguild.org) or contact Barb Yost 616-254-9777.

**June 11: Skokie, IL.** 3<sup>rd</sup> Annual Geodefest, Chicago Rocks & Minerals Society, St Peter's United Church of Christ, 8013 Laramie Ave, Sat 1:00-5:00, Contact: Jeanine Mielechi, 6304 W Highland Av, Chicago, IL 60646, (773) 774-2054, [jaynine9@aol.com](mailto:jaynine9@aol.com).

**June 11-12: Saginaw, MI.** Annual Seminar, Michigan Geology & Gemcraft Society, Carrollton Middle School, Sat 9:00-5:00, Sun 9:00-4:00, Contact Donald Brown, 32832 Illinois, Livonia, MI 48150 (734) 421-8159.

**June 11-12: Mansfield, OH.** Richland Lithic and Lapidary Society will be having their show after a 40 year lapse! Theme: "Ohio's Fabulous Fossils & Minerals" on June 11 from 10am - 6pm and June 12 from 11am - 5pm. At the Richland County Fairgrounds Arts & Crafts Building, 750 N. Home Rd. Mansfield Ohio. Tom Kottyan of "Mineral House" will be the host with his OHIO Mineral collection on display along with the Farrington Mastodon Skull and other great displays. Their club website with show info: <http://rlls.webs.com>. Admission is \$3.00 with discounts for seniors and children.

**June 26-28: South Bend, IN.** 48th annual show and sale; Michiana Gem & Mineral Society; St. Joseph County 4-H Fairgrounds, Esther Singer Bldg., 5177 S. Ironwood Rd., at Jackson Rd.; Fri. 2-7, Sat. 10-6, Sun. 10-4; adults \$3, children (6-12) \$1, under 6 free; dealers, gems, fossils, minerals, jewelry, demonstrations, exhibits, Kids' Korner, silent auction; contact Marie Crull, (574) 272-7209; e-mail: [crullb2@sbcglobal.net](mailto:crullb2@sbcglobal.net); Web site: <http://sauktown.com/Michiana>

**July 16: Morenci, MI.** Stateline Gem & Mineral Society's Rock Swap at the former Railroad Depot 325 W Main St., 8:00-5:00. In conjunction with the Morenci city wire yard sale. 20 ft x 10 ft spaces available \$25. \$5 discount before July 1. Contact Edmund Jarzembrski (419) 237-2000 or Dennis Avis (517) 458-1307 or email [davis@tc3net.com](mailto:davis@tc3net.com) with subject "Info for Rock Swap".

**August 8-13: Houghton, MI.** Annual Copper Country Mineral Retreat. Schedule of events are located on the website for the Mineral Museum: [http://www.museum.mtu.edu/copper\\_country\\_mineral/index.html](http://www.museum.mtu.edu/copper_country_mineral/index.html). Also of note this year is the REOPENING of the A.E. Seaman Mineral Museum. To make this a fun event there will also be an outdoor picnic. To participate in the food, you must pre-register.

**August 20: Clio, MI.** 9th Annual Swap Meet, Flint Rock & Gem Club, G-11350 N Saginaw Rd (M54), ½ mile S of Vienna Rd Sat 9:00-5:00, Contact: Jim Adames, (989) 723-6951, [jdijha@earthlink.net](mailto:jdijha@earthlink.net)



**Thelma Postlewaite's  
Family News**

**June Birthdays:**

- 1 Harry Snodgrass
- 2 Jean Baker
- 3 Kimberley Erdman
- 4 Dawn Pfothenauer
- 5 Lucas Armentrout
- 7 Carolin Dion
- 7 Linn Petersen
- 8 Coleen Shaw
- 11 David DeLong
- 16 Stephanie Mahoney
- 19 Linda Maiani
- 25 Gene Wallace
- 29 Zoe Howard
- 29 Benaiah Varner

## ***Popular Mineralogy***

*Fascinating mineralogy and earth science for the amateur mineralogist and serious collector - #37*

### ***Pyrite Mirrors***

*by Andrew A. Sicree*

#### **The first mirrors**

If you lived during the Stone Age, how did you know what you looked like? In modern life we take mirrors for granted. Indeed, mirrors are everywhere: in the bathroom, over the dresser, by the front door, hanging from the windshield of your car. Most of these mirrors are glass with a silvered backing. Some might be metals such as polished chrome-plated steel. But if you lived in a culture that didn't have glass and had metallurgy limited to copper and goldsmithing, what could you use for a mirror? You could, of course, examine your reflection in a pool of still water, but the reflection isn't very bright and you can't hang a pool of water on your wall.

Some ancient cultures had metallurgical technologies sufficient to make mirrors of polished brass or bronze. One classical account reports that, as Rome laid siege to Syracuse during the Second Punic War (214-212 BC), the Greek scientist Archimedes used bronze mirrors to reflect sunlight, focusing it on the attacking Roman fleet setting their ships on fire. Bronze is an alloy of copper and tin (brass is copper and zinc).

But what does a pre-Bronze Age culture use for a mirror? The oldest known mirrors were manufactured from polished obsidian. Many of these mirrors were simply obsidian cobbles one side of which was ground to a flat surface and then polished. Such a mirror would reflect light but any image would appear against a black background. Obsidian mirrors found in Anatolia (in Turkey) range back in age to 6000 BC. Obsidian mirrors were also used in Central and South America beginning at about 2000 BC. Mirrors made from polished anthracite coal have also been found in South America. The ancient Egyptians used mirrors of polished copper beginning approximately at 3000

BC. Metal-coated glass mirrors were invented in the first century AD.

#### **Olmec mineral mirrors**

Other ancient cultures solved the mirror problem in an ingenious manner: they created mirrors of polished minerals such as pyrite ( $\text{FeS}_2$ , cubic) or iron oxide minerals such as magnetite ( $\text{Fe}_3\text{O}_4$ , cubic), hematite ( $\text{Fe}_2\text{O}_3$ , trigonal), and ilmenite ( $\text{FeTiO}_3$ , trigonal).

The Mesoamerican Olmec culture (1500 – 400 BC) produced note-worthy numbers of mineral mirrors. Many Olmec mirrors were made from pyrite. Others were made from iron oxide minerals such as hematite, magnetite, and ilmenite. One extraordinary Olmec mirror from Las Bocas, Mexico, is a mosaic of several hundred faceted fragments of pyrite. Another Olmec mirror was made from a large nodule of pyrite – a flat surface was ground into one side.

Experienced mineral collectors may be surprised to hear that pyrite mirrors survive to be found in archaeological sites. After all, it is not unusual for pyrite specimens in mineral collections to decompose in a few decades or even a few months. Some pyrites oxidize rapidly, releasing sulfuric acid, and some pyrite mirrors uncovered at Mayan or Olmec sites are indeed corroded. The fact that many are found unoxidized may be attributable to the fact that when buried in a grave, the pyrite is sealed in an anoxic (oxygen-free) reducing environment. Also some pyrites are much more stable than others – it is likely that Mesoamerican artisans knew this and chose their raw materials from sites known to produce more stable pyrites.

Large numbers of concave mirrors of hematite, ilmenite, and magnetite have been unearthed in Guerrero, Mexico, and are attributable to cultures akin to the Olmec. Massive hematite was sliced and

ground to a convex shape with an unfinished back. A round or oval convex mirror was cut into the center of the front and finely polished. The optical quality of these mirrors attests to the extraordinary skill of the lapidaries who manufactured them. Many mineral mirrors have holes drilled in their edges and were hung around the neck by a cord.

Such a mirror was not used as an ordinary “looking glass,” but rather it probably was thought to possess magical properties. Close up, a convex mirror would distort and magnify one’s image. Then as one drew back from the mirror, your image would flip upside down. Convex mirrors may also have been used for fire-starting.

### Mirrors among the Maya and Aztecs

Mineral mirrors were popular among the ancient Maya (whose Classical period ranged approximately 250 AD to 900 AD). Mayans can be seen primping themselves in front of mineral mirrors in Classical Mayan artworks such as pottery decorated with scenes from life in the royal court. Like the Olmec, the Maya cut mirrors from blocks of massive hematite and pyrite. These “uniform” mirrors undoubtedly took many hours to cut and polish and were thus quite valuable. The Maya also manufactured less expensive “composite” mirrors that have a stone base, a clay binding layer, and a reflective surface made from pyrite grains.

Mayan mirrors were used for more than checking one’s hair and makeup. They were imbued with mystical and magical powers and used for divination.

The name of Tezcatlipoca, a major deity in the Aztec pantheon, translates from Nahuatl as “Smoking Mirror,” a title that alludes to his connection with the obsidian used by the Mesoamericans to make mineral mirrors. Tezcatlipoca is often depicted with his right foot replaced by an obsidian mirror – an allusion to Aztec creation myths in which he loses his foot in a battle with the Earth Monster. Other depictions of Tezcatlipoca place the obsidian mirror on his chest and some have smoke emanating from the mirror.

An extraordinarily well-made Aztec mosaic mask preserved in the British Museum shows another use for pyrite. Made in the 15<sup>th</sup> or 16<sup>th</sup>

Century, this mask is based on a human skull and is covered with alternating bands of black lignite and bright blue turquoise. The whites of the eyes are made from white conch shell. But the pupils are orbs of polished pyrite.

### Reflectivities of minerals

How reflective are these mineral mirrors? Some minerals are shinier than others. Finely polished surfaces of magnetite have *average* reflectivities of 21% while hematite surfaces have reflectivities of about 28%. Pyrite has a much higher reflectivity of up to 57%. This means that a highly polished pyrite surface will reflect back as much as 57% of the light that hits it. (Modern mirrors are much more reflective than pyrite – astronomical mirrors, for instance, reflect 95-99% of incident light.)

But the story on reflectivity is a bit more complicated because the amount of light reflected depends upon the color (or wavelength) of the incident light. Hematite, for instance, reflects 34.5% of purple light (wavelength = 400 nm), but less than 23% of red light (wavelength = 700 nm). Magnetite is less reflective but more consistent reflecting 22.3% of purple light (400 nm), 21% of red light (700 nm). Ilmenite is even less reflective, reflecting 21.2% of purple light (400 nm), and 18.6% of red light (700 nm). Not only is pyrite more reflective than these other iron minerals, its range is reversed. Pyrite reflects 38.2% of purple light and 57.0% of red light. The brassy yellow color of pyrite results from the fact that the mineral is much more reflective in the yellow, orange, and red portions of the spectrum than it is in the purple and blue end.

For comparison, a gold surface reflects 24.9% of purple light (400 nm) and 83.6% of red light (700 nm) and polished silver reflects 69.8% of purple light and 86.5% of red light.

**Refs.:** Nelson, Z., et al., 2009, “Composite Mirrors of the Ancient Maya: Ostentatious Production and Precolumbian Fraud,” *The PARI Journal*, 9(4), p. 1-7.; and Stirling, M. W., 1981, *The Olmec & Their Neighbors*, Dumbarton Oaks, Washington DC. 351 p.

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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](mailto:sicree@verizon.net) for more info.*

## AS BLACK AS KOHL

More than five thousand years ago, Egyptian Queens darkened their eyelids with black or deep green cosmetics. They made green eyeshadow by crushing malachite and mixing it with a greasy binder. Black pigments were obtained by using galena, crushed to a dark gray-black powder. The resulting black cosmetic produced in an eyeshadow and eyeliner known as kohl that is still used today. Ancient Egyptians got their malachite from the mountains of the Sinai Peninsula while galena was mined near Aswan or brought to the Nile Valley from the Red Sea coast.

Kohl was used for more than reasons of fashion. It made an effective sunshade, protecting and cooling the eyes of a people who lived and worked under bright, cloudless desert skies. It was also thought to guard the wearer against eye ailments and, in some cultures, to protect one against the “Evil Eye.” Use of kohl persists to the present day.

Galena-based preparations of kohl can pose a health threat, especially if the method of processing the galena manages to reduce some of the galena (lead sulfide) to lead metal (elemental lead). Even today the use of galena-based cosmetics persists in spite of efforts to replace the galena with less-poisonous alternatives. Across a broad sweep of Northern Africa from Morocco to Egypt and stretching into Saudi Arabia, lead-containing cosmetics are a source of elevated levels of lead in blood.

Some alternative preparations of kohl used stibnite as the black pigment (which exposed to wearer to high levels of antimony), but more modern formulations use charcoal or carbon black (i.e., soot). Tourists who buy cosmetics while visiting North Africa should be aware of the dangers posed by lead-based cosmetics and try to avoid them, if possible. ©2010, Andrew A. Sicree, Ph.D.

## Give Me That Old-Time Nomenclature

Chipping away at hard rock down in the mines, old-time miners had names for the ore minerals that aren't exactly those approved by International Mineralogical Association. Our modern desire to be ever so exact with our nomenclature, has

stripped us of most of these colorful and sometimes funny old-fashioned names.

You'll still hear the term “yellow boy” used for the yellow coatings of ferric hydroxide ( $\text{Fe}(\text{OH})_3$ ) found in streams flowing from old abandoned mines. “Ruby jack” was a miners' term for the red variety of sphalerite ( $\text{ZnS}$ , cubic); the name was used for sphalerites from the Tri-State District around Joplin, Missouri. To the hard rock miner “black jack” meant an iron-rich black sphalerite, while it denoted a variety of cannel coal among coal miners.

Early German miners and mineralogists are noteworthy for giving a host of colorful names to ore minerals. *Zinkblende* is a still-used term for sphalerite, but *honigblende* (“honey blende”) was used for the honey-yellow variety of sphalerite. Some names were highly appropriate. *Himbeerspat* meaning “raspberry spar” is descriptive of rhodochrosite ( $\text{MnCO}_3$ , trigonal) while *schwerspat* or “heavy-weight spar” gives you a feel for the heft of barite ( $\text{BaSO}_4$ , orthorhombic), a mineral noted for its high density.

Related ore minerals might have similar names. Thus, wulfenite ( $\text{PbMoO}_4$ , tetragonal) was *gelbbleierz* (“yellow lead ore”), pyromorphite ( $\text{Pb}_5(\text{PO}_4)_3\text{Cl}$ , hexagonal) was called *grünbleierz* (“green lead ore”), *rotbleierz* (“red lead ore”) denoted crocoite ( $\text{PbCrO}_4$ , monoclinic).

The German tendency to string nouns together yielded names like *kieselkupfersmaragd* or “silicic copper emerald” for bright green diopside ( $\text{CaSiO}_2(\text{OH})_2$ , trigonal), noting the mineral's similarity in appearance to emerald. Hemimorphite ( $\text{Zn}_4\text{Si}_2\text{O}_7 \cdot \text{H}_2\text{O}$ , orthorhombic) bore the name *kieselzinkerz* (“silicic zinc ore”), while the lithium-iron mica, zinnwaldite ( $\text{KLiFeAl}(\text{AlSi}_3)\text{O}_{10}(\text{F},\text{OH})_2$ , monoclinic), earned the appropriately longer name *lithiumeisenglimmer* or “lithium iron mica,” *glimmer* being the German term for the micas.

Although banned from today's scientific literature, these terms had one advantage over those in modern glossaries: they were more descriptive of the mineral itself.

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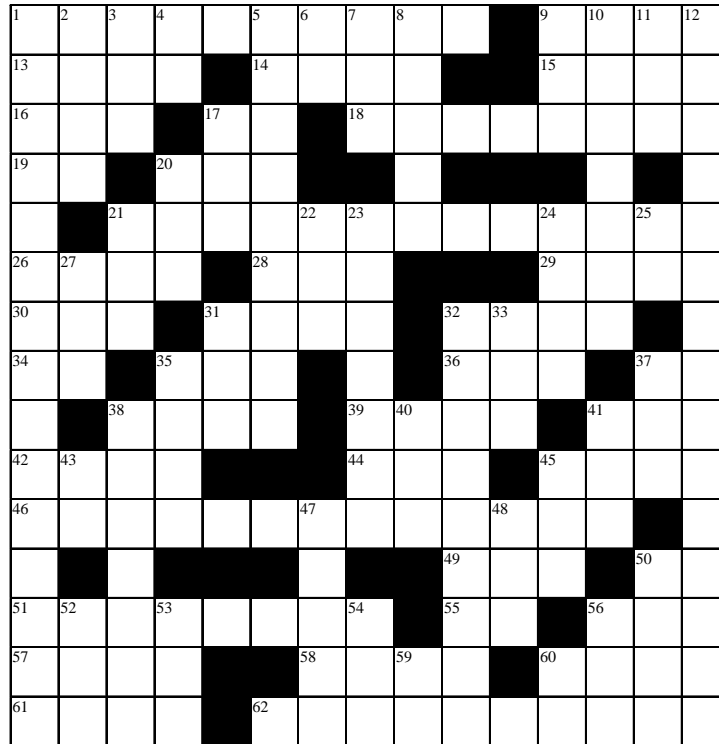
# Spinel

## ACROSS

- 1 lodestones
- 9 what ruby is
- 13 copper state (ab)
- 14 fisherman's winch
- 15 produces basalt
- 16 tangy coldness
- 17 a soldier
- 18 small English mammal
- 19 gadolinium
- 20 one
- 21 germanium iron spinel
- 26 noble gas in lights
- 28 Gilbert; unit of EMF
- 29 Utah's namesake Indians
- 30 organization (ab.)
- 31 \_\_\_\_\_ Fitzgerald; singer
- 32 Spanish baby
- 34 element found in calcite
- 35 opposite of hello
- 36 a narrow Irish spade
- 37 found in cobaltite
- 38 what bishops have
- 39 found in franklinite
- 41 a clumsy guy
- 42 totally engrossed
- 44 Emergency Nursing World (magazine ab.)
- 45 jadeite or nephrite
- 46 studies a different C
- 49 charged particle
- 50 element in strontianite
- 51 resident of Panama
- 55 found in pyromorphite
- 56 French yes
- 57 found on a haul truck
- 58 what geologist takes
- 60 to aid
- 61 test, quiz, etc.
- 62 iron vanadium spinel

## DOWN

- 1 manganese chrome spinel
- 2 like a desert
- 3 short Gipper



- 4 island nation
- 5 faces of magnetite crystal
- 6 that is
- 7 dumb the
- 8 French student
- 9 like a beer?
- 10 zinc aluminum spinel
- 11 Slavic placename suffix
- 12 magnesium iron spinel
- 17 wildebeest
- 20 stone vase
- 21 marshy source of peat
- 22 petroleum
- 23 river of ice
- 24 crimson corundum
- 25 combines with gold
- 27 Paleozoic, Cenozoic, etc.
- 31 big on giant squid
- 32 used for flame tests
- 33 Phanerozoic, Proterozoic
- 35 electron particle radiation
- 37 a shallow fellow
- 38 light wavelengths pattern
- 40 like DNA
- 41 scull

- 43 alternating current
- 45 Jennifer
- 47 source of phosphates
- 48 small troubling spirit
- 50 kidney fat
- 52 sides of quartz
- 53 edge of dress
- 54 new (Romanian)
- 56 Kimono sash
- 59 thallium
- 60 anorthite (ab)

LAST MONTH'S SOLUTION: Arsenic



# June

# 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Gemcraft 7:00p	2 Gemcraft 12-4p	3 )	4
5 Metalcraft 1:30p	6	7 Extreme Beaders 9:00a-5:00p Faceteers II 7:00p	8 Gemcraft 7:00p Faceteers 7:00p	9 Gemcraft 12-4p Metalcraft 6:30p	10	11
12	13	14 Extreme Beaders 9:00a-5:00p	15 <b>Show Mtg 6:30p</b> <b>Club Mtg 7:00p</b> Potluck 7:00	16 Gemcraft 12-4p	17	18
19	20 Beaders 6:00p Rocky Reader Deadline	21 Extreme Beaders 9:00a-5:00p Faceteers II 7:00p	22 Gemcraft 7:00p	23 Gemcraft 12-4p Metalcraft 6:30p	24	25
26 Juniors 12-2p	27	28 Extreme Beaders 9:00a-5:00p	29 Gemcraft 7:00p	30 Gemcraft 12-4p		

Group meetings and classes are for members only. Our club meetings are open to the public on the third Wednesday of every month. To learn more about our club, visit us during our Open House held every May and November.



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