



The **BACKBENDER'S** **GAZETTE**

The Newsletter of the
Houston Gem & Mineral Society
Houston, TX

Volume XXXVIII - No. 8

August 2007



President's Message

by Matt Dillon

July is here, and the hot weather I have been talking about is coming along with it. How ever, June and July brought us more rain than normal, so some of our activities had to be put off or plans changed as a result. Some of this rain fell in south and southwest Texas, and I am sure those of you venturing out this fall will find that erosion from all the rain improved your chances of finding good material.



Our Show Committee is working hard preparing for our annual show in Humble, September 21–23, 2007. Those of you wishing to help should contact our Show Chairperson Sigrid Stewart or her assistant, Michele Marsel. They have initiated a “New Volunteer Incentive Program” which involves earning a “Show Buck for every shift you work”—another good reason for helping out.

In addition, Scott Singleton is busy planning our hosting of the 2008 American Federation of Mineralogical Societies Annual Convention during our 2008 show.

Changes are taking place around our clubhouse, and you no doubt have noticed much progress on the new room being built in the large open storage area. Tom Wright, David Hawkins, Wayne Barnett, and many others have put in hours of hard work during this project which still has a way to go. You may also notice that the parking lot is restriped with a fresh coat of yellow, and we will also paint the concrete blocks

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General Meeting Programs

July 24: Kazakhstan Metal Work--Our own Neal Immega will speak on the spectacular metal work to be seen in the Kazakhstan exhibit currently on display at the Houston Museum of Natural Science. Neal is a docent at the HMNS, and he may be able to arrange for a low cost or free tour of the exhibit for interested members on a Saturday or Sunday.

August 28: To be announced

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Every article submitted to the BBG is edited for grammar and content prior to publication. Any flaming is removed.

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Copy is due for the September 2007 issue by Wednesday, August 8, 2007.

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Purpose of HGMS

The objectives of this Society are to promote the advancement of the knowledge and practice of the arts and sciences associated with the collecting of rocks, minerals, fossils, artifacts, and their identification and classification; the general lapidary art; the collecting and identification of gemstones; the designing and execution of jewelry or metalcraft; and to provide the opportunity to obtain, exchange, and exhibit specimens and rough or finished materials.

Membership dues are \$30 for an adult membership, \$40 for a couple, \$50 for a family (including all children aged 5-18), and \$8 for a youth membership (ages 5-18). Advertising rates: \$70 for 2 months, ¼ page; \$150 for 6 months, ¼ page.

MEMBER: American Federation of Mineralogical Societies & South Central Federation of Mineral Societies.

All meetings are held at the Clubhouse located at 10805 Brooklet near the intersection of Highway 59 (Southwest Freeway) and Sam Houston Parkway (Beltway 8). See the calendar inside the back page for when the different Sections meet. The General Meeting is the fourth Tuesday of each month at 7:30. The HGMS Internet address is <http://www.hgms.org>.

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that separate one row from the other to help our members avoid tripping over them at night.

I want to remind everyone about how our excellent Youth Section is growing, and more kids are coming to the clubhouse on the first and third Saturdays of the month to work on the great projects Beverly Mace and her assistants are guiding them through. The Youth Section has exclusive use of our shop between the hours of 10:00 a.m. and 12 noon on those two days of every month, but I notice that a few of our senior members are still trying to use the equipment during those time periods. They must yield to the Youth Section members during those two hours. If you have any doubts about using the shop during the two hours mentioned above, please ask Beverly, her assistant, or the shop-foreman on duty, and they will be happy to advise you on your options.

I hope everyone has a great summer, and I look forward to seeing you at the clubhouse and at the next General Meeting on July 24!

**Additions to the Minerals of the Sherman Tunnel,
Leadville, Lake County, Colorado**

by Arthur E. Smith

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Last fall I wrote an article about the microscopic minerals I obtained from the Sherman tunnel in Leadville (Smith 2006). This spring while trying to shrink my stock of duplicate and surplus minerals, I came across some poor microscopic silver specimens from this location. Trimming some of the larger pieces revealed a surprise and some additional mineral species I did not report from the location. I do not know specifically where I obtained these specimens, but most of the material I purchased in the 1970s and early 1980s in Leadville from the Rock Hut and others, and I added specimens from Steve Willman and still later from Allan Mitchell, *Microminerals International*, who collected them when the mine was operating.

Most of the specimens I have are from the oxidized zone and consist of zincrosasite, cerussite, smithsonite, aurichalcite, barite, brochantite, descloizite, dolomite, calcite, gypsum, hemimorphite, plumbojarosite, wulfenite, chlorargyrite, azurite, and malachite. I also had a couple of small masses of crystalline silver on matrix. The matrix contained massive galena, sphalerite, and pyrite not mentioned in the article. These specimens are probably from a silver-enriched zone below the oxidized mineral zone. One of the surplus specimens was about 4 cm across and contained a small mass on crystalline silver on one side. I was about to chuck it, but decided to reduce its size a bit and break it some first, just in case. That was a smart and lucky decision—more lucky than smart probably.

The trimmer shattered the specimen and revealed cavities with bright coiled and entwined wires of native silver. These certainly upgraded the silver specimens already in

my collection from this location. Some tiny, pale tan siderite rhombs were associated with the nests of silver wires. Not directly associated with the bright silver wires but in separated cavities with and on tarnished wire silver are some minute free-standing dendritic-like black acanthite crystals—usually less than 0.3 mm tall but quite attractive. They seemed to be formed of flattened, pointed, and acicular acanthite crystals attached to each other and forming a branching or dendritic pattern. They appear to be late in formation and probably are an alteration of some of the silver. Similar specimens but larger occur at the Bulldog Mountain mine in Creede, Colorado (Smith, *in press*) and elsewhere in Leadville. Massive and crude sphenoidal crystals of tarnished chalcopyrite also were present in the specimen, but none were really good enough to keep as specimens. Some dark gray partial crystals are possibly arsenopyrite, but none of the crystals were complete enough to make a definite determination.

The “crown jewel” obtained from this specimen is yet to be mentioned. Quartz crystals are small and not abundant, but most are



Figure 2: Acanthite crystals that occur with tarnished wire silver. Most are considerably under 0.5 mm in size.

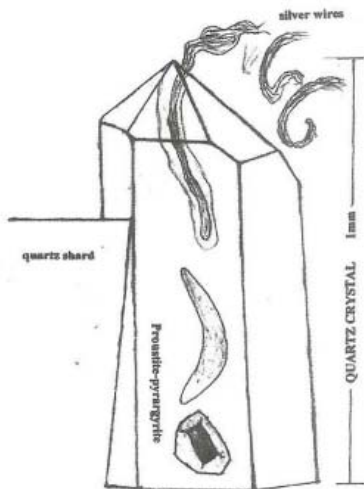


Figure 1: Idealized sketch of a quartz crystal with included wire silver and proustite-pyrargyrite. The outlined area around the included wire silver is a slightly milky area that may be a result of refraction and reflection of the silver wire or even an enlargement of the cavity with the silver.

bright and mostly transparent. One of these, a 1-mm long crystal, was observed and found to be almost flat on the matrix, with the termination end only slightly elevated more than the matrix-attached base. Near the quartz termination are some ragged bright silver wires. One of these extends toward the quartz crystal and actually enters one of the rhombohedral faces on the back side of the quartz crystal. It extends downward into the prism and toward the front of the quartz crystal but terminates without exiting the crystal in what looks like a silvery blob in the crystal. Near the base of the quartz crystal, there is a bright red included proustite-pyrargyrite crystal. This crystal is somewhat equant, and some flat faces can be observed, but the rough surface of the crystal and defraction distortion of the quartz make a good complete view impossible. Just above this crystal and extending almost to the end of the silver wire is an-

other bright red, elongated, proustite-pyrargyrite crystalline mass in the shape of a boomerang. Unfortunately the narrow quartz faces and imperfections do not allow good viewing of all three inclusions at the same time. Actually only two of the prism faces are available for viewing the inclusion, so a good photograph cannot be made. One other quartz crystal from the same specimen also has a proustite-pyrargyrite inclusion but with no crystal form. No proustite-pyrargyrite was observed that was not included in quartz. In my own collecting experience, quartz crystal formation usually precedes the crystallization of silver or most sulfosalts, but evidently there is an exception here, and the quartz was deposited later than both in the enrichment phase. My sketches are idealized and are supposed to give a general idea of the minerals I have observed.

The best lesson here is to give those throw-away specimens a good break and an examination before chucking them out, or you may miss the best combination of minerals from the location.

Reference

Smith, A.E. *in press*, Mineral Collecting in Creede Colorado in the 1970s and early 1980s: The Commodore and Amethyst mines and the Bulldog Mountain mine.

Smith, A. E. 2006, Through the 'scope: collecting microminerals in Leadville, Lake County, Colorado. *Rocks & Minerals* 81:381-387.

The Giant Concretions of Rock City, Kansas

by Paul V. Heinrich

Member of the Houston Gem & Mineral Society

In the SW1/4, Sec. 14, T.11S., R4W., about 3.6 miles south of the town of Minneapolis in Ottawa County, a spectacular concentration of giant concretions called "Rock City" can be visited. They are a fantasyland of rock formations which are unique for their large size, number, and concentration in a small area, their range of shapes, surface ornamentation, and accessibility (Schoewe 1937).

History

It is unknown when or who first discovered Rock City. The Morris Family was the first owner of the land containing it. Even after they sold the adjoining property, they retained ownership of Rock City in order to prevent it from being commercialized. In time, its ownership was transferred to Rock City, Inc., a nonprofit organization, with the condition that it be maintained in virtually the same condition as when it was purchased.

The first published reference to Rock City appeared in Mudge (1878). Photographs of Rock City later appeared in Hay (1893); Bell (1901); Chamberlain and Salisbury (1906, 1914); Kansas newspapers and the state highway map in 1936; Simpich (1937); and in papers published in the 1930s. Bell (1901), Gould (1901), Landes (1935), Schoewe (1937), Shafer (1937), Ward (1938), and McBride and Milliken (2006) discussed the

remarkable nature of the concretions comprising Rock City.

Schoewe (1937) and Schoewe et al. (1937) recommended that Rock City be recognized as a National Monument. On May 29, 1977, Rock City was dedicated as a National Natural Landmark. It was the third National Natural Landmark to be created within Kansas.

Physical Character

Rock City consists of about 200 concretions which occur as three distinct clusters within an east-west belt about 1640 feet (500 meters) long and 130 feet (40 meters) wide. The central cluster is the largest and best preserved of these clusters. It contains about 84 concretions which are generally about 90 percent exposed. They rest on low pedestals of host sandstone which often exhibits Leisegang banding and contains abundant pea-size and



Figure 1: Typical view of concretions within the central cluster of Rock City. Photograph courtesy of Kansas Geological Survey from “Photos from Ottawa County” Web page, which is accessed from <http://www.kgs.ku.edu/Images/DB/index.html>.

grape-size carbonate concretions. The 52 concretions of the east cluster are almost as well preserved as those in the central cluster. The 70 concretions forming the west cluster are more weathered, buried, and fragmented than those in the other clusters (Schoewe 1937, Ward 1938, McBride and Milliken 2006).

The concretions which comprise Rock City vary greatly in size and shape. These concretions exhibit a wide variety of spherical, subspherical, loaf, and irregular shapes (Figures 1 and 2). Some of them have truncated tops. In terms of size, they typically range in diameter from 10 to 20 feet (3 to 6 m) with an average diameter of 11.8 feet (3.6 m). In the central cluster, concretions have coalesced to form a loaf-shaped compound concretion, which is 27 feet (8.2 m) long and 8 feet (2.4 m) high (Schoewe 1937, Shafer 1937, McBride and Milliken 2006).

These concretions consist of well-sorted, medium-grained sandstone which are tightly cemented by poikilotopic and displacive fibrous calcite. The sand fraction consists of about 95 percent detrital quartz. The remainder of the grains consist of chert, micaceous metamorphic, rock fragments, muscovite, heavy minerals, and intraclasts. Par-



Figure 2: Example of concretion at Rock City showing cross-bedding, size, and truncated top. Photograph courtesy of Kansas Geological Survey from "Photos from Ottawa County" Web page, which is accessed from <http://www.kgs.ku.edu/Images/DB/index.html>.

tially calcified feldspars and calcite-filled molds and ghost grains of feldspar were observed. These and the presence of oversized patches of calcite the size of medium sand grains indicate that over 20 percent of the feldspars and other grains have been replaced by calcite during the cementation of the sandstone to form these concretions. Microscopic grains of pyrite, now replaced by goethite, and pyrite

concretions of up to 30 cm in diameter are present within the concretions (McBride and Milliken 2006).

Similar concretions have been reported from the Rock City region. Schoewe (1937) observed them about 2 to 3 miles (3.2 to 4.8 km) south of Rock City and 0.5 mile (0.8 km) east of Lamar within Ottawa County. Scattered occurrences of such concretions have been observed in Ellsworth, Marion, and Rice Counties. In Mushroom Rock State Park in Ellsworth County, they form photogenic hoodoos after which the park is named. McBride and Milliken (2006) studied similar giant concretions exposed in a quartzite quarry near Lincoln, Nebraska.

Stratigraphy

The concretions which comprise Rock City formed within cross-bedded sandstones of the Dakota Formation. The Dakota Formation consists of 30 to 40 percent sandstone and 60 to 70 percent claystone, mudstone, and siltstone with minor amounts of lignite and conglomerate. It has a maximum thickness of about 347 feet (106 m). Ancient coastal rivers, which were flowing toward the northwest, deposited the Terra Cotta Member, the subdivision of the Dakota Formation containing these concretions, during the Albian Stage of the Cretaceous 100 to 112 million years ago. These concretions occur within sandstones which accumulated in the channel of low sinuosity rivers, characterized by very well defined cross-bedding (Franks et al. 1959, Mack 1962, McBride and Milliken 2006).

Origin of Concretions

A variety of origins have been proposed for the origin of these concretions. Prior to 1937, they were erroneously identified as glacial boulders, corals, concretionary limestone masses, and weathered sandstone remnants. Schoewe (1937) was first to correctly identify these concretions as carbonate concretions (McBride and Milliken 2006).

Based on a detailed analysis of the petrography and geochemistry of these concretions, McBride and Milliken (2006) reconstructed a more detail history for them. From the degree of compaction of the sandstone when cemented, they inferred that the concretion formed when the sandstone containing them was buried between 0.2 to 0.6 mile (0.4 to 1 km) below the surface sometime between 72 and 82 million years ago. In addition, they concluded that these concretions formed pervasively rather progressively by growing from the center of the concretion. They also concluded that the calcium, from which forms the cement, likely came from marine shells and possibly limestone and anhydrite from the underlying Kiowa Shale and Wellington Formation.

Origin of surface markings

Unlike the typical giant concretion, the Rock City concretions exhibit intricate geometric designs (figure 2). These surface markings reflect tabular and wedge-shaped planar sets of cross-bedding, which characterized the fluvial sandstone in which they formed (Franks et al. 1959). Because of their greater permeability, the coarser-grained cross-lamina within the cross-bedding are more strongly cemented than the finer-grained cross-lamina. As a result, weathering has etched the concretions, creating alternating ridges and grooves depending on the grain size of the cross-lamina.

How to get to Rock City

Rock City is located 3.6 miles (5.8 km) south of the town of Minneapolis in Ottawa County. To reach Rock City, go about 2.5 miles (4.0 km) southwest of Minneapolis on Kansas 106 and turn right on Ivy Road. Then, go 0.5 mile (0.8 km) west on Ivy Road and turn right (north) into the road to Rock City.

Rock City is owned and operated as a park by Rock City, Inc., a local non-profit corporation. It is open 9 a.m. to 5 p.m. daily, May 1 to September 1. A small admission fee is charged and used to maintain the park and offset its operating costs. Further information about Rock City can be obtained from Rock City, Inc., 1051 Ivy Road, Minneapolis, Kansas 67467 (785.392.2577). Rock City Web pages can be found at <http://www.washburn.edu/cas/art/cyoho/archive/KStravel/rockcity/> and <http://www.naturalkansas.org/rockcity.htm>

Other Places To See Giant Cannonball Concretions

Rock City is one of a handful of places within the world where giant cannonball concretions can be inspected and photographed by the general public without a significant amount of off-road bushwhacking. The locations where similar cannonball concretions can be readily visited include:

1. Red Rock Coulee Natural Area, Alberta, Canada
2. Theodore Roosevelt National Park, North Dakota
3. Koekohe Beach, South Island, New Zealand
4. Zavidovići, Bosnia and Herzegovina

Red Rock Coulee Carbonate Concretions: One park in which giant, subspherical concretions can be observed is Red Rock Coulee Natural Area, which lies 34 miles (56 km) southwest of Medicine Hat, Alberta, Canada, along Hwy. 887. It contains numerous subspherical carbonate concretions that are as much as 8 feet (2.4 m) in

maximum diameter. They occur as a boulder field composed of concretions eroding out of the Cretaceous Bearpaw Shale within the eastern part of the 800 acre (324 hectare) nature preserve. At this time, little has been published about the nature and origin of these concretions. Being a natural area, any type of collecting or disturbance is prohibited. However, these concretions make spectacular pictures when either photographed or drawn.

North Dakota Cannonball Concretions: In North Dakota, giant cannonball concretions are found along the Cannonball River in Morton and Sioux Counties, North Dakota. These concretions are as large as 10 feet (3 m) in diameter. Unlike the Rock City concretions, they have a relatively smooth surface. Their surfaces exhibit fractures which are virtually identical to those seen in pictures of the Bosnian cannonball concretions. Very little has been published about their nature and origin.

There are two parks where these concretions can be seen. First, these concretions can be seen along the North Unit Scenic Drive of Theodore Roosevelt National Park, McKenzie County, North Dakota. At this location, these concretions are eroding out of the Late Paleocene Sentinel Butte Formation which consists of fluvial and lacustrine sediments. Finally, medium-size examples of these cannonball concretions are on display in Ft. Abraham Lincoln State Park near Mandan, North Dakota.

New Zealand Cannonball Concretions: Another natural area in which giant cannonball concretions are protected and can be readily found and photographed consists of a stretch of Koekohe Beach on the Otago coast between Moeraki and Hampden, South Island, New Zealand. This scientific preserve contains giant concretions called Moeraki Boulders, and they range in diameter from 1.6 to 7.2 feet (0.5 to 2.2 m). They occur as isolated boulders or as clusters of spherical boulders scattered along the beach. Individual Moeraki Boulders often can be found eroding out of the Paleocene mudstone of the Moeraki Formation along the bluff line. Moeraki Boulders consist of calcite-cemented mud. Large cracks, called "septaria," radiate outward in an intersecting polygonal pattern from the hollow core of these concretions. These septaria are typically lined with an outer layer of brown calcite and an inner layer of yellow calcite spar. Rarely, an innermost layer of dolomite and quartz covering the yellow calcite spar overlies the brown calcite. The unmodified surface of the typical Moeraki Boulder is usually smooth except for a polygonal fracture pattern (Boles et al., 1985; Forsyth and Coates, 1992; Thyne and Boles, 1989).

As a result of detailed studies of the petrography and geochemistry of the Moeraki Boulders, Boles et al. (1985) and Thyne and Boles (1989) concluded that the precipitation of calcite inside the pores spaces within the mudstones comprising the Moeraki Formation created them. Based upon the magnesium and iron content and isotopic composition of the carbonate cement, they concluded that these concretions started forming within marine mud near the surface of the Paleocene seafloor as the result of carbonate precipitation caused by the microbial reduction of sulfate in pore fluids. They estimated that the 2-meter in diameter Moeraki Boulders took about 4 to 5.5 million years to grow. After they had completely formed, the Moeraki Boulders were fractured to create large septaria within them. When a drastic drop in sea level allowed

fresh groundwater to flow through the mudstones of the Moeraki Formation, brown calcite, yellow calcite, and, in rare cases, dolomite and quartz progressively filled the septaria (Boles et al., 1985; Forsyth and Coates, 1992; Thyne and Boles, 1989).

Bosnian Cannonball Concretions: In Europe, large carbonate concretions, which are accessible to tourists, have recently been found near Zavidovići, Mecevići, and Ozimici, Bosnia and Herzegovina. Although initially misidentified as being manmade, ongoing studies of the Zavidovići stone balls and local bedrock associated with them clearly demonstrates that these stone balls are classic examples of giant cannonball concretions. Preliminary petrographic analysis indicates that these stone balls consist of a solidly carbonate-cemented graywacke, classified as a litharenite according to Folk (1968). The calcite cement consists largely of poikilotopic spar which often has replaced framework grains as found in Rock City and many other giant carbonate concretions. The bedrock, either from which the Zavidovići concretions came or in which they are still partially encased, consists of graywacke identical to the concretions. The local bedrock differs from the Zavidovići concretions in composition only in that it lacks the strongly developed carbonate cement. The area around the Zavidovići concretions, which Dr. Earl W. McBride, University of Texas at Austin, described in personal communications as being “world-class” examples of large cannonball concretions, would make an excellent park much like Rock City that would showcase and protect them.

Summary

Rock City in Ottawa County, Kansas contains a unique collection of giant carbonate concretions. These concretions are spectacular for their size, variety of shapes, and geometric surface ornamentation. They formed by the cementation of cross-bedded fluvial sandstones within the Cretaceous Dakota Sandstone by carbonate cements. The differential cementation along individual cross-lamina within the cross-bedding and later preferential erosion of weakly cemented cross-lamina created the geometric designs which the concretions at Rock City exhibit. Similar but not identical giant spherical to subspherical carbonate concretions can be seen only in a few other locations within Bosnia and Herzegovina, Canada, New Zealand, and North Dakota.

Acknowledgments

I thank Rex Buchanan of the Kansas Geological Survey and Mike Everhart, Adjunct Curator of Paleontology of the Sternberg Museum of Natural History in Kansas for reviewing this article and their very helpful comments.

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Don't Freeze When the Heat Is On!

Heat-Related Illnesses vs. Rock Hounding Fun!

by Owen Martin

Member of the Houston Gem & Mineral Society

Actions and reactions during heat illness situations can save a life.

In my recent experience, the BBG and similar periodicals in the south and southwest have been good at warning people about preventing heat related illnesses while rock hounding in the summer. With respect to prevention we know to do things such as wear light weight and air-permeable clothes, bring lots of water, take frequent breaks while hauling goodies to the car, etc.

What we know less about is *how to respond* to heat-related illnesses once they happen.

There are several different levels of heat illness, so let me say up front that if you have ANY question about someone having a heat “situation” that is even slightly serious, DO NOT hesitate to call 911. With that being said, especially on the big field trips, it is important that *everyone on the trip to know exactly where they are*—otherwise the help won't know where to find them.

The following is taken from the U.S. National Library of Medicine Web site:

Your body normally cools itself by sweating. During hot weather, especially with high humidity, sweating just isn't enough. Your body temperature can rise to dangerous levels, and you can develop a heat illness. Most heat illnesses occur from staying out in the heat too long. Exercising too much for your age and physical condition are also factors. Older adults, young children, and those who are sick or overweight are most at risk. Drinking fluids, replenishing salt and minerals, and limiting time in the heat can help.

Heat-related illnesses include:

- Heatstroke - a life-threatening illness in which body temperature may rise above 106°F in minutes. Symptoms include dry skin, rapid, strong pulse, and dizziness
- Heat exhaustion - an illness that can precede heatstroke; symptoms include heavy sweating, rapid breathing, and a fast, weak pulse
- Heat cramps - muscle pains or spasms that happen during heavy exercise
- Heat rash - skin irritation from excessive sweating

Most of the above situations, except heat stroke, can be treated with cold water and a little rest; however there are a few commonsense actions that can help dramatically.

First, if you have a hat—take it off! Most of the heat in your body escapes through the head. Fanning the head and putting cool towels on the forehead and neck will help significantly.

Second, during summer in Texas we typically dress to keep off mosquitoes and to minimize exposure to poison ivy/oak. Now would be the time to take off any extra layers that may be worn.

Third, hydration is still important. If you don't have water, especially cold water, then send someone to retrieve some ASAP. If someone is deteriorating from heat exhaustion to heat stroke, the timeliness of response becomes very important. Water should be administered in small quantities, especially if the victim is incoherent, and water should **never** be poured into the mouth of an unconscious person.

Fourth, speaking of water—sitting in the creek (as some of us know better than others) is also a very good way to cool down the body.

In case of **heat stroke**, the key symptoms here are *hot red skin and no sweat*, unconsciousness, or severe disorientation. **911** should be called immediately. Then drop your rocks and get help from the group. If cold water or ice is available, then administering it to the victim on-site is a good idea. Otherwise the victim will need to be transported as quickly as possible to a location where emergency crews can find and respond to the situation. Either way, moving into the shade is a good idea.

If ice is available, place it first behind the neck, then under each underarm, and finally in the groin area. The major veins that carry blood through the body will release the heat into the ice, helping to cool the body much more quickly. Again, a conscious and coherent victim should be given small amounts of water or sports drink—no sodas, coffee, tea, or alcoholic beverages! There is one exception; Sprite and Seven-up have electrolytic characteristics similar to Gatorade, so a *little* of those two drinks may also help. Use them as a last resort though.

Little things like fanning air over the skin or staying in the shade or moving into an air-conditioned vehicle can make a big difference. Anything you can think off will usually help. Again, calling 911 for a minor situation is a lot better than not calling in a life or death situation. Inaction in these types of situations is the biggest enemy, so ***don't freeze when the heat is on!***

Get ready for the Show

by *Sigrid Stewart*

HGMS 2007 Show Chairman

When the weather turns hot, you know it is summer. And then you have fall to look forward to, right? The first day of autumn, September 21, is the first day of the 54th annual Gem, Jewelry, Mineral, and Fossil Show. Your Show Committee has been busy planning show activities, and now it's time to get the news out! Ladies and Gentlemen, mark your calendars!

Annual Postcard Labeling Party, Saturday August 25, 10 a.m. to 1 p.m. at the clubhouse. Come see this year's beautiful postcard. Lunch will be served.

Preshow Pizza Party and Auction, Saturday September 8, 5:30 p.m. to 9:30 p.m. at the clubhouse. Pizza, pies, and pretty rocks! Break out the dessert recipes, bring your famous pie or cake, and bring some goodies for the auction, too. Your Show Committee will provide dinner and salad fixings.

Loading Day: September 19

Setup Day: Thursday, September 20

Volunteer and Dealer Appreciation Dinner: Thursday September 21, 6:30 p.m.–7:30 p.m., Humble Civic Center. Meet the fiendish Dr. Phil!

Annual Gem, Jewelry, Mineral, and Fossil Show at the Humble Civic Center:

Friday, September 21, 9 a.m.–6 p.m.

Saturday September 22, 9 a.m.–6 p.m.

Sunday September 23, 11 a.m.–5 p.m.

New Incentives for Show Participation! We will be presenting these at the next General Meeting, July 24. We have some great sweeteners for our volunteer callers too; some mini-classes to make an afternoon of calling entertaining. Think dichroic glass, opals, wire-wrapping!

Put these activities on your calendars now, plan to have fun with your friends, and help us gear up for the show.

Extinction

by Chris Peek

Member of the Houston Gem & Mineral Society

Over a field walked alone,
bent heavy toward my home,
I kicked at clumps beneath my feet
and realized they were bones.

Paused, I gazed across that field
back more than a million years,
I saw the creatures grazing there
among their young, their fears.

They had eyes but could not see
their age coming to an end.
They had no way to change their fate
no future could they bend.

In the present I see ourselves
bending nature to our path;
prolong our time upon the earth?
But can these changes last?

HGMS School Kits

by Denise Bicknell

HGMS Member,

The purpose of HGMS, in part, is to "promote the advancement of the knowledge and practice of the arts and sciences associated with the collecting of rocks, minerals, fossils, artifacts, and their identification and classification..." This clearly gives us as a society the duty to share our knowledge with others. One way we fulfill this duty is by helping teachers to educate their students. Among other things, we provide teaching sets designed to be used as a hands-on teaching tool.

In 1991 when Tom Wright was President, HGMS was approached by Conoco who wanted a collaborative outreach program. Art Smith suggested teaching sets that could be given to schools through individual teachers. Conoco would provide funding that HGMS would use to purchase the necessary materials, create the sets, and distribute them. The collaborative agreement provided HGMS with a unique opportunity to extend our reach into the schools.

The program was set up so that teachers representing their school could come to the clubhouse and check out sets for their use. The sets then belonged to the school and could be used by them for years. Individuals giving demonstrations at schools—HGMS member or not—may also check out sets to give to schools. Over the years we have provided numerous rock, mineral, economic, fossil, and quartz sets to schools in our area.

Our first year to hold the show at the Humble Convention Center was also our first year to give sets to teachers through our School Daze program—held each year in conjunction with our show. The teachers are always very grateful to receive these valuable resources. Steve Blyskal, the School Set Committee Chairman, and Neal Immega have designed the sets so that they parallel topics covered in school curriculums or provide an informative and fun activity.

The sets are stored on the shelves by the side door, and each one is numbered. A clipboard with sign-out sheets is located next to the sets. Anyone may check sets out to teachers or schools providing that one of the sign-out sheets is completely filled out. HGMS must provide to ConocoPhillips an accounting of where the money went each year when we reapply for the grant. To that end, we must have the school's name, the district name, the teacher's name and the grade they teach, a phone number, which set they are taking and its chronological number, a date, and the name of the HGMS member checking out the set. We are happy to provide these sets, but we absolutely must have the forms completely filled out in order to tell ConocoPhillips how the sets are used.

See the sample form on the next page:

SCHOOL COLLECTION SETS –SIGN OUT SHEETS

Please fill in all of the information asked for on this sheet before taking a set. These sets are to be given to teachers at elementary, middle or high schools who teach earth science as part of their curriculum.

Name of Person taking the set _____ Date _____

Phone number: _____

Name of the School receiving the set: _____

School District or Private _____

Teacher: _____ Grade: _____

Basic Mineral and Hardness Set _____

Worldwide Mineral Set _____

Fossil Set (Paleontology set) _____

Field Trip in a box _____

Each summer, the School Sets committee gathers the necessary components, glues numbers on specimens, and assembles the sets. The numbers correspond to an identification key provided with each set. If you wish to be part of this important outreach, please contact Steve Blyskal at 832-264-1278 (cell) or 281-239-0377 (home).

In Our Library

by Art Smith, Librarian

I have placed a number of books on the table outside the library as give-aways, and I hope that by the time you read this, they are all gone. As I have mentioned in the past, the library’s space is becoming very limited; we have to limit what goes into it and be sure everything there is of use to some section of the Society. Books already there are reevaluated at times, and new publications are evaluated as they are received.

We have had problems the last two months of people not picking up and paying for their winning auction bids. The table is full, and if they are not gone by the time this is published, they will be taken up and re-auctioned. Remember, these items are available to anyone who pays the winning bid amount after the second weekend following the Tuesday auction. So have at it if you missed something. If they are re-auctioned, you may end up paying more.

The Lapidary Materials Index that I started last month is moving right along and now has over 200 items indexed. If you have a pet item or have some data on an item that you want included in the index, e-mail me at artsmithite@msn.com. Some of the books with this data I have at my house, but I will return them to the library as soon as I am finished.

Eddie Mace is kindly copying VHS videos into DVD format for us, and I will have an updated list of those on the desk soon. These are available for checkout by filling out the chart on the desk. Cross your name off when you return it.

Late-Breaking Club News

Are you getting e-mails about HGMS activities? If not, contact n_immega@swbell.net and let him know that you want to be on the list.

2007 Show Committee Announces NEW Volunteer Incentive Program

Earn a Show Buck for every shift you work and redeem them for cool stuff. Stay tuned for more details. Mark your calendar for the Show weekend—September 21-23, 2007.

Susan Lenz Update

by Norm Lenz

Dear HGMS Friends,

Most changes since my last update are positive. Heather continues to be a wonderful caregiver and companion to Susan. Heather has become our primary cook while Tanya is temporarily filling two positions at Sheltering Arms where she works.

Positives:

- Susan has had no seizures since my last update a month ago. We eliminated one of her seizure control medications by increasing another. So far, the results are positive.
- Antibiotics have solved the problem of abscesses. We have been able to eliminate three antibiotics from her daily medications.
- Her stomach pains were diagnosed as inflammation of the esophagus and stomach, probably due to all the medications she has taken. We have added a new medication to control this problem and are very satisfied with the results.
- There is still no evidence of tumor regrowth on Susan's last MRI taken June 18.
- She eats well, sleeps well, and does not seem to have any pain.
- She is much more alert and less fatigued than at my last update. We hope this trend continues.
- We were able to visit our property in the Hill Country last weekend. Susan enjoyed watching the hummingbirds outside our dinette window.

Negatives:

- Susan is able to feed herself only a small portion of what she eats.
- She is still very weak. We have contracted for a second part time caregiver so two people will always be present to help with moving her to and from the bed, couch, table, etc.

- Tremors remain a constant bother.
- A blood test for thyroid problems has indicated a potential issue. Her doctor has prescribed a thyroid medication to see how she responds.

I am trying a new e-mail service hoping to gain e-mail independence from my Internet Service Provider. My new Google e-mail address is: normlenz@gmail.com My old e-mail address is still active for now.

Thank you for keeping us in your thoughts and prayers while we continue our fight.



Day Light Section

by *Frances Arrighi*



Sixteen members attended the 11 June, 2007, meeting of the Day Light Section. This meeting was the first meeting to include our summer program, which will be learning the technique of Keum Boo. This is a Korean technique where one metal (24K gold foil) is fused into another metal (fine silver) by heat alone (around 700-800 degrees F).

The fine silver piece is placed on an electric hotplate, 1000 watts. The desired design is cut or punched (paper punch) from the 24K gold foil and placed on the heated fine silver piece. The gold foil is tacked down with a cold agate burnisher and then burnished in. The gold is molecularly bonded to the silver and will not come off. The surface of the silver or the gold and silver can be textured before burnishing in the gold or after, depending on the wish of the artist.

Supplies for this technique come from several different companies. The wood stove thermometer came from Southland hardware on Westheimer. Talk to the person who does the ordering. They do not necessarily keep these in stock, but they will order for you. The agate burnishers can be purchased from Allcraft. We made ours. The gold foil was also purchased from Allcraft.



Lapidary Section

by *Kathy Konkel*



The upcoming Lapidary Section meeting will be held on **Monday, August 20 at 7:29 p.m.** Patty Scott has graciously agreed to demonstrate Keum-Boo (the technique of applying specially-milled 24kt gold foil onto fine .999 silver). According to Patty, the technique is simple, and the equipment is accessible to everyone.

On a different subject, we encourage members to enter one or more stones in the lapidary stone cutting competition at the annual HGMS Show in September. If you have never entered a stone previously, your Novice competition stone must be a 30x40 agate rectangle cut to R.O.L.E. specifications. If you have entered before and received a Blue Ribbon, then you have graduated to the Intermediate/Master level, and the stone to be entered must be a freeform moonstone of a size between 12 mm and 30 mm. For Novice through Master level, all faces of the stone must be polished. Good luck!

HGMS members may use the shop prior to the Lapidary Section meeting 5:00 p.m.–7:15 p.m. The usual shop fees apply. Consider joining us and start cutting your show stones.

Make plans to attend the September 17 Lapidary meeting as Steve Wilkerson will show us medieval lapidary techniques. This is the same presentation he gives at the Texas Renaissance Festival. There is a rumor that he'll come in full costume . . .

Moonstone Working...

from "Special Effects, Techniques, for Special Gems"

by Gerald L. Wykoff, GG, OSM

from Anglic Gemcutter 12/1999

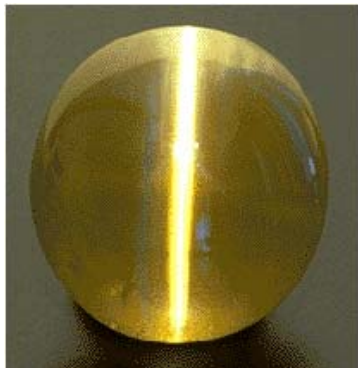
via The Rock Collector 6/2006 and Stoney Statements 10/2006

Varied Cab Methods Produce Superior Results on Some Gems

Editor's Note: I felt that this was quite a timely article since the Lapidary Section's Show competition stone material for the Intermediate/Master level is moonstone.

Moonstone Working...

Of all of the magnificent phenomenal gemstones too seldom cut to their maximum performance level, I would suggest that moonstone ranks at or near the top. Too many gem cutters give this mighty feldspar a cursory examination, locate the flash from the platelet plane, and go ahead and start cutting. Later they wonder why they haven't achieved the sought-after billowy subtle blue sheen that floats across a well cut Moonstone. The answer in a nutshell—the stone simply wasn't oriented correctly. Truth is, it's surprising how many lapidaries don't understand the procedures for orienting a piece of Moonstone feldspar so the floating sheen will develop. Orienting a Moonstone properly involves a two-step collimating procedure. First, you want to develop the flash plane, and second, you want to develop the sheen plane *which is perpendicular to the flash plane*.



Here's how this is done. Roll the rough specimen around directly under an overhead light—the stronger the better—until you observe a distinct adularescence flash. Mark that spot with a lead pencil or felt tip, then roll the stone completely over to the opposite side and look for another flash. Mark this spot, too. Now, as a double check, roll the stone back and forth and left and right until you get absolutely the brightest flash you can. Mark this new orientation with distinguishing pencil or ink dots. With good moonstone, the flashes will appear yellowish, perhaps with a hint of white or silver. Hold the pen or pencil firmly on its side and then rotate the stone completely around in the same plane between the two dots, making a sort of equatorial line on the stone. If the drawing tool isn't high enough for drawing comfort, shim it up higher with a piece of wood or plastic. This drawn line represents the precise plane of adularescence.

The second step—the one marking the direction of the billowy cat's eye sheen—involves another collimation. Hold the stone directly under the light again, this time so the drawn line is on top. Roll the stone slowly and carefully, searching for a light bluish flash. This second set of flashes will be much more difficult to detect, but keep at it because most good moonstones will display the phenomena. The flashes will appear perpendicular to the first line as you rotate the stone's line in front of you, keeping this line uppermost. When you see the more subtle flash, mark it. Now flip the stone over and search for its opposite. Mark this flash, too. Along this new collimation line lays the cat's eye. Therefore, make a saw cut on or parallel to the first collimation line to cut a bull's eye or broad flash and parallel to the second collimation for the cat's eye or the moving, billowy sheen.

Two distinct styles for cutting moonstones are available. If you are cutting for the broad flash, cut a standard or even a flattish topped cabochon. *When cutting for the cat's eye, though, follow good cat's eye procedure: Cut a high domed, narrow type of cabochon.* The latter cutting shape will more dramatically showcase the cat's eye—long ovals or navette-shapes most of all.

Recently Completed Jewelry Fabrication Class Projects Four Photos

Tom Wright Instructor and Photographer



Projects completed by Student Linda Grandstaff



By Mina Modlin



By N. Jade Gillen



By Kemper Modlin

Ode to a Cab

via The Rockpile 3/2007

“Curse on thee, little cab,
Choicest part of a costly slab,
Traced with care and ground precisely,
Sanded smooth and finished nicely,
Why should work so truly fine
Be displayed right next to mine?”

HGMS General Meeting Minutes

June 26, 2007

by Denise Bicknell, HGMS Secretary

The meeting was called to order at 7:30 p.m. by Matt Dillon, President.

Announcements: Our new room is taking shape. Thank you to all who helped move the stairs and to those who helped with construction.

Matt Dillon announced a Lost and Found system which will be implemented once construction of the new room is completed. Further information will be announced in the near future.

David Hawkins asks that if you are in the office and find mail on the floor by the window, to either just leave it there or to put it in the respective mail slots. DO NOT place it on the desk because it gets covered up and lost.

Karen Burns is requesting help on Sunday afternoons at the museum. If you can help, contact Neal Immega to arrange for free admission and free parking.

Guests: We were pleased to meet first time attendee, Mo Swami.

Irene Offeman, long-time HGMS member, was also in attendance.

Show Committee: Sigrid Stewart announced that the annual Show postcard labeling party is approaching. The date will be sometime in August. A firm date has not been set and will be announced at a later date.

The International Gem and Jewelry Show is July 13–15. The Show Committee would like help in manning the booth. Please contact Sigrid if you can help. The Show Committee is implementing a new “all-encompassing” display for the booth to better demonstrate HGMS’ wide range of interests and topics.

The Committee is requesting more HGMS membership participation in Show Displays. Please consider putting up a display.

Steve Blyskal asked for help compiling School Sets. If you can help glue numbers on rocks or minerals or are interested in this project, please contact him. He would appreciate the help.

Education: David Hawkins announced that a new Beginning Jewelry Fabrication class starts on July 7 and an Advanced Jewelry Fabrication class starts on July 8.

Day Light Section: Sunday Bennett announced that they are working on Keum Boo. It is a process of bonding gold and silver.

Beading Group: The next meeting is BYOP – Bring Your Own Project. The August meeting will be the week before the General Meeting.

Faceting Section: Phyllis George read an e-mail from Wayne Barnett requesting all HGMS members interested in faceting to consider joining the Texas Faceters’ Guild.

Bob Lucas, TFG member, drove all the way from Austin to attend the HGMS Faceting Section meeting and request that HGMS faceters take a more active role in TFG. This could lead to the TFG relocating to Houston and a possible TFG satellite show to be held in conjunction with our 2008 show. Please contact Wayne Barnett or Phyllis George for more information.

Lapidary Section: Karen Burns announced that they made nylon hammers at their last meeting. Tom Wright will demonstrate riveting at the July meeting.

Mineral Section: Steve Blyskal announced that the Section will have a work session on July 18 to prepare the fluorescent display for the 2007 show. Dean Lagerwall announced that the Mineral Section will be ordering new T-shirts. The shirts will have the HGMS logo on the front and crystal drawings on the back. If you would like one please contact him with your size.

Paleontology Section: Neal reported that their last meeting featured a presentation by Dr. Westgate on Mexican Dinosaurs.

Youth Section: Beverly Mace announced that the youth field trip had to be cancelled due to rain.

Library: Art Smith announced that he will be placing some free books on the tables by the library door.

BBG: Deadline for BBG articles is the Wednesday before the second Saturday of the month.

AFMS Awards: Phyllis George presented awards from the AFMS Convention and Show. To reach the AFMS level, an article must first place in the top three at the SCFMS contest level. Congratulations to all our AFMS winners!

Scott Singleton – Adult Advanced Article – First place

Albert J. Robb III – Adult Advanced Article – Fifth place

Art Smith – Adult Advance Article – Sixth place

Sunday Bennett - Original Adult Article – First place

Terry Proctor – Adult Poetry – Fifth place

Jerdahn Campbell – Original Article – Juniors Under 12 – Honorable Mention

Phyllis George – BBG (large bulletin) – First place

This year's AFMS meeting was held in Roswell, New Mexico, so it is fitting that the trophies were on a slab of honey locust wood (a species indigenous to Northern New Mexico) cut in the shape of New Mexico and featuring Pecos Diamonds (double terminated quartz crystals that are found only in New Mexico) and a polished Thunder Egg half (quartz nodule from near Deming, New Mexico).

Show and Tell: Karen Burns displayed an example of Keum Boo that she created during the June Day Light Section meeting.

Door Prize: Larry Glover won the fossil fern from Oklahoma and a piece of fossil wood from Texas.

Program: Our speaker for the evening was John Caldine. He began by thanking HGMS members for helping him learn about rocks, gems, and minerals. His presentation featured the pearl—cultured, freshwater, natural, created, plastic, and glass. He taught us about the different shapes and lengths, the various colors—dyed and natural—and how to value pearls based on color, luster, size, and regularity. The presentation included how to choose the right pearl color for skin tone, hair color, and clothing. Our thanks go to John for an interesting presentation. The photos below are of John and some of the gorgeous pearl jewelry he put on display.



MINI MINERS MONTHLY

A Monthly Publication for Young Mineral Collectors

Vol. I No. 5

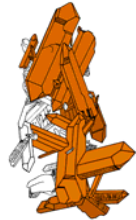
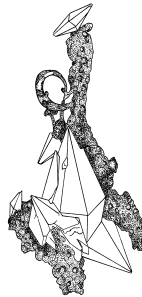
July 2007



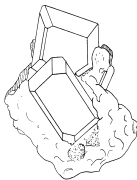
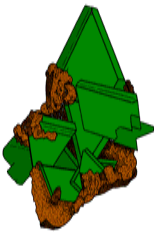
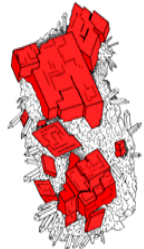
With the summer just about here, you will notice that there are more mineral shows. When you travel for vacation, you may even find mineral shops. How do you know what minerals to buy? David English has written another article to help you build your collection through trading and buying specimens.



The *Mineral of the Month* for August will be *Rhodochrosite*. Beautiful crystals of rhodochrosite are found in Colorado, Peru, Russia, South Africa, and more. Banded red and pink rhodochrosite has been discovered in Argentina. Would you like to draw a rhodochrosite specimen for me? Send it in and perhaps I'll print it in a future *Mini Miners Monthly*. Here is a deep red "rhodo" with silver from Peru.



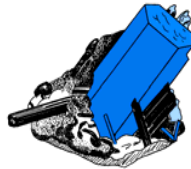
Mini Miners from all over the country continue to write. Lindsey A. from Denver, Colorado emailed us with this: "What are some of the good mineral museums? Are they expensive to get into?" I'll give a list of good mineral museums in this edition. By the way, my email address is diamonddan@rochester.rr.com.



What is this mineral?

This mineral is bright yellow, very soft, and burns in a match flame. When it burns, it smells like rotten eggs. It is an element.

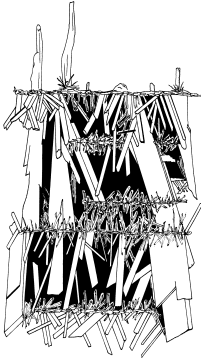
What is it? _____



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MAKING YOUR OWN CRYSTALS

A CRYSTAL RECIPE (IT IS BEST TO DO THIS PROJECT WITH THE HELP OF AN ADULT!)



With careful work, you can create your own crystals at home. This recipe is for alum crystals. You can use salt instead of alum. If you use alum, you will be able to make clear, octahedral crystals. You can buy alum at a drugstore.

Step 1: Make a *saturated solution* of alum. A saturated solution is a mixture of water and alum (or salt) that has so much alum in it that no more will dissolve. You can make a saturated solution by boiling a cup of water in a sauce pan. When the water is boiling, turn off the stove. Dissolve alum in the water by spooning in a tablespoon of alum at a time and stirring it into the water until it completely dissolves. Repeat this until the alum won't dissolve in the water anymore.

Step 2: Place the alum mixture aside and let it cool to room temperature.

Step 3: When the alum mixture is cooled, you will see alum on the bottom of the saucepan. Very carefully pour the water into a glass jar. *Be sure it is cool. If it is still hot, the glass jar might break.* Do not pour the undissolved alum into the glass jar.

Step 4: Put the jar in a warm place for two days. As the water evaporates, crystals will start to grow on the side and bottom of the jar. When you see a nicely shaped crystal (it will be diamond-shaped), carefully remove it from the jar with tweezers and dry it off with a soft cloth. This is called a *seed crystal*.

Step 5: Tie a very thin thread around your seed crystal. Tie the other end of the thread around the middle of a pencil.

Step 6: Prepare another jar of saturated alum solution.

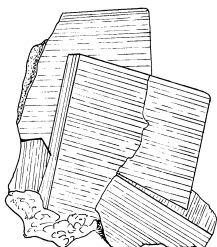
Step 7: After the saturated solution has cooled to room temperature, lower the seed crystal into the new saturated solution. As the water evaporates, the alum molecules will attach to the seed crystal and it will grow larger and larger. (Be careful at this step: if you have not made a saturated solution or if the solution is still too hot, the seed crystal will dissolve in the water and you will have to start all over again!)

For more recipes, find a copy of the book "Crystals and Crystal Growing," by Alan Holden and Phylis Morrison published by MIT Press, 1982. You can easily find copies of this edition and earlier editions through bookstores and internet book sources. This is a really great book if you are interested in making all sorts of high-quality crystals on your own!

Editor's Note: I have subscribed to the Mini Miners Monthly magazine and received permission to include a few pages each month in the BBG and also on our Web site at www.hgms.org. Pages 26-27 are from the July 2007 issue; pages 28-29 are from the May 2007 issue.

Mineral of the Month

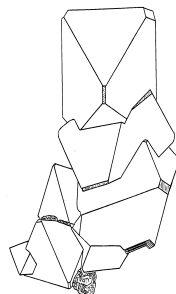
Pyrite



Left: Pyrite cubes from Colorado.

Right: Pyrite octahedra (diamond shaped crystals) from Peru.

Color both specimens golden yellow.



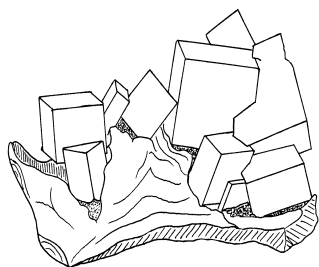
Pyrite has iron (Fe) and sulfur (S) in it. The chemical formula for pyrite is FeS_2 .

Pyrite is used as a source of sulfur for making chemicals like sulfuric acid. It is sometimes used as an ore of iron for making steel.

Pyrite was named after the Greek word *pur* which means *fire*. If you hit pyrite with steel like a hammer, you will make a spark hot enough to start a fire. Many years ago, people would start camp fires with pyrite and steel.

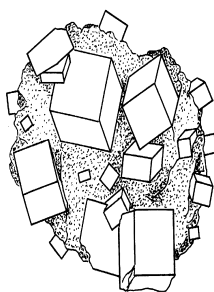
Try this yourself. Make sparks with pyrite and steel. **REMEMBER:** protect your eyes with plastic goggles.

When you hit the pyrite what do you smell? (Sulfur). It smells a little bit like rotten eggs.



Left: Golden pyrite cubes on dark gray limestone from Syracuse, New York.

Right: Pyrite cube cluster from Mexico.



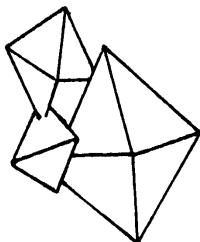
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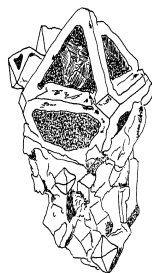
Fool's Gold

Pyrite

It might look like gold, but don't be fooled! Many prospectors ran off to the bank thinking they had struck it rich in gold only to learn they had struck pyrite. They were fooled by "fool's gold."

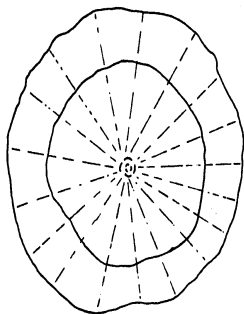


Pyrite and gold are similar in one way: they crystallize in the same *crystal system*. This means they both can form cubes and octahedra (that is, diamond-shaped crystals).



Pyrite from Peru

Gold from Russia



Pyrite disc (commonly called "Pyrite Sun") from Illinois.

You don't have to be fooled, though, because fool's gold and real gold are *very different* from one another. Fill in the information on the following page and discover how you can tell the difference. The answers can be found in a mineral book.

The Texas Faceters' Guild Symposium 2007*October 6 & 7, 2007**6719 Burnet Lane, Austin, Texas**by Bob Lucas, TFG Newsletter Editor**From Texas Faceters' Guild Newsletter 7/2007*

Take some of the mystery out of concave faceting. Watch a demonstration (perhaps hands on?) of concave faceting by faceting machine builder **Zane Hoffman** of Poly-metric Instruments, Inc. Gain an insight into what can be done with this equipment.

What do you do if you want to facet a 10.2 kilo piece of manmade quartz? Listen to how **Art Kavan** and his team put together equipment to facet this gem and what it looked like when finished. Learn what is next for the Monster Faceting Machine.

Did you ever wonder what makes Texas Topaz from Mason County different? Let **Ana Collins**, a student at the University of Texas and previous award winning national speaker, review the work she is undertaking under the tutelage of Dr. Mark Helper. The project is titled "The Characterization of Texas Blue Topaz" and should answer many questions about Texas Topaz.

Do you want hands-on experience measuring index of refraction? World-renown faceter **Wing Evans** will lead a seminar allowing all attendees to use the equipment provided by him to determine index of refraction. Come practice this technique.

Curious about the Cullinan diamond? Curious about its history and how the original was separated into multiple gems? Watch a 10-minute DVD obtained from the Premier diamond mine in South Africa. View a replica of the original rough and determine how we might use it to change the TFG exhibit case.

Bring your contest entry cut with your interpretation of the "Square Dance Cut" for the symposium cutting competition. (*BBG Editor's Note: See the April issue of the TFG Newsletter for cut instructions.*) Take part in the judging to determine who wins the Gift Certificate generously donated by Creative Gems.

Come and enjoy the camaraderie and comity of your fellow Texas Faceters. Bring the work you are proud of. Bring the things which have caused you faceting problems. Be ready to contribute to a faceting show and tell. Come to have fun and learn!

Symposium attendees who are current in their TFG membership status will receive their copy of the CD containing all archival TFG newsletters!

There will be a business meeting in conjunction with the symposium. Come prepared to give your assessment of what the future holds for the Texas Faceters' Guild.

Send in your Symposium Registration today!

Contact Bob Lucas or Ewing Evans for information about registration:

Bob Lucas, 6745 Lendell Dr., San Antonio, TX 78249, 210-558-4547,
blucas@world-net.net

Wing Evans, 309 Ridgewood Rd., Austin, TX 78476, Ewingkevans@cs.com

A New Technique for the Inspection of Facets

by Wing Evans

from *Texas Faceters' Guild Newsletter* 4/2007

In competition faceting, the most common errors are meet points and scratches.

While faceting during last Thanksgiving, I was inspecting a facet. It was clean, no scratches to be found. On impulse, I picked up a small LED flashlight and looked again. There were three cat hair scratches that I could not see with the usual lights. So I proceeded to polish these scratches away. This same testing has been repeated by three other faceters.

This proved that an LED can reveal small cat hair scratches that you simply cannot see with other lights. The usual requirements still apply: Precise orientation between eye, loupe, facet plane, and light are required. The light must be just incident to the facet plane. When these requirements are met, much smaller scratches can be observed. The result is that when you submit a competition stone, the judges will not be able to find any scratches.--Now get after those meet points!

Tips & Hints

Tick Removal ('Tis the Season)

from the *SCFMS Newsletter* 5-6/2007

A School Nurse wrote the info below—good enough to share—and it really works! A pediatrician told me what she believes is the best way to remove a tick. This is great, because it works in those places where it's sometimes difficult to get to with tweezers: between toes, in the middle of a head full of dark hair, etc.

Apply a glob of liquid soap to a cotton ball. Cover the tick with the soap-soaked cotton ball and let it stay on the repulsive insect for a few seconds (15-20), after which the tick will come out on its own and be stuck to the cotton ball when you lift it away. This technique has worked every time I've used it (and that was frequently), and it's much less traumatic for the patient and easier for me.

Unless someone is allergic to soap, I can't see that this would be damaging in any way. I even had my doctor's wife call me for advice because she had one stuck to her back and she couldn't reach it with tweezers. She used this method and immediately called me back to say, "It worked!" Submitted to AGMS List by: Gene Healy, Austin Gem & Mineral Soc.

More on the Subject: Ticks

The best system for removal of ticks I have found is by coating them with Campho-Phenique. It is easy to carry a small bottle of the liquid with you. All you have to do is coat the back of the tick and it will start releasing its grip. At the same time it is letting go, you are having the Campho-Phenique treat the bite area with antiseptic, reducing the chance of infection in the bite. From Harold Lieck

Soda in the Field

Author unknown

*from The Agatizer, via Golden Spike News, SCFMS Newsletter 4/2007,
and The Calgary Lapidary Journal 6/2007*

Here are a few good reasons you will be glad you took that box of **Baking Soda** along on your field trip. In fact, maybe you should take **TWO** boxes!

1. Insect bites, minor burns, and poison oak—add water to make a paste and apply to affected area.
2. Sunburn, wind burn, and prickly heat—add ¼ cup to a basin of water and bathe or sponge on.
3. Acid indigestion—add ¼ teaspoon to ½ glass of water and drink slowly.
4. Tired feet—3 tablespoons to a basin of warm water and soak.
5. Tooth cleanser and breath freshener—use as much as needed on moist toothbrush.
6. Hand and fingernail cleaner—rub dry on moistened hand to remove pine pitch, odors, and grease.
7. Fire extinguisher—for grease fire, throw a boxful at the base of the fire.
8. Freshening camp coolers and jugs—add 2 teaspoons, partly fill with water. Shake and rinse.
9. Deodorant—sprinkle inside boots and shows.
10. Natural cleaner for camp dishes and pans—add 3 tablespoons to a pan of warm water and soak.
11. Cleaning dirty bug-splattered windshields, chrome and camper frames—rub damp sponge sprinkled with soda on area.
12. Freshening RV water tanks—flush with a solution of ¼ cup soda and 1 gallon of water. Rinse with clear water.

AFMS Future Rockhounds of America Merit Badge Program in a Nutshell

*by: Jim Brace-Thompson
AFMS Juniors Activities Chair
via SCFMS Newsletter 5–6/2007*

Here are answers to four common questions I've received about the AFMS/FRA merit badge program:

How Does the Merit Badge Program Work?

The program consists of an FRA membership badge, nine merit badges (Rocks & Minerals, Earth Resources, Fossils, Lapidary Arts, Collecting, Showmanship, Communication, Field Trips and Leadership), and a "Rockhound Badge" for kids who earn six of the nine merit badges. A 100-page guidebook describes and outlines requirements for each of the nine merit badges. There are 52 activities to choose from, or about a half-dozen activities per badge, with kids required to complete only three activities to earn any particular badge. Checklists in the guidebook make it easy for

youth leaders to sign off on activities as junior members complete them. In addition, brief back-up pages and suggestions help leaders guide their kids through each activity. The guidebook is available both in hardcopy format (photocopied) and on the AFMS Web site (<http://www.amfed.org/fra/meritbadge.htm>). To save on costs to the program which is being provided entirely free, I encourage you to download a copy of the guidebook and its checklist sheets from the Web. If this is not possible, contact me for a copy.

How Do I Sign up the Kids in My Local Club?

The program is for clubs with youth members enrolled in the AFMS Future Rockhounds of America (FRA). To enroll your kids, contact me (call 805-659-3577 or e-mail jbraceth@adelphia.net). All you need is a group of kids (up to age 18), a sponsor, a name, and an application to FRA. Your club must be affiliated with the AFMS. The number of youth is not important, you can have as few as one or two and as many as you can handle.

How Do I Order the Merit Badges?

Because this is a new program and we don't have a history as to what potential supply-and-demand will be, I'm keeping distribution of badges centralized, at least for the first year or so. For budgetary reasons, we were only able to order a limited quantity of badges as a start. Thus, rather than send bulk quantities of badges to local youth leaders and exhaust our supply right away, I'm asking that local leaders at individual clubs send me requests for badges as they are earned.

How to go about this?

You should make multiple copies of the activity checklists that are included in the merit badge guidebook. For each child, check off activities as they are completed. When at least three activities are checked off for any one badge, both the child and youth leader sign the checklist, write in the mailing address of the youth leader, and send it to me: (Address below). I'll record the info and send the badge. To speed the whole process, I'm also willing to do fulfillment via the phone or e-mail (see my contact info, above) rather than through the mail so long as the youth leader indicates:

- 1) The badge being requested
- 2) Which activities a child has completed to earn that badge
- 3) The child's name and name of his/her club
- 4) Name and mailing address of the youth leader to send the badge to

I know this is a bit cumbersome and will mean a lag time in getting badges to kids. But in discussing this with others in the AFMS, I decided it's best to use this centralized approach at least in the beginning in order to monitor how much the program is getting utilized. It's also necessary in order to keep tabs on which activities are proving most popular and how many badges actually end up getting awarded. This way, we'll have an accurate record for the future in estimating budgets for how many badges, and which ones, will need to be manufactured on a regular basis. In order to keep the program free, we need to monitor all costs as we start out and keep a lid on those costs by distributing only what's actually being used.

How Can We Make the Merit Badge Program Better?

Finally, I welcome feedback—suggestions for improvements to the existing activities and ideas of new activities and badges to add to the program. Let's all pitch in to provide an educational program by which kids learn, earn rewards, and—as always—have fun!

Jim Brace-Thompson, AFMS Juniors Activities Chair
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Ventura, CA 93003
e-mail: JBT@sagepub.com
Phone: 805-410-7582
Fax: 805-499-7881

SCFMS Future Rockhounds Forum

*David and Carol Abbott
SCFMS Juniors Program Co-Chair
from SCFMS Newsletter 5–6/2007*

Collecting

This month's topic is that of "collecting." Most of us "collect" something, rockhounds probably more than most people. However a proper collection, whether minerals, rocks, fossils, dolls, or dog biscuits, requires "curation." Without curation, a collection is little more than stuff-you-haven't-found-a-place-for. Lack of curation must be the greatest downfall of collections. Curation is the act of writing down what an item is, where it was found, who found it, and other information specific to the type of collection. This activity is tedious, not much fun, and probably less interesting than household chores. This creates a special challenge when dealing with our "future" rockhounds. We need to help them see that the benefit they receive will meet or exceed their "cost" in lost time.

Several years ago, we were asked to organize a "collection" for sale by the heirs of a passed-rockhound. We and several others were basically led to the garage and backyard—and turned-loose for the day. Most of the material was the basic stuff that all of us have in abundance—common agates, jaspers, wood. Further, the bulk of it was in mixed batches in large containers of all sorts. But, in the process of checking each rock, in each container, some real (potential) treasures emerged. David found a river-tumbled mammoth-tooth in amongst cutting material. We were astonished! Mammoth teeth tend to be fragile. But this one was completely replaced by minerals (primarily silica) and tumbled into typical river-rock oval. Where was this found? Who found it? Surely, there must have been some interesting stories behind that tooth, but all we could do was speculate. Carol found several nice cabinet-size mineral specimens (with no labels). And almost everyone found something in the collection that nobody in the group could identify. The money raised by the collector's family would probably have been multiplied if items had been curated.

To date, we haven't found that magical approach that will convince young-people of

the value of curation. Like adults, they assume they will remember. Or, they depend upon someone else's memory. And, it is never convenient. So here is a plea to all readers: What approach have you found that effectively communicates the value of curation? Surely, someone has had success in this area...please share!

AFMS—Be Safe - Be Well

by Don Monroe

AFMS Safety Chair

from AFMS Newsletter 3/2007

My **Relatives:** From time to time I have included a comment or two about my personal life, but I have rarely noted anything about my relatives. Some of them are nice folk and some are even better than that, but some of them are not to my liking and really should be avoided. One of these unsatisfactory folks is my Uncle Arthur.

Uncle Arthur Itis visits me periodically and he may even come by your house. Can we do anything about "Arthur Itis"? Well, we can do a little and here are some of the ways we can attack this most unpleasant visitor and increase our enjoyment and ability to pursue our hobby...

Suggestion #1 Follow a planned exercise program. Here is an area where advice from your doctor is probably needed. Arthritis can occur in many parts of our bodies and for me it is the knees and shoulder, and for reasons unknown, my thumbs. Exercise really helps the knees and shoulders, but the thumbs are still a problem.

Suggestion #2 What we eat can definitely have an effect on arthritis, but I do not think that is universal and applicable to all of us. I like tomatoes, and one summer one of the people in my office brought bags and baskets of fresh ripe tomatoes every day. At lunch we would make great sandwiches, and that was a daily ritual. After a few weeks my knees became so sore that I really could not walk well. I finally learned that my system is very sensitive to the acid in the tomatoes. When I broke the tomato habit, the relief was quick and dramatic. I also determined that too much citrus fruit or juice was not my friend. Read up on the dietary aspects of arthritis and you may be surprised to learn what can help or hurt.

Suggestion #3 Don't abuse your body. One of my old golfing buddies would collect aluminum cans, and he would stomp on them to flatten them before bagging them. It took a long time for him to finally accept the fact that crushing cans was really hard on his knees and ankles. Look at your work area and think about jar openers and resilient floor pads to take the strain off wrists and knees.

Suggestion #4 There are some medical procedures that may help. When I had surgery to remove unwanted bits of cartilage in my knee, my orthopedic surgeon also peeled off some arthritis which he described as having the appearance of a heavy white paint. I never saw it but that's what he said. I think it came back so the benefit was temporary.

Suggestion #5 Medication is an idea that I really do not, like but many people swear by the anti-inflammatory and other drugs. I do not like the possible side effects, but as I said in the beginning, **there is no universal cure.**

A Dream Come True...Gold Panning in Alaska

by Gloria Durfey

from *The Mountain Gem* 6/2005

I learned a long time ago that if I waited until I had someone to go with—I'd never get to go anywhere! So, as a member of the Lost Dutchman's Mining Association (LDMA) and the Gold Prospector's Association of America (GPAA), I went for the 100th anniversary of the gold rush on the beaches of Nome.

I flew from Asheville to Cincinnati to Salt Lake City to Anchorage where we boarded a small plane to Nome. Several trucks with very large wheels met us "gold prospectors." They were to shuttle us 11 miles up the beach to the Cripple River Gold Camp—where we were to stay for the last week in July and the first week of August which is Alaska's summertime. There were 125 of us from all over the United States, including the workers. The camp looked like a Wild West movie setting with a meeting hall, store, saloon, outhouses, showers, and plywood shacks called hooches" over sand where we slept. Each had a woodstove, sink, and elevated plywood sheets in each end where we put our sleeping bags and gear. That's it!

Every morning we met in the meeting hall for coffee, world news, weather announcements, and instructions for the day. Dry foods lined the open shelves. There was an electric pot for water, coffee, a small microwave, and one light bulb. No television, but there was a VCR that played the Gold Prospector's Shows from the Outdoor Channel. We sat at wood picnic tables and benches to eat, read, play cards, and visit. It was daylight 24 hours a day. There were 24 highbankers set up on the beach, pumping ocean water that washed the fine gold from the sand. You could shovel sand as many hours as you desired.

There was a trommel operating 15 miles from camp on a gold bearing creek on the tundra. Several prospectors helped operate the trommel that dug and separated rock from sand and gold. Every Friday night we were treated to a spaghetti supper after which everyone went to the saloon. Our admission fee was to find a rock with a hole in it on the beach and wear it around our necks.

The workers put on a show. It was fun! Cans of beer and soft drinks sat on the counter without needing refrigeration. They stayed cold as six inches below the surface of the ground was ice year round.

I promised Dredger and his wife that I would make 10 apple pies upon arrival as they had been there since early June and were hungry for sweets. So I mailed ahead almost a full case of Rome Beauty Apples, piecrusts, pans, sugar, spices, etc.

Well, to make a long story short—the apples bounced around in transit and after cutting out the bruises, we spread the crusts on cookie sheets and made apple tortes for everyone! They all appreciated them—plan "B" works again!!

There were no trees on the tundra, only fields of grass and a few bushes along the creeks. There were a few flowers, one of which was a tufted white flower (much like

a dandelion) with which the Eskimo mothers lined the baby's animal-skin diapers. In the shallow creeks, grey salmon were so thick they could have been stepping stones. We had smoked salmon every day. The big fat grizzly bears ate their fill, too! We had to drive across the tundra to Nome or down the eleven-mile beach. At low tide, if you kept two wheels in the ocean and two wheels on the hard packed sand, the trip took 45 minutes. At high tide, because the beach was strewn with tree trunks—from Siberia—it took twice as long. Since the trucks were very high off the ground, they carried a stepladder for me to get in and out.

There were a few paved roads in Nome but no roads “to” Nome. The “Iditarod Race” (dogsleds) ends in Nome. The residents use their ski dogs to get around in winter (nighttime is six months). In town, there is a bar for every other store. Eskimos, like other Native American Indians, have no tolerance for alcohol—but they like it! There are a few gift shops, ivory shops, restaurants, and assorted stores. The ivory shops are fantastic! The Eskimos search the beaches for walrus tusks, whale baleen, bones, and teeth that they carve or scrimshaw. Then they sell their wares to ivory shops for sale to tourists. Much of their workmanship is beautiful though expensive.

A very unusual item was an “oosik”—the penile bone of a walrus. It was \$200 or \$300, and I couldn't afford it. So when I saw a picture of one on eBay, I snapped it up!

Food was expensive. It takes a month for a barge to make the trip from Seattle to Nome to deliver supplies, or you can bring them in by plane. Whenever they had room, I would go on every trip to town or to the trommel operations. That's where I took my metal detector as the trommel was digging gold nuggets. However the entire area is also full of “hot rocks” (*radioactive*) which also set off the metal detector.

Everyone gets a draw a week from all the gold collected by trommel operation. We'd draw numbers from a pot—#1 gets the largest nugget (it was an ounce) and on down to #125, and each received a vial of fine gold, too!

There were many interesting people from all walks of life, including the man who engineered the heat shield on the nose of John Glenn's space capsule—it kept it from burning up when it reentered earth's atmosphere.

Another interesting person was the Eskimo who designed the coin to commemorate the 100th anniversary of the gold rush on the beaches of Nome. I have a picture of him holding the coin, and I also bought a carving of a seal that his sister carved and signed.

Of the 125 participants, there were probably 30 women. I neither saw nor heard anything objectionable the entire trip.

Boy was I glad that I took my thermals! The temperature was high 30s and low 40s. We were warned to bring good raingear and mosquito repellent. Now I saw no mosquitoes, but the 80 mph wind probably blew them away—“Gloria” weather! Winter sets in during late August. Imagine 100 years ago 25,000 people panning gold on the beaches, in linen sheeting material tents. That's roughing it.

I wouldn't take anything for the experience, no problems; but bad hips and all! Loved it!

ShowTime 2007

- August 18-19 Bossier city, LA Ark-La-Tex Gem & Mineral Society
Bossier Civic Center, 620 Benton Rd.
Charlie Johns, 318-687-4929
cwsejohns@bellsouth.net; www.larockclub.com
- August 18-19 Live Oak, TX San Antonio Bead Market
Live Oak civic Center, 8101 Pat Booker Rd.
Rebekah Wills, 903-734-3335
www.thebeadmarket.net
- August 25-26 Jasper, TX Pine Country Gem & Mineral Society
VFW Bldg., FM 2799 and FM 1747, 9 miles
west of Jasper; Sharon Kerr, (409) 384-3441
or (409) 489-0487; seadigest@aol.com
- September 1-2 Arlington, TX Arlington Gem & Mineral Club -- SCFMS
Arlington Convention Center
1200 Ballpark Way; Karen Cessna, (817) 860-
5232, Rick Kupke (817) 465-5270
rickkupke@nwiis.com; http://tses.org.
- September 21-23 Humble, TX Houston Gem & Mineral Society
Humble Civic Center, 8233 Will Clayton Pkwy.
5 miles east of Bush Intercontinental Airport
1 mile east of Hwy. 59
sigrid.stewart@chevrontexaco.com
- September 21-23 Jacksonville, FL Jacksonville Gem & Mineral Society
Morocco Temple, 3800 St. Johns Bluff Rd.
Mary Chambliss, (904) 269-4046
IvoryTowers@msn.com
- October 6-7 Austin, TX Texas Faceters' Guild Symposium
6719 Burnet Lane, Bob Lucas 210-558-4547
blucas@world-net.neto
- October 11-13 Mt. Ida, AR World Champ. Quartz Crystals Digging Con-
test; Montgomery County Fairgrounds, Fair-
grounds Rd.; Thu. 9-3, Fri. 9-3, Sat. 9-3; adults
\$90, preregistration \$75; dig in working crys-
tal mines, keep all you dig, maybe even win a
prize. Maureen Walther, Mount Ida Area
Chamber of Commerce, Mount Ida, AR 71957
(870)867-2723; director@mtidachamber.com
www.mtidachamber.com.

2007		AUGUST					2007
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
			1	2	3	4 10-12 Youth Section 10-5 Shop Open	
5	6	7 7:30 Board Meeting	8 7:30 Faceting Section	9	10	11 10-5 Shop Open	
12	13 1:00 Day Light Section	14 7:30 Show Committee	15	16	17	18 10-12 Youth Section 10-5 Shop Open	
19	20 5:00-7:15 Shop Open 7:30 Lapidary Section	21 7:30 Paleo Section	22 7:00 Beading Group	23	24	25 10-5 Shop Open	
26	27	28 5:00-7:15 Shop Open 7:30 General Meeting	29	30	31		

2007		SEPTEMBER					2007
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
						1 10-12 Youth Section 10-5 Shop Open	
2	3	4 7:30 Board Meeting	5 7:30 Mineral Section	6	7	8 10-5 Shop Open 5:30-9:30 Preshow Pizza Party!	
9	10 1:00 Day Light Section	11 7:30 Show Committee	12 7:30 Faceting Section	13	14	15 10-12 Youth Section 10-5 Shop Open	
16	17 5:00-7:15 Shop Open 7:30 Lapidary Section	18 7:30 Paleo Section	19 Show Loading Day 7:30 Mineral Section	20 HGMS Show Setup Day Dealer Dinner	21 HGMS Show- Kids' Day	22 HGMS Show	
23 HGMS Show 30	24	25 5:00-7:15 Shop Open 7:30 General Meeting	26 7:00 Beading Group	27	28	29 10-5 Shop Open	

The **BACKBENDER'S** **GAZETTE**

*The Newsletter of the Houston
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