



Smoke Signals



Gem & Mineral Club

September 2011

Club Activities –

Bead Day - Sunday Sept 18th Noon-5 at Readmore Book World and Rock Shop. 1518 15th St Moline, IL 61265. This day will be for beading only. So if you have been waiting to learn beading, now if your chance. For information contact Vickie at 309-764-2653 or 309-235-6128.

September Meeting Tuesday Sept 20th at 6pm: Hauberg Civic Center, Rock Island, IL. This month we will be holding nominations for 2012 Board. Elections will be held at our Oct meeting. Our 3 year Director chair will be open and we will be in need of someone to fill that position. All positions will be open for nominations so if you are interested please let us know. A nominating committee will be created prior to the meeting. If you would be interested in serving on this short term committee please let me know – Kellie Moore.

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Upcoming Shows:

September 10-11: FAIRFIELD, IA The Sac & Fox Lapidary Club Annual Gem Mineral & Fossil Show.

Sept 16-18: LINCOLN, MO, 52nd Annual Show & Swap, Mozarkite Society of Lincoln, Inc., Lincoln City Park, Shelter House, Fri, Sun 8:00-5:00, Contact Robin Kimber, 209 S Ohio, Sedalia, MO 65301, (660) 829-1100

Sept 17th - Rock & Mineral Swap Meet

The Rock River Valley Gem and Mineral Society of Rockford, Illinois is sponsoring a "If It Deals with Rock & Mineral Swap Meet" on Saturday, September 17, 2011 at the Odd Fellows Hall, 6219 Forest Hills Road, Rockford. 9:30am - 3:30pm. \$20 donation for a 10x10 space. Free Parking. Rain or Shine. Bring it, Swap it, Buy it, Sell it. CONTACT: Dave Reese 815-885-1410; dmreese56@hotmail.com.

Sept 17-18: 2011 Auction Venue – Amana, IA sponsored by Cedar Valley Rock and Mineral Society. Amana RV Park and Event enter 39 38th Ave Amana, IA 52203. Approximately 1200 lots from several collections. Minerals, Rough. Fossils, Cabs, Faceted Gems, Jewelry, Findings, Equipment, Books, etc. Sat 9-7?, Sun 10-4?. Friday viewing hours 5 pm-7:30, Sat 7:30am, Sun 8:30am. Equipment will be sold Sat at 2. I.D. is required to obtain a buying number, Cash or Check only. You must have two forms of ID for check. Contacts: Marvin Hoag 319-364-2868, m_hoag@yahoo.com or Sharon Sonnleitner 319-396-4016, sonnb@aol.com; www.cedarvalleyrockclub.com

Sept 23 – 24 – 25. Geode Fest at Cheney Creek in Hamilton, IL. Fri and Sat there will be 2 guided Geode Collecting tours 8-12 and 1-5. Sun there will be one guided tour 8:30-1:30. Tours are \$20 Individual, \$30 Family. There is also a bucket fee of \$20 per bucket, St. Francisville tour is \$25 per bucket. There are also 12 vendors set up in Cheney Creek who have rocks to sell. So – even if you decide not to join the tours there is a rock show to be enjoyed also. Contact: Mike Shumate 573-518-4739.

SEPTEMBER 24 & 25 Rita Bass is having a rock sale. We are located at 2522 N. 625 E. Road, Rochester, IL. SAT AND SUN 9:00 AM TO 3:00 PM After 35 years of rock hunting both locally, and all over the US and filling my basement I have decided to sell off the bulk of my collection. There will be lead mine material, Mazon Creek nodules, quartz and pink dolomite from Arkansas, drusy quartz and barite from Washington Co., Missouri, geodes from Illinois, Missouri and Kentucky, calcite from Eminence, Missouri, fossil material from Illinois, Kentucky and Florida, calcite clams from the Ruck's quarry, Fort Drum, Florida, some fluorite from southern Illinois, amethyst from Thunder Bay, Ontario, material from Buffalo, Iowa, Rensselaer, Indiana, Utah, Colorado and much more. She will also have misc. antiques and furniture there to sell. Cash or checks only. Directions next page.

Directions: That is about 12 miles SE of Springfield or 7 miles east of Rochester on the Mt. Auburn Road and 2 miles south on 625 E. Road. (first road in Christian Co.) Please call for directions from other locations. Our phone number is 217-623-5336 or our cell is 217-816-9400. E mail address is hmbass@embarqmail.com

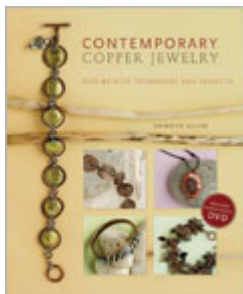
Oct 1-2: SPRINGFIELD, IL, Annual Show, Lincoln Orbit Earth Science Society, Illinois Bldg, Illinois State Fair Grounds, Sat 10:00-6:00, Sun 10:00-5:00, Contact John Washburn, 107 Deer Creek Rd, Rochester, IL 62563, (217) 498-7713, jrwashburn3@att.net

Oct 15-16: DES MOINES, IA, Annual Show, Des Moines Lapidary Society, Paulo Knapp Animal Learning Ctr Iowa State Fairgrounds, E University Av Gate, Sat 10:00-5:00, Sun 10:00-4:00, Contact Steve Cunningham, (515) 262-4578, steverv@mchsi.com

Our Fall Show: OCT 29-30: BLACK HAWK GEM AND MINERAL CLUB FALL ROCK, GEM AND JEWELRY SHOW, Mississippi Valley Fairgrounds, 2815 W Locust St., Davenport. Sat. 10 a.m.- 6 p.m. Sun. 10 a.m.-3:30 p.m. The show will feature rocks, minerals, fossils, agates, geodes, tumbled stones, carved stones, beads, silver and beaded jewelry, spheres, arrowheads and much more. There will be demonstrations on Faceting, and Flint Knapping. Learn to make arrowheads. Crack Geodes. Admission is \$1 for adults - kids 17 and under are free. For information Call Craig or Kellie at (563) 445-3034

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Book review by Kellie Moore



Contemporary Copper Jewelry – Step by step techniques and projects. By Sharilyn Miller

Discover the exquisiteness of copper and how to create one-of-a-kind designs with this exciting material. The truly great thing about this book – even if you don't like copper these are great ideas that you can use with any type of metal. That was my main attraction to it.

After the Field Trips – then what?

Let's face it, field trips are fun! And then there is always that chance of discovery. Who knows what new and unusual specimen you might just find? Whether it's fossils or geodes or a different kind of mineral, they are just waiting for you to come along and pick them up. But then the field trip is over and you take your treasures home; then what.

First of all, are you sure you know what you did find. Most of us have one or more books to help us identify what we brought home. If you decide these books are a bit too pricey for you check out the public library. Many have books on rocks, minerals, and associated items for you to use. Once you have identified you specimen don't forget to make a label. Give the date found, where it was found, what it is, and any other details that might be of interest to others who might see your collection in the future.

Is your find something you can cut and polish into a wearable jewelry piece? If you have the necessary equipment a lot of hours can be enjoyably spent trimming, grinding, polishing, wire wrapping or mounting your transformed find into the thing of beauty.

Maybe you didn't find anything of real interest on you last field trip. Don't forget there are usually several rock shows each year within a reasonable driving distance. You can usually find rough rock, slabs or finished stones at such shows. The shows are also a good way to get together with others who share your interest in rocks and jewelry even if you don't find that special stone.

Auctions are also interesting to visit. A nice one is held by the Cedar Rapids club in late September each year. I've found some nice rough rock and slabs at that event. It's usually a 2 day affair, both Saturday and Sunday. It's well worth the trip.

If you are more of a stay at home person don't forget the Rock and Gem magazine. A monthly magazine with field trip stories, articles about different rocks, locations and gems as well as regular columns on subjects of interest.

So even if field trips are not a common thing for you there is no reason to let your interest in rocks to get rusty. There really is so much to do, see and learn. Just keep moving and don't forget to make it to our clubs meetings, see you there.

By Paul Heuer

Bench Tips by Brad Smith

BALL BURS

I use ball burs quite a bit for carving and for cleaning up bits of solder that need to be removed. Ball burs seem to be more controllable than other cutting burs. They're less apt to grab and walk over your piece leaving nasty scars. And I've found that size matters. The large 8-10 millimeter size is a useful size for carving off bulk material while the small half millimeter or less size can be used at high speed for signing your name on the back of the piece.

CLEANING STEEL SHOT

Steel shot in a vibratory or rotary tumbler works great to burnish up your finished silver pieces. Surfaces are shined and hardened by the shot impinging on it. Carbon steel shot can get rusty and even stainless steel can develop a blackish coating that's hard to remove. My solution of choice to clean the shot is Classic Coke. Just pour an ounce or two over the shot and let the tumbler run for an hour or so. A bad case might require a second cleaning. I'm no chemist, but I've heard that it's the phosphoric acid in Coke that does the trick.

While you're waiting for the shot to clean up, just settle back and enjoy the rest of the Coke.

DEBURRING A HOLE

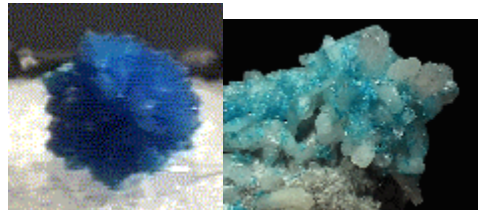
When you drill a hole, there's usually a burr produced on the underside of the metal. Typically you would then file or sand this smooth, but doing so will put scratches on your piece that will take time to polish off. A quick way to remove the burr is to grab a drill that's about three times as large as your hole. Simply twist it in the hole to cut off the burr. I usually do this by hand but if you have many holes to do, put the drill into a holder like a pin vice.

Acknowledgement to be included with each publication:

More BenchTips by Brad Smith are at:

groups.yahoo.com/group/BenchTips/
or
[facebook.com/BenchTips](https://www.facebook.com/BenchTips)

THE MINERAL CAVANSITE

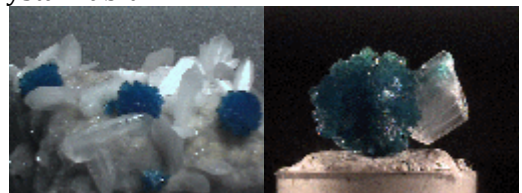


- Chemistry: $\text{Ca}(\text{VO})\text{Si}_4\text{O}_{10}(\text{H}_2\text{O})_4$, **Hydrated Calcium Vanadium Silicate.**
- Class: Silicates
- Subclass: Phyllosilicates
- Uses: mineral specimens.

Cavansite is a beautiful and rare mineral. It was only discovered in the last 30 years and is found in only a few localities. By far the best crystals come from the famous zeolite quarries in Poona, India. Crystal aggregates consist of spherical rosettes with jutting pointed crystals. The deep blue color of even the smallest cavansite crystals is truly amazing. A beautiful blue cavansite rosette perched on top of the muted colors of the typical zeolites makes a dramatic crystal association. Cavansite's rarity and beauty explain its recent popularity.

PHYSICAL CHARACTERISTICS:

- Color is greenish-blue to ocean blue.
- Luster vitreous to pearly.
- Transparency transparent to translucent.
- Crystal System: Orthorhombic
- Crystal Habits radiating acicular crystals forming spherical crystal clusters.
- Cleavage perfect in one direction.
- Fracture conchoidal.
- Hardness 3 - 4
- Specific Gravity is approximately 2.33
- Streak is blue.
- Associated Minerals include zeolites such as stilbite and heulandite as well as calcite, apophyllite, babingtonite and quartz.
- Other Characteristics: larger crystals show an unusual internal reflection.
- Notable Occurrence is Poona, India and Columbia Co. and Malheur Co., Oregon, USA.
- Best Field Indicators are color, associations, locality and crystal habit.



Via Dop and Digs Sept 2011

Shop Hints

Some grades of turquoise have a tendency to glaze over when sanding unless sanded on a new sander. To set a good finish fast on even a worn sander, try letting the stones stand in water until you sand them. Just enough water to touch the stone is enough. To dip them in water as the sanding progresses will help also.

The best Polish Cloth – Go to your shoe repair man and purchase a piece of saddle leather large enough to make a 8-10 inch disk. Glue this to a wooden wheel with the flesh side out. This works very well on rhodonite and jade. (I use it for black coral – c)

Via *Tule Smoke Signals* Aug 2011, Via *Alaska Pebble Patter*.

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DID YOU KNOW...?

Cuprite

A major ore of copper, cuprite is named from the Latin cuprum, meaning “copper”. It can turn superficially dark grey on exposure to light. Cuprite typically has cubic crystals. In the variety called chalcotrichite or plush copper ore, the crystals are fibrous and found in loosely matted aggregates. It can also be massive and earthy. Cuprite is a secondary mineral, formed by the oxidation of copper sulfide veins. Fine specimens come from Namibia, Australia, Russia, France and the U.S.

Zincite

Red oxide of Zinc is another name of zincite. Natural crystals are rare; it is usually massive and granular. When crystals do occur, they are hollow pyramidal. Some so-called natural crystals of zincite in the collector’s market are, in fact, smelter products. Zincite is found mainly as an accessory mineral in zinc ore deposits. Crystals are found only in secondary veins or fractures. The key localities are Franklin and Sterling Hill, New Jersey, where it is an ore of zinc. Tsumeb, Namibia, is another important source.

Magnetite

Magnetite is highly magnetic; it will attract iron filings and deflect a compass needle. An iron oxide in the spinel group of minerals, it usually forms octahedral crystals, although it is sometimes found in highly modified dodecahedrons. Magnetite can also be granular, occurring as disseminated grains and as concentrations in black sand. It is similar in appearance to hematite, but hematite is nonmagnetic

and has a red streak. Magnetite is one of the most widespread of the oxide minerals and is found in a wide range of geological environments. It is a high-temperature accessory mineral in igneous and metamorphic rocks and in sulfide veins. A major ore of iron, it forms large ore bodies in Norway; Kiruna, Sweden and New York State. Excellent crystals are found at Binntal, Switzerland; Traversella, Italy; Zillertal, Austria; Varmland, Sweden; Durango, Mexico and in New York and Vermont. The most strongly magnetic material is found in the Ural Mountains of Russia and Mount Elba, Italy.

Magnetite is said to be for the Greek shepherd boy Magnes, who noticed that the iron ferrule of his staff and the nails of his shoes clung to the magnetite-bearing rock.

Brookite

Named in 1825 for English crystallographer H. J. Brooke, brookite typically occurs as brown metallic crystals. The orthorhombic polymorph of titanium oxide, it is found in veins in gneisses and schists and, more rarely, in zones of contact metamorphism. It generally occurs with rutile, anatase and albite. Because it is relatively dense, it gets concentrated in placer deposits. Fine crystals are found in the same Alpine deposits as anatase; they are also found in Brazil, Norway, Wales and Colorado.

Thanks to the Smithsonian Institution.

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What is a Rock

by May E. Hansen

A rock to a boy is something to throw.
A rock to a jeweler has value like gold.
A rock to a gardener is an ornament for flowers.
A rock to a farmer is a burden when plowing.
A rock to a fisherman makes a fine seat.
A rock to a sailor is a landmark at sea.
But of all the meanings it has been to man
Since the world's creation and it all began,
Surely, no value can hardly be measured,
Nor can a rock be so highly treasured
As that rock, the rockhound holds in his hand,
A specimen so great, a specimen so grand
Be it pyrite, topaz, jade or a geode,
After digging and digging, that rock he holds
Has value unmeasured, much higher than gold,
For the discovery of nature is an experience untold.

Poem from *Rockhound Ramblings* 11/90, via *The Sooner Rockologist* 01/02; via *Osage Hills Gems* 3/02, via *Strata Gem, Toole G&MS* 7-8/04

MY EXPERIENCES WITH OPAL

By Bill Hart

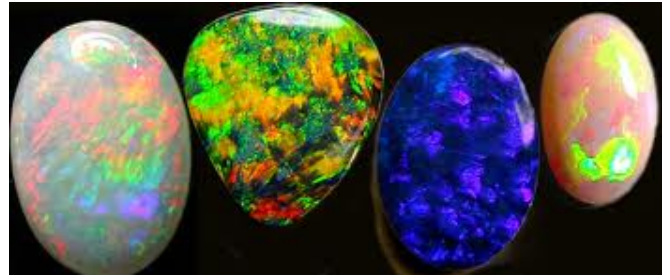
When I first learned to cut Opal back in 1956, I thought there was only one type, the common, white based stone with flashes of fire. I had no idea what caused these flashes but I did know that when the stone was cut and polished, these flashes would become, like magic, the soul of the stone. Of course when I was first learning, I could only afford the "practice opal". It cost \$1.00 per ounce in 10 ounce packets.

For years that was the only type Opal I cut. In 2001 I heard of Wild Acres, a school that taught various types of stone cutting, jewelry making and other lapidary arts. I decided that I wanted to learn more about cutting Opals, and Wild Acres was the place to learn. I wanted to learn how to make a doublet or a triplet and how to cut very flat pieces of Opal.

When I arrived in North Carolina, I was introduced to the lady instructor, Mrs. Sarah Lee Boyce of North Carolina. The first 2 days we cut common Opal so she could assess our "talent" and "skill." They are not the same, I found out. I had the skill but lacked the talent to make a "bad" piece turn into a good piece. So she kept after me to "listen to the stone, let it tell you what it wants to look like". It took me the better part of a day to understand what she meant, that is, orient the stone to get the best display of color.

On the third day she was satisfied that the class had learned what she was trying to instill into us. So she started the day by passing out a piece of "Honduran Opal". This is a type that has lots of sand imbedded in it and undercuts very badly. After we "finished" our stone, she told us that she was now going to show us how to stabilize the stone before we cut another. This was my first introduction to another type of Opal. The next stone she gave us was a piece of blue stone which had different lines of material in it. This was "Peruvian Opal". It is has a "blue" color with dendrite formations and is a harder stone and cuts beautifully. The next stone was a piece of "Boulder Opal". This stone has Opal in iron ore and is soft to cut and polish. The last day was spent making doublets and triplets.

After I returned home, as I was checking the Opal on eBay, I saw "Koroit boulder Opal", a type I did not know of. I decided to bid on a lot and won. When I received it, most of the pieces were flat and had an Entirely different coloring to it. It is polished flat most of the time because the color layers are very thin. If you try to dome it, you may lose the colors.



The next type I found was a type called "Brazilian Dendrite Opal". The color of the base runs from clear to a very dense yellow, and green. It makes a very unusual stone when cut to show the dendrites. It also has a variation of color in the same stone.

Since then I have found "Pink Opal", a harder stone. I have no idea why this is an Opal. It is bright pink and has brown streaks in it. I also bought a piece of "Ice Cream Opal" which is a soft stone that has a tendency to pit while being cut.

The next type I found is Louisiana Opal. It is a very different opal. It is a sandstone/quartzite with opal cement and matrix. It is very hard and unlike most opal, the less water you use the better. This stone has lots of matrix and other impurities in it and it is best to just polish as is. The colors are hard to expose and if you don't take care, you can cut through the strata very fast. This type opal shows its colors best in bright sunlight.

Since then I have seen two other types, "Green Opalite from Macedonia" and Opal from Ethiopia which has a brown base. Both places are unusual for the formation of Opal. However, I have since found out that the "Ethiopian Opal" was the original Opal. And that is where it came to be known as "Queen of Gems". It was mined and polished for the royalty of Africa and the kingdoms of the Middle East. I have not obtained any of these types so know nothing about cutting and polishing them.

There are many ways to cut Opal. You can simply cut a standard shape taken from a template. If you have a large enough piece, with color all the way through it, this is fine. But most Opal has gotten too expensive for me to afford the larger stones. So to make the best stone from small pieces, learn to "listen to the stone". Start cutting on a 220 disk or belt, using lots of water and going very slow. Take the time to look at the stone every few minutes, both wet and dry. This will give you more of a sense of what the stone is "trying to tell you". You will most likely have a stone that is free formed but you will have the "best" stone you can get from the piece.

Via *The Rock Rattler* May 2006

Sawing (or What's Inside?)

By Roger K. Pabian, Lapidary Chair MWF

There is a common belief that you never know what will be inside a rock until you saw it open. There may be some surprises, but the lapidary has a lot more control over what sawing will produce than is commonly believed. The biggest mistake is fitting the rock into the vise. ("This rock fits perfectly into the vise, therefore, that must be the direction in which I should cut it.") I have seen hundreds of slabs of aventurine that have no sparkle because they were cut in the direction in which they most conveniently fit into the vise. The same holds true for tiger eye and for most feldspars, such as labradorite or spectrolite.

The solution to getting the proper cut is no farther away than the scrap wood pile and some white glue such as Elmer's Glue. If you have a piece of aventurine and you want maximum sparkles, glue the piece to the lumber scrap with the sparkly side up. Give the glue about a week to dry and set up hard, then set the stone in the vise with the sparkles parallel to the blade. You should end up with some very nice slabs.

Tiger eye and feldspar are nice blocky minerals that fit very nicely into the saw vise, all in the wrong way. With tiger eye, make the cut such that it is parallel to the direction of the broken, fibrous surface. Glue one of the fibrous surfaces to a board and get ready to cut some very fine eye material. The tiger eye will be at an angle to the saw blade, and not in a block that is essentially perpendicular to it.

For feldspars, to orient the stone, take the block you wish to cut and roll it about under a bright incandescent lamp. (Do not use fluorescent lights or the ecologically safe lights as these do not have the proper wave lengths of light to be of any help.) You will find that when the surface of the stone shows the maximum reflection and color, that surface will be about 10 degrees off of the horizontal. Making your cut parallel to that surface will produce the best effect. You will need to have a few shims to set the block at about 10 degrees to the board. Make sure to not cut wood with your diamond saw; use small rock scraps for shims, or cut some from a soft rock such as alabaster or limestone.

When slicing agate nodules, cuts parallel to the surface will produce an opened pattern, whereas cuts that are perpendicular to the surface produce a tightly banded fortification pattern. By different orientation of the stone, you can produce opened or closed patterns at will.

Too many lapidaries tend to throw away the end cuts of agate nodules, but these often produce some of the most outstanding patterns when the surface is sawed away. My late friend, Bill White, won many American Federation trophies for his cabochons that came off of the end cuts; material that most people would have thrown away. When working with big cabochons, it is often quicker and less expensive to remove the excess material with the trim saw. This was especially true when carbide wheels were in vogue, and diamond grinders were not in use.

At any rate, you are the one in charge when sawing a rock. The rock doesn't have any say in the matter. Don't be hasty; use some glue and board scraps. Treat the material with the care and kindness it deserves.

Via *Crystal Lines* Nov 2009, Via September 2009 *MWF Newsletter*

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September birthstone is Sapphire



Sapphire gemology

Species: Corundum

Color: Blue, colorless, pink, orange, yellow, green, purple, black

Chemical composition: Al₂O₃, Aluminum Oxide

Crystal system: (Trigonal), doubly pointy, barrel-shaped, hexagonal pyramids, tabloid shaped

Hardness: 9 (Mohs scale)

Sapphire is the most precious and valuable blue gemstone. It is a very desirable gemstone due to its excellent color, hardness, durability, and luster. In the gem trade, Sapphire without any color prefix refers to the blue variety of the mineral [Corundum](#). However, the term Sapphire encompasses all other gem varieties and colors of Corundum as well, excluding [Ruby](#), the red variety of Corundum, which has its own name since antiquity.

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MWF Liaison	Vacant	

The purpose of this non-profit organization is to promote interest in collecting, studying and working with gems and minerals and fossils. Organized in 1955, the Black Hawk Club joined the Midwest Federation of Mineralogical & Geological Societies in 1959. It is also a member of the American Federation of Mineralogical Societies. Meetings are held on the third Tuesday of every month, September through May at 6:00P.M. in the Hauberg Civic Center, 1300 24th Street, Rock Island, IL. Picnics are held at various locations during June, July, and August. Annual Dues: Individual Membership: \$15.00, Senior Couples: \$12.00, Senior Individual: \$10.00, Family: \$20.00.

Contributions: Submissions (announcements, photographs, notes, letters, articles, etc.) are actively solicited from BHGMC members. Copyrighted material submitted for publication must be accompanied by a written release from the copyright holder. All material submitted is subject to editing. Unless previously arranged, all submissions become property of the Black Hawk Gem & Mineral Club, Inc. When requested, original and personally-written articles will be published with a copyright notice in the author's name, otherwise all submissions will be published without individual copyright. No anonymous submissions will be considered; however, the submitter's name will be withheld or a pseudonym may be used at the submitter's request. The deadline for all submitted work is the 20th of the month before it is to be published. Late and/or unused entries may be published in later issue.

Editor: Kellie Moore 718 Franklin Ave, Davenport, IA 52806.

Disclaimer: The conclusions and opinions expressed in *Smoke Signals* are those of the authors and do not necessarily represent those of the Officers, Editor, or members of the club.

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www.blackhawkgemandmineralclub.com

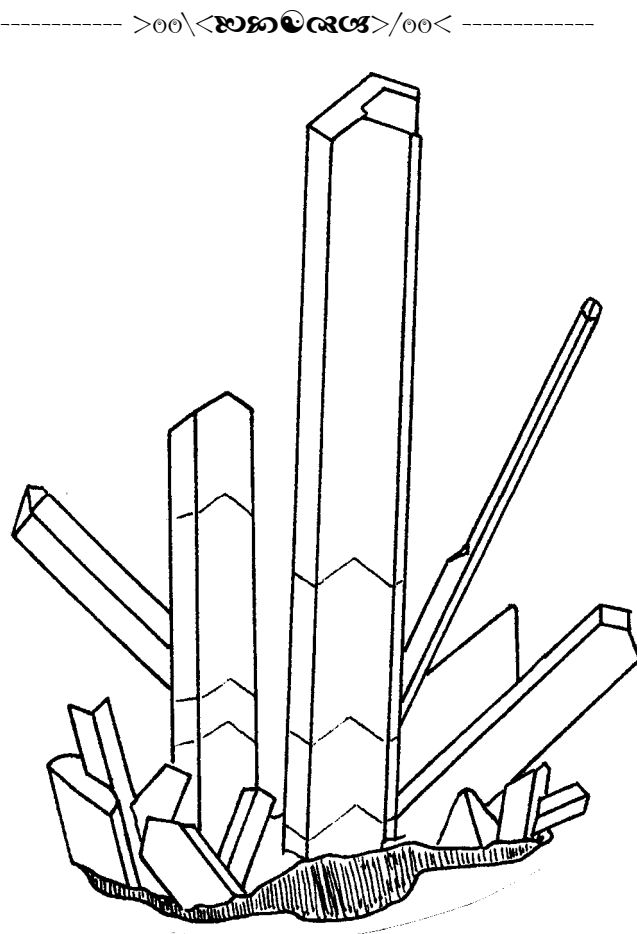
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Midwest Federation of Mineralogical & Geological Societies

<http://www.amfed.org/mwf/>

American Federation of Mineralogical Societies

<http://www.gaminal.org/afms.htm>



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**Black Hawk
Gem and Mineral
Club, Inc.**

September 2011

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