



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

The Newsletter of the  
Houston Gem & Mineral Society  
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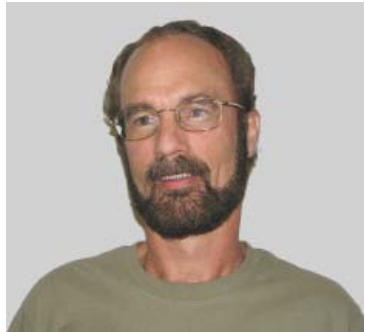
December 2006

## **President's Message**

*Scott Singleton*  
2006 HGMS President



**L**ast month I mentioned that we most likely have set a club record for membership. Well, I looked at a few records and talked to a few people who have been around awhile, and it doesn't appear that we have ever had more adult members than we now have.



**Historical recap:** Our club experienced explosive growth in the early 1970s as a result of our hugely successful shows at that time. We went from a membership of 145 in 1969 to over 400 in 1975. Membership was over 400 for the remainder of the 1970s. In the subsequent 25 years, membership has not changed substantially. We hovered between 300-400 in the 1990s and 2000s. However, all of a sudden we shot up to 505 adult members and 75 youth members after our September show. Fast forward one more month to the end of October, and we now have 520 adults and 80 youth members.

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*President's Message continued on page 4*

## **Program for November 28 General Meeting**

*by Matt Dillon*  
1<sup>st</sup> Vice-President

**F**rom time to time, various members have asked me for help regarding how to cut and polish certain types of agates. I am preparing another presentation on that subject, and I hope to get a professional lapidary to assist me. The lapidary will provide additional perspective on agate cutting and on the ways in which agates can be used.

I will ask a representative from each of our club's Sections to help with the presentation at our November 28 General Meeting. I feel it is important, particularly to our many new members, to have a better understanding of what each Section does and the projects in which they are involved or may become involved in in the future.

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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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*President's Message continued from page 1*

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(BTW, this number of youth members is about twice our normal compliment, so our sudden growth is not restricted to adult members. In fact, this Youth Section growth is the primary reason Youth Section Chairperson Beverly Mace needs your help in assisting her with this Section's activities. Please volunteer if you can.)

So, what's going on here?

I think the answer lies in the two main things any business or organization needs to achieve in order to be successful—(1) people have to find out about us, and (2) we have to offer things that people find interesting enough to pay for a membership year after year.

Let's answer the second item first: I think we all know why we continue to stay members on a yearly basis. The club offers several things that directly relate to our hobby—a clubhouse in which to meet, special interest groups within the club that appeal to our specific interests, a shop in which to work, and classes that teach us how to perform specialized techniques within our hobby. If these things didn't interest us, we would stop paying our membership.

By the way, I should mention that most other clubs in the country can only dream about providing the things we provide. I have been told this by a number of people both inside and outside our club. For this opportunity we should be thankful.

The answer to the first item has to do with outreach. We are fortunate that we have a number of people within this club who are conscious of the community in which we live and are willing to promote our Society to our community. I believe these efforts are resulting in concrete gains in our membership. How have we been doing this? For a number of years the Show Committee has been organizing our club's participation in local shows and conventions. Examples are the Clear Lake Gem & Mineral show (same audience!), Intergem shows (lots of exposure!), teacher conferences such as TESTA (Texas Earth Science Teachers Association), MATS (Metropolitan Area Teachers of Science—an HISD organization), and the Museum Educator's Open House at the HMNS (Houston Museum of Natural Science), and home school educator's conferences such as SETHSA (Southeast Texas Home School Association) and THSA (Texas Home School Association).

In addition, in the last year or two we have had an active demonstration table at the HMNS on Saturdays. Many thanks to Karen Burns and Stan Perkins for performing this outreach service for our club. From the reports I hear, this regular feature at the Museum is probably one of the single greatest factors for our spike in membership. I think we are fortunate to have a close relationship with the Museum and to have people willing to contribute time over there.

And, of course I would be completely remiss if I were not to mention the single largest outreach activity we perform each year—our Annual Show. This one event has been visited by over 8,000 people each of the last two years we've held it (2004 and 2006).

That's a serious amount of public exposure.

So, all I can say to all of you is to keep up the good work. I believe all of our efforts to maintain a first-rate Gem & Mineral organization are paying off. Imagine this—I've begun to hear discussions by various individuals that we need to expand! In my view of things this is a good problem to have. Congratulations, club—you've deserved it.

### **October's International Gem Show: Beads Rule**

*by Art Smith*

*Member of the Houston Gem & Mineral Society*

**M**y wife and I visited the International Gem Show on Friday afternoon. I was surprised at the number of bead dealers in the retail section, but I was particularly amazed at the number in the wholesale area. They absolutely dominated it. Again, there were lots of glass and nonmineral beads offered, but to my surprise there were a lot of new rock and mineral beads too. It is hard to identify much of the bead material without doing a few simple tests which you generally cannot do at the show. Much of this new material has been given a name that may or may not indicate the actual bead composition or place of origin. There were so many new things that I cannot remember them all. However, I recently received the catalog of Oriental Crest and much of it is illustrated there. Wilson Lin, the owner, generally tries to learn what mineral or rock the bead is composed of and where it comes from. He and wife Rachel have a new, larger show room which is worth a visit. See reference for his address.

At our show in September, I bought a slab of a dark colored rock with large pink feldspar phenocrysts from Monarch Minerals. I like to have pieces of such material because there is a good chance it will eventually turn up in lapidary items. It consisted of about 1 cm pink phenocrysts of plagioclase feldspar in a black dolerite matrix. It was called, "pink porphyry" and comes from Western Australia.

At the International Gem Show, we saw several dealers with such material in beads. Oriental Crest has it in their catalog as "porphyry jasper," but there is no indication that the material has been silicified so probably is not a jasper. It does make an attractive bead, particularly in the larger sizes where both the black matrix and the pink plagioclase feldspar are present.

Unfortunately this seems to be a problem with many of the new bead materials. The patterns are large and varied, and you do not get a good representation of what the material is like in the standard 8 mm round bead. This is true of many other materials such as Polka Dot jasper from Africa, Imperial jasper from Mexico, Red Mud jasper from India, Ocean Jasper from Madagascar, and many others. I do not mean to say that these materials are not good for small beads, but examine each strand you buy and see if you want the diversity in color and pattern that is present. Decide then whether you can use such material. Some of these strands are excellent for certain projects, but most strands have very few beads that actually well represent the appearance of the named mineral or rock.

Cuprite is another new bead material. Actually the beads seem to be mostly chrysocolla with small reddish brown areas that are the mineral cuprite. Cuprite is a red copper oxide and chrysocolla is a blue or greenish copper silicate. This material is probably from the copper mines of Chile. The material costs about twice as much as most beads, but it can be an unusual and attractive combination.

Red Mud Jasper appears to be a silicated breccia consisting of white, gray or yellow angular fragments in a red to reddish brown matrix. It is particularly attractive in beads of all shapes over 10 mm in minimum dimension. It is moderately priced in most sizes.

Polka Dot jasper is composed of white to gray spheres in a black matrix. I am not sure of the composition since I have not been able to examine them closely. These could be sedimentary rocks with some rounded fossils that have been silicified because the spheres do show some character. Also the white spheres could be amygdules in a dark igneous rock like basalt. Amydules are mineral-filled vesicules (open spaces such as gas bubbles) in an igneous rock. This filling can be just about any mineral and is not necessarily related to the composition of the rock. Prices are moderate for most sizes.

Blue to blue green amazonite with some black and yellow material from China is common. The shade of the amazonite is variable as is the amount of black and yellow present. Oriental Crest sells it as Black Gold Amazonite. Amazonite is the blue to blue-green variety of microcline feldspar. In beads, amazonite has previously been available from Brazil, Africa, and rarely Russia. Prices and quality vary considerably. The African, Russian, and some Brazilian amazonite is often perthitic. This means that the amazonite is minutely intergrown with a plagioclase feldspar, usually albite. The albite occurs as tiny, patterned, white or lighter colored blobs in the blue amazonite.

Red and green garnet from China is a dark mixture of an opaque red and green material that is said to be garnet. I have no reason to doubt this but have not examined any to confirm its identity. Its dark color may cause it to have only restricted usage in beads.

Orbicular granite from Australia is composed of white, gray, and black minerals, but few pieces that I saw showed any orbs. Its usage would be restricted to beads larger than 12 mm, though even in these I seldom saw any orbicular pattern.

Crazy lace agate from Mexico is not new but seemed more abundant. However, few pieces showed the crazy lace agate pattern that makes this a popular stone. The color variations of white, pinkish, gray, and reddish brown make some strands attractive.

There are numerous other stone beads available; some new and some that were available only in limited quantity or quality in the past. In most the materials are suitable for beads. However, I would suggest that you buy it only if you can find individual strands of good quality and color in sizes that you can use for specific creations and not necessarily buy it because of how it is named. Buy only after seeing it and deciding it is what you want. I did not see any beads made of any apparent toxic or dangerous materials. All of the quartz minerals are safe and have no such problems. If you

are making any jewelry for young people, you should be sure the materials are not toxic, especially if there are any metals or arsenic or mercury minerals in the bead materials.

I did not find any good mineral specimens to buy. Sam and Dean beat me to some Peruvian specimens in the wholesale section. However, that is not what I particularly want, though one barite specimen is very attractive. The Afghan and Pakistan minerals were mostly what I had seen in July, and there were still some outstanding deep green Afghan elbaite available. But I already had bought mine, and to up-grade it at the prices offered now seemed foolish. Wali told me that it has become even more dangerous in the Northern areas of Pakistan. He did have a light blue elbaite (tourmaline) that mimicked an aquamarine crystal except for the lack of 6 distinct prism faces. Both minerals are in the hexagonal system, but the elbaite is trigonal so usually does not show the distinct six-sided prisms usually seen in the beryl (aquamarine) crystals.

Tim and Holly Smith had their usual good assortments of minerals, lapidary items, and fossils, but nothing I had to have though I did look long and hard at a large mesolite specimen.

The only item I did pick up was a piece of agatized Brazilian fern. It had a nice muted color and interesting internal structure vaguely reminiscent of some palm wood. Neal confirmed its identity as fern. Matt Dillon also picked up a piece.

Other than that I did not find much else of interest. There were numerous carvings that were either too high for resale, did not knock my sox off, or were poorly carved and cheap looking. In July I bought a rose quartz elephant that everyone wants, but I could not find another, and the dealer that had it said that it was his only one. Instead of being polished, the piece is sand blasted so it has a unique appearance and is well carved.

So it was an interesting afternoon at the show. My wife gave out early, and so we left without much to carry on the long trek back to the car. I should have known this would happen because I had brought a large, folded, heavy duty shopping bag with us when usually I do not. We enjoyed walking through the show and examining things that were offered for sale and finding what was new to us.

#### Reference:

Lin, Wilson, 2006, *Oriental Crest, 2006 Holiday Special Edition*. 6161 Savoy Drive, Suite 985, Houston, TX 77036. 1(800)367-3954

### Report on October General Meeting Program

by Matt Dillon

HGMS 1<sup>st</sup> Vice-President

The October General Meeting program was my own presentation on how and where to collect agates and agate identification. I brought several different types of agate, some I hand-collected and some I purchased over the past forty years or so, to show the great variety of material. I also showed a slide presentation on polished agates and some of the sites where I have collected.

There appeared to be a great deal of interest in the program, and many members had questions regarding the locations and trips I take to collect. A couple of other members brought agates of their own to display and discuss.

### Pseudomorphs—A Brief Overview

by Dean Lagerwall

Member of the Houston Gem & Mineral Society

**M**inerals are composed of positive and negative ions (cations and anions, respectively) such that the net charge is zero. Often, environmental changes force the cation, anion, or both to be replaced. When this happens, a new mineral species can be created. Because the changes happen on a molecular level, the outward shape of the original mineral is retained, hence the general term *pseudomorph* for “false form” or “false shape.” To better describe how one mineral changes to another, pseudomorphs are broken into three general categories<sup>1</sup>:

<b>Pseudomorph</b>	One mineral replaces another. This can be broken down further:
Substitution	Change in anion <u>and</u> cation
Alteration	Anion <u>or</u> cation is changed; mineral can be hydrated or dehydrated
<b>Paramorph</b>	One polymorph of a mineral is replaced with another polymorph (the formula remains the same, but the crystal structure is changed) pyrite/marcasite; brookite/rutile; calcite/aragonite; etc.
<b>Epimorph</b> or <b>Perimorph</b>	One mineral coats another, acquiring its overall shape (the mineral being coated is an endomorph) If the original mineral goes away, a hollow space is left.

When inorganic species dissolve, the positive and negative species become surrounded by solvent and some distance is put between the cations and anions. In this state, it is possible for outside ions to substitute for the original ion. The result is a molecule-by-molecule replacement of one species for another. Alternatively, both ions could be simultaneously or sequentially replaced to form an entirely different mineral.

*On the opposite page is a list of some common pseudomorphs. Many others exist. (The “→” should be read “becomes.”)*

### SUBSTITUTION PSEUDOMORPHS

Total replacement of one mineral with an unrelated mineral is usually accomplished by the slow dissolution of the original mineral with the simultaneous precipitation of another less soluble mineral. Quartz is a common replacing mineral. The abundance of iron, oxygen, and water makes hematite and goethite/limonite substitution common. (See next page.)

<sup>1</sup> Often distinguishing these categories is not straightforward.



Pseudomorph	Formula
Aegirine → Quartz	$\text{NaFeSi}_2\text{O}_6 \rightarrow \text{SiO}_2$
Aragonite → Quartz	$\text{CaCO}_3 \rightarrow \text{SiO}_2$
Aragonite → Opal	$\text{CaCO}_3 \rightarrow \text{SiO}_2 \cdot x\text{H}_2\text{O}$
Barite → Quartz	$\text{BaSO}_4 \rightarrow \text{SiO}_2$
Calcite → Quartz	$\text{CaCO}_3 \rightarrow \text{SiO}_2$
Celestite → Quartz	$\text{SrCO}_3 \rightarrow \text{SiO}_2$
Fluorite → Quartz	$\text{CaF}_2 \rightarrow \text{SiO}_2$
Gypsum → Quartz	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O} \rightarrow \text{SiO}_2$
Barite → Sulfur	$\text{BaSO}_4 \rightarrow \text{S}$
Aragonite → Copper	$\text{CaCO}_3 \rightarrow \text{Cu}$
Azurite → Copper	$\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2 \rightarrow \text{Cu}$
Ankerite → Limonite	$\text{Ca}(\text{Fe}^{+2}, \text{Mg}, \text{Mn})(\text{CO}_3)_2 \rightarrow \text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$
Ilvaite → Limonite	$\text{Ca}(\text{Fe}^{+2})_2\text{Fe}^{+3}(\text{SiO}_4)_2(\text{OH}) \rightarrow \text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$
Gypsum → Halite	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O} \rightarrow \text{NaCl}$
Halite → Calcite	$\text{NaCl} \rightarrow \text{CaCO}_3$
Halite → Dolomite	$\text{NaCl} \rightarrow \text{CaMg}(\text{CO}_3)_2$

## ALTERATION PSEUDOMORPHS—HYDRATION AND DEHYDRATION

When water is an intricate part of the mineral species, addition (hydration) or loss (dehydration) of water can cause pseudomorph formation. Unfortunately, some of these pseudomorphs are very delicate and are prone to self-destruction.

Pseudomorph	Formula
Gypsum - $\text{H}_2\text{O} \rightarrow$ Anhydrite	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O} \rightarrow \text{CaSO}_4$
Anhydrite + $\text{H}_2\text{O} \rightarrow$ Gypsum	$\text{CaSO}_4 \rightarrow \text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
Ikaite - $\text{H}_2\text{O} \rightarrow$ Calcite	$\text{CaCO}_3 \cdot 6\text{H}_2\text{O} \rightarrow \text{CaCO}_3$
Borax - $\text{H}_2\text{O} \rightarrow$ Tincalconite	$\text{Na}_2\text{B}_4\text{O}_5(\text{OH})_4 \cdot 8\text{H}_2\text{O} \rightarrow \text{Na}_2\text{B}_4\text{O}_5(\text{OH})_4 \cdot 3\text{H}_2\text{O}$
Azurite + $\text{H}_2\text{O} \rightarrow$ Malachite	$\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2 \rightarrow \text{Cu}_2\text{CO}_3(\text{OH})_2$
Cuprite + $\text{H}_2\text{O} + \text{CO}_2 \rightarrow$ Malachite	$\text{Cu}_2\text{O} \rightarrow \text{Cu}_2\text{CO}_3(\text{OH})_2$

## ALTERATION PSEUDOMORPHS—CHANGING ANIONS

### Sulfide Alteration Pseudomorphs

In the presence of oxygen and water, sulfides ( $\text{S}^{-2}$ ) can be oxidized to sulfates ( $\text{SO}_4^{-2}$ ). If the new sulfate is water soluble, it can form sulfuric acid ( $\text{H}_2\text{SO}_4$ ) which can be further distanced from the original sulfide (and cause other changes to the environment). To maintain a charge balance, other anions must take its place. Common sulfide replacement ions include:

- Sulfate  $\text{SO}_4^{-2}$
- Oxide  $\text{O}^{-2}$
- Hydroxide  $\text{OH}^{-1}$
- Oxide/hydroxide  $\cdot x\text{H}_2\text{O}$
- Carbonate  $\text{CO}_3^{-2}$

Pseudomorph	Formula
Galena → Anglesite	PbS → PbSO <sub>4</sub>
Pyrite → Hematite	FeS <sub>2</sub> → Fe <sub>2</sub> O <sub>3</sub>
Marcasite → Hematite	FeS <sub>2</sub> → Fe <sub>2</sub> O <sub>3</sub>
Pyrite → Goethite/Limonite	FeS <sub>2</sub> → Fe <sub>2</sub> O <sub>3</sub> •xH <sub>2</sub> O
Marcasite → Goethite/Limonite	FeS <sub>2</sub> → Fe <sub>2</sub> O <sub>3</sub> •xH <sub>2</sub> O
Stibnite → Stibiconite	Sb <sub>2</sub> S <sub>3</sub> → Sb <sub>3</sub> O <sub>6</sub> (OH)

Sulfate / Carbonate / Fluoride / Chloride / etc. Replacement

Due to the solubility of certain sulfates, carbonates, and halides, these anions are commonly replaced as environmental conditions change. Remember, the anion swap must maintain the charge balance.

Pseudomorph	Formula
Celestite → Strontianite	SrSO <sub>4</sub> → SrCO <sub>3</sub>
Gypsum → Calcite	CaSO <sub>4</sub> •2H <sub>2</sub> O → CaCO <sub>3</sub>
Halite → Thendrite	NaCl → Na <sub>2</sub> SO <sub>4</sub>
Siderite → Hematite	FeCO <sub>3</sub> → Fe <sub>2</sub> O <sub>3</sub>
Siderite → Goethite/Limonite	FeCO <sub>3</sub> → Fe <sub>2</sub> O <sub>3</sub> •xH <sub>2</sub> O

ALTERATION PSEUDOMORPHS—CHANGING CATIONS

Like the anions, the positively charged cations are prone to replacement as environmental conditions change. It is also common for the cation to be oxidized (loss of electrons, i.e. Fe<sup>+2</sup> → Fe<sup>+3</sup>) or reduced (gaining of electrons, i.e. Cu<sup>+2</sup> → Cu<sup>0</sup>). There is usually an alteration of cation/anion ratios to accomplish the necessary charge balance when this occurs.

Pseudomorph	Formula
Gypsum → Celestite	CaSO <sub>4</sub> •2H <sub>2</sub> O → SrSO <sub>4</sub>
Glauberite → Gypsum	Na <sub>2</sub> Ca(SO <sub>4</sub> ) <sub>2</sub> → CaSO <sub>4</sub> •H <sub>2</sub> O
Aragonite → Dolomite	CaCO <sub>3</sub> → CaMg(CO <sub>3</sub> ) <sub>2</sub>
Aragonite → Rhodochrosite	CaCO <sub>3</sub> → MnCO <sub>3</sub>
Dolomite → Smithsonite	CaMg(CO <sub>3</sub> ) <sub>2</sub> → ZnCO <sub>3</sub>
Tetrahedrite → Bourbonite	(Cu, Fe) <sub>12</sub> Sb <sub>4</sub> S <sub>13</sub> → PbCuSbS <sub>3</sub>
Magnetite → Hematite	Fe <sup>+2</sup> (Fe <sup>+3</sup> ) <sub>2</sub> O <sub>4</sub> → Fe <sub>2</sub> O <sub>3</sub>
Pyrrhotite → Marcasite	Fe <sub>(1-x)</sub> S → FeS <sub>2</sub>

PARAMORPHS

The environment in which the mineral was deposited dictates the crystal structure. However, as the environment changes, the mineral may favor a different internal crystal structure. In such cases, the overall formula for the mineral remains the same as does its external appearance, but the internal crystal structure is altered. It is often impossible to tell if the change has taken place without X-ray crystallographic analysis. This type of pseudomorphism only exists in minerals having several polymorphs.

Paramorph	Formula
Marcasite → Pyrite	FeS <sub>2</sub>
Aragonite → Calcite	CaCO <sub>3</sub>
Rutile → Brookite	TiO <sub>2</sub>

## EPIMORPHS (PERIMORPHS)

When one mineral coats another using the overall shape of the original mineral as a template, it is referred to as perimorphism. The term Epimorph and Perimorph are synonymous. It is not required for the original mineral to be gone to be considered an epimorph, but it is common practice to refer to the overlying mineral as a coating rather than referring to it as an epimorph if the original mineral is present. By the strictest sense, epimorphs are not true pseudomorphs, but due to their resemblance to other species, they are generally lumped into the general pseudomorphs category, especially if the original mineral is gone. Quartz, calcite and prehnite are common epimorphs.

Sometimes after a secondary mineral has coated the first, the first mineral will dissolve leaving a space. Then a third mineral can fill that vacant area to form a cast of the first.

## FOSSILS

Many fossils can fall into the general category of pseudomorphs in that the original inorganic material has been replaced by another (often quartz or calcite). Petrified wood and bone fossils are probably the most familiar “pseudomorphs” to the general public. In the name of brevity, I have limited this discussion to species that have not been alive unless their inclusion demonstrated a particular topic.

## LABELING

When labeling pseudomorphs, paramorphs, and epimorphs, it is most common to first indicate the mineral in its present form, the word(s) describing the transformation, and then the mineral that was replaced. Of course, the location from which the specimen originated should always be indicated. For example:

Copper pseudomorphing Aragonite, Copper Rose Mine, Grant County, AZ  
Anglesite psm after Galena, Blanchard Claim, Bingham, NM  
Pyrite paramorph after Marcasite, Spring Creek, Alden, Erie County, NY  
Quartz epimorph after Calcite, Droujba Mine, Rhodopi Mtns., Bulgaria

## References

John S White, “Using the proper ‘-morph,’” *Rocks and Minerals*; Sep/Oct 2003; pg. 348.

Hurlbut, S., Dana’s Manual of Mineralogy, 18<sup>th</sup> ed., 1971, John Wiley & Sons, New York (ISBN # 0-471-42225-8).

## **New HGMS Classes Proposed for Saturdays— But Only If Enough People Sign Up!**

*by David Hawkins  
Education Chair*

**J**anuary starts a new year at HGMS, and the Education Committee is thinking about starting **New Saturday Classes**.

The first Saturday Class will be a **Beginning Jewelry Fabrication class**. This is a 5-week class that meets a total of 25 hours (5 hours each Saturday for five weeks). If you do not currently have basic jewelry making skills, this class will teach you what you need to know. The skills learned in this class will prepare you for participation in the Intermediate Classes which require an understanding of basic jewelry making.

### **We will have Intermediate Classes on the following skills:**

- Bracelet making
- Chain making
- Inlay making
- Four different stone setting classes
- Precious Metal Clay (PMC) ring making class
- Three different PMC classes ranging from 5 to 8 hours in duration, each one a single session.
- Wire wrapping a ring
- Silver ring fabrication
- Tool making
- Soldering

These are not the same classes already offered by HGMS. They cover completely new material, and **MANY WILL BE OFFERED ONLY ONCE**.

Interested? Great! Sign up right away by mailing me a \$25 deposit for EACH class you want to take to hold your place in the class(es) of your choice. Be sure to include the name of the class you wish to attend, your name, address, phone, and e-mail address. Mail it to David Hawkins, Education Chair, Houston Gem & Mineral Society, 10805 Brooklet, Houston, TX 77099. Also send me an e-mail at [classes@hgms.org](mailto:classes@hgms.org) to give me early notice of your intent to take the class(es), being sure to include all the information requested above. These classes will be offered only if there is sufficient interest.

These classes (except for the PMC classes) will be scheduled only after I receive at least five checks reserving places in a particular class. Each class requires a minimum of five and will accept a maximum of eight people.

The PMC classes will be taught by Cheryl Lucas, and she will decide after the first of the year when she will be able to teach her classes. Her classes will have official starting dates. The other classes will be scheduled for the month following the receipt of at least five deposit checks for that class.

If you want these classes, decide **NOW** and send me the info (and checks) right away.

## HGMS Entries into the SCFMS 2007 Bulletin Editors' Contest

by Phyllis George  
HGMS Editor

The deadline for getting our entries submitted in the SCFMS 2007 Bulletin Editors' Contest comes early this year. The SCFMS Bulletin Aids Chair, Don Shurtz, needs to have them in hand by Wednesday, November 15, 2006. Today is Sunday, November 12, and I am still putting the December BBG together. I hope to send the entries with their accompanying documentation off by Tuesday. Don has said he will be very understanding.

Adult Article – Advanced		
Published	Author	Title
April	Scott Singleton	Ancient and Modern Cycads
May	Art Smith	Why Collect Microminerals
	Neal Immega	American Emerald!
	Terry Proctor	Understanding the Geological Time Scale
November	Albert J. Robb III	Middle Eocene Shark and Ray Fossils of Texas
December	Dean Lagerwall	Pseudomorphs—A Brief Overview
Original Article – Adult		
Published	Author	Title
March	John Culberson	My First Field Trip with HGMS
May	Stanley Perkins	Springtime—A “Young” Man’s Fancy Turns to Field Trips!
June	Denise Bicknell	The Mineral Gods Must Be Laughing! (book review)
	Lexy Bieniek	Brownwood Fossiling
September	Kathy Konkell	What I Did This Summer
October	Matt Dillon	Hope Springs
	James Wark	The Wonderful World of Auctions
	Sunday Bennett	For the Love of a Bead
November	Sam Norwood	Methods for Close-Up Photographs
Original Article – Junior		
Published	Author	Title
June	Jerdahn Campbell (age 6)	Lignite Mine Fieldtrip
	Samantha Roquemore (age 7)	Nature Rocks!
	Lorraine Singleton (age 7)	Field Trip to Coal Mine
Adult Poetry		
Published	Author	Title
February	Sunday Bennett	An Ode to 2005, Year of Hurricane Katrina
March	Terry Proctor	This Old Hammer
November	Mary Ann Mitscherling	Patterns
Bulletin – Large		
Published	Editor	Title
March	Phyllis George	The Backbender’s Gazette
November	Phyllis George	The Backbender’s Gazette
Web Site		
Web Address	Webmaster	Club
<a href="http://www.hgms.org">www.hgms.org</a>	Phyllis George	The Houston Gem & Mineral Society

The number of entries to be sent from HGMS is the largest ever. Normally there are anywhere from 9 to 12 entries. This year there are 23, counting the BBG itself and the Web site. 2006 saw a tremendous increase in the number of articles written by members. Each category had a record number of entries: six entries in Adult Article – Advanced, nine entries in Original Articles – Adult, three entries in Original Articles – Junior (under 18), and three Poetry entries. The two issues submitted for the BBG only count as a single entry because their scores will be averaged.

### **HGMS Christmas Party**

*December 9, 2006*

*by Phyllis George*

**T**he 2006 HGMS Christmas/Hanukkah/holiday party will be held December 9, 2006. Social hour will start at 5:30, and dinner will begin at 6:30. Meat will be supplied by the HGMS Board, and the Show Committee is providing the soft drink beverages (they had a large supply left after the show). Bring a side dish or a dessert to round out the meal.

The format is changed a little as there will NOT be a live auction this year, but two new silent auctions will be ending that evening. There will be an awards ceremony following dinner. Hope to see you all there!

### **In Our Library**

*by Arthur Smith, Librarian*

**W**e received another donation of books from Jack Frost. Most are somewhat technical, but there is some excellent reference material. Two bound but not published theses are of interest to collectors. One is on the Washington County, Missouri barite deposits, and the other is on the Majuba Hill, Pershing County, Nevada deposit. Both areas have produced a significant number of mineral specimens, and since these have not been published, they can be difficult to obtain for reference and examination.

Two books on wire wrapping were auctioned in the Lapidary Section auction. I bid what I considered a fair price on them but could not be there for the final bidding. All I can say to the lapidary people is that if you want to have such books available for yourself or other club members in the library, you need to make sure that they do not slip through our fingers. The library is a resource for all club members, not just the Mineral Section. I cannot keep up with all the books we should have and our purchasing resources are limited, so it is up to the Sections and individual members to make sure that we have good books on all subjects that are of interest to Society Members. There have been several requests for wire wrapping books in the past, but if other Sections do not care what is in the library on subjects of interest to them, so be it.

As the years go by, some of the publications we have sets of in the library seem to get too technical and are no longer a useful resource for the library. This is true for the *American Mineralogist*. I have cancelled the subscription to this journal at the end of 2005, and I probably should have stopped it 20 years ago because there has been very little of interest in it to Society Members. The early 1900 to 1960 volumes have a lot

of significant articles but now the number has dwindled to perhaps one or two a year. Also the volumes take up a lot of shelf space, so I may put the last few years into storage in the loft to free up some shelf space.

We have added a lot of significant publications to the library this year. However, if the library is not used, they are of no account. So do not be afraid to use the library. We have over 26,200 articles and books cataloged in the library's database which is in Microsoft Works. It is easy to use. If you are not sure how, I will be glad to teach you. Between our library, Rice University, and the University of Houston, there are very few things that are not available for any research project. So have at it.

The latest *Mineral News* has an article that Scott Singleton and I wrote and Phyllis George edited for us on the Houston Gem and Mineral Show and what we have done to keep it going and make it work. It was submitted in answer to a previous article on the demise of such shows as is happening elsewhere in the country. We have already received several inquiries because many local mineral shows are in trouble. I am particularly well aware of this because I have watched such shows in New England that grew and thrived in the late 1960s through the 1970s and now have ceased to exist or have become a weak shell of what they once were. So we as a society are very fortunate to have dedicated workers who have worked hard to keep ours going and making it stronger.

### **Policy on the Use of HGMS Equipment**

*Approved by HGMS Board on November 7, 2006*

#### **HGMS-Owned Equipment:**

**C**lub-owned equipment is defined as that equipment or materials purchased by the HGMS Board or its appointed agents or donated to the HGMS in general for use at the clubhouse or at HGMS Board officially-sanctioned events.

The HGMS Board or its appointed agents may assign the use of any HGMS equipment to a given Section, but the Club retains ownership of that equipment.

HGMS property may be removed from the HGMS clubhouse only for club-approved events or ongoing community outreach. Permission for removal from the HGMS clubhouse must come from the Clubhouse Chairperson or his (or her) designated representative. *(A community outreach is directed toward a public or private organization or institution whose goals are similar to those of the HGMS, and its function benefits the citizens of our community.)*

The upkeep and maintenance of any HGMS property and all associated costs is the sole responsibility of the HGMS Board or its assigned agent(s), regardless of its assignment to a given Section.

A listing of all HGMS-owned equipment on loan from the HGMS shall be maintained by the HGMS Clubhouse Chairperson. Each Section using HGMS equipment will maintain its own listing of such equipment and be able to produce the list when requested by the HGMS Board. *(Policy continued on next page)*

## Section-Owned Equipment

Section-owned equipment consists of any equipment purchased by the Section, purchased by a member of the HGMS for the Section, or donated by any source to the Section for furthering the activities of that Section.

The upkeep and maintenance of all HGMS Section property is the sole responsibility of that HGMS Section.

Property owned by individual HGMS Sections may be used as each HGMS Section deems fit.

### **The Nature of Amber © 2005**

*An essay by Sean McLaughlin*

*ambermaster@balticimports.com*

*Article submitted by Joan Riley after she gained permission  
from the author for the article to be reprinted in the BBG.*

**A**mber, the great healer and guardian of the ancient world, is one of the four organic gems. Gem dealers describe it as the polymerized and hardened resin of prehistoric trees that lived millions of years ago, or in other words, a near-stabilized ancient sap. Its chemical composition varies for there are many different resins that may make an amber, each of which contains its own particular pattern of organic compounds.

One of the most important chemical aspects of an amber is its acids. We judge a piece of gem quality amber by both the type of acid it possesses and by the amount of that acid.

Succinic acid, from the Latin word succus, meaning sap, possessed by the majority of ambers found in the Baltic region (but not specific to the Baltic) is generally regarded more highly by gem dealers than that of retinite acid which is found in the majority of the ambers mined in the Dominican Republic and Caribbean. Gem quality ambers should contain as much as three to eight percent succinic acid. Such acid in such an amount presents a more stable amber as related to oxidation (the process whereby the outside of the amber discolors) and to the brittleness of the amber itself.

Different types of amber are found in small quantities throughout the world. The oldest plant and insect inclusions are found in Lebanese amber which can date from one hundred and twenty five million to one hundred and thirty million years of age. Among the oldest ambers found, which may come as a shock to many, are those which are excavated in New Jersey. Some have been dated at an excess of ninety million years of age. Naturally, these ambers are prized for their inclusions, by which we mean the organic matter and debris collected by the sticky resin as it flowed down its particular tree. Collectors should be aware, before they descend on New Jersey with a shovel and a bucket, that fossilized resins are quite common to our world. One should remember that amber is only that type of resin that is crossed linked and polymerized with little resin volatiles. It is rare in the world of old resins. Resin hunters should further remember that of all the amber found, only an astonishing ten percent is gem



quality.

The path of resin becoming amber is not a linear one. It is quite complex and has a great deal of specifics that determine the evolution of a resin. But to simplify matters, one could say that a resin, once produced, if protected in certain ways, will experience an evaporation of properties and/or a change of properties that allows it to eventually harden. Most deposits of amber are in ancient estuaries that flowed into an ocean or sea. There, preserved and protected in sediment, the resins may become amber. The first great path to amber is when the resin reaches a copal-like state. Copals are resins that possess a certain hardness and whose molecules have started changing.

Copal is a carvable, workable resin substance that appears throughout the world and which may have a tremendous cultural value. While copal may have great cultural value, it possesses little gem value. Berber amber, Afghan trade beads, Nepalese shaman balls, Asian Indian or African ambers, some wrongly identified Mexican amber, and what is often marketed as “new amber,” are almost always copal. They should not be sold as amber for they will oxidize very quickly, losing their luster and even their polish. Because of the compounds that they still contain, like an image of a ball of clay that is dry on the outside and wet on the inside, they, like that clay, are very brittle and subject to easy cracking.

The historic use of copal was to dissolve it in alcohol to produce a paint varnish. To the dismay of many scientists, whole areas of the world's copal with dense inclusions—that is, insects, organic matter, or other debris—were utilized this way. Copal, because of its general youth, from 100 years, i.e. Dominican copals, to 35 million years as dated in a rare Japanese copal, contains the greater number of inclusions. Because of the great rise of angiosperms, our flowering plant life, and its impact on our insect life, copal has the larger sized inclusions as compared with ambers dating from forty to one hundred and twenty million years of age. The large and numerous dark ant inclusions I was offered in the Yucatan were not new ants preserved in plastic as many feared, but ants that were two hundred years old preserved in copal. If one studies the bee sizes in copal, or even their change of size in Dominican amber, which is younger than Baltic amber, one would be truly amazed at how small the bee is when it is preserved in Baltic amber. Copal does not necessarily lead to amber. But one could say that amber at one time was very, very close to copal.

Much amber is mined. In fact; most of the world's oldest ambers are found and now excavated from small deposits. Wonderful stories are told about their finding or their loss. For example, many people would be shocked to know that there was so much amber in one area of the clay strata of Staten Island, a borough of New York, that when it was being excavated for building government facilities and what would later become the Staten Island Ferry, the workmen burned it for warmth.

But the majority of amber, and the amber that I deal with and whose history and mythology I seek to preserve, is the amber that comes from the Baltic Sea. For thousands of years this amber gave a great richness to what grew to be Dane Mark, the expanding Vik Mark northern Germany, the great tribes that compose Northern Poland, as well as the Baits.

The greatest amber beaches of the Baltic Sea were and are located in its lower eastern curve, in Latvia, Lithuania, and what was old East Prussia, and is now divided into Kaliningrad and Poland. The regions of these copious amber beaches were the homes of the Baltic tribes and the Baltic language, and of the great tribes who traded amber out of and along the great rivers.

Amber, known as the Sun Stone, Sickness Averter, Gold of the North, the Guardian, the Healing Stone, the Burn Stone, the White Burn Stone, etc., came to be one of the oldest traded commodities that we know of in the history of our world. Much knowledge of that trade has survived. We know how amber was collected by the Mesolithic (8000 BC–4000 B.C.) Baits and the Battle-axe culture and what types and colors they included in their graves. We know that by the end of the Neolithic Period, the New Stone age, which lasted much longer among the Baits, that amber was being traded along diverse routes and that it was worked with primitive flints and bone drills, producing a shaped and pierced gem. We know of the Assyrian cuneiform trade disks—among the earliest trade vouchers in history—that keep a precise record of the amount of amber being transported, traded, or bought so that merchant princes would not be defrauded, for they are in the British Museum. We know the terrible stories of monsters, some of which are said to drip amber into the sea from their homes in twisted trees, and the false stories of impassable seas where rocks would crash to rocks that the Phoenicians told to discourage others from sailing the amber sea-lanes and thus competing with them in amber's acquisition.

What we do not know, though, for we have also lost a great deal of lore, is all the qualities of healing and protection associated with amber. For amber's forceful beauty seemed to reach into the individual psyche of each People along the amber routes. Each seemed to ascribe to amber something that was specific to themselves, whether it be dark or light, in a form of magic, science or religion. This multiplicity of regard personalized the lore of amber.

Often, at night, in the stillness of my world, when the world that I have created for myself is calm, I have the feeling that if one could ever perceive the whole lore of this little gem, then one could begin to form a picture of the great human soul even as it was developing, and watch it join others in community. For the history of this organic gem is a history of light and dark, a history of courage and betrayal, of that which is male and female, of that which guards and nurtures, or which, conversely, can curse the very history and root of its own being. It is the ancient world and the relationship that that world has forged with us who have come from it. It is a line unsevered from antiquity to here, to this place, so far from the sea.

A gracious thank you, then, to this gem born from the "Tears of the Goddesses." It has always inspired us to raise the level of what we could make from it, even if it itself has never changed.

### **Traditional Meanings of Color in Baltic Amber**

- Clear Transparent Gold = Growth, The Sun Stone
- Clear Transparent Red = Strength
- Clear Transparent Cognac = Clarity

- Clear Transparent Brown = The Richness of the Earth Water
- Clear = Birth, Renewal, Completion
- True Green (not dyed) = Growth, Abundance, and Renewal
- Grey = Simplicity and Calmness
- White = Spirit
- Opaque Yellow = Joy, Celebration, and Stability

### Wildacres Date and Uniform Rules Class Paid For by the AFMS

*E-mail received from Bill Pattillo November 3, 2006*

*[bill@rockfoodtable.com](mailto:bill@rockfoodtable.com)*

I am forwarding an e-mail that I got today.

If you know of anyone who would like to attend Wildacres and take the Uniform Rules Class, please let me know as soon as possible. I can contact Dee Holland, and he will make the arrangements. The American Federation will pick up the tab for the attendee, and it is a very worthy session. Notify me if you know someone who would be interested in attending

Bill and Lois Pattillo

Dee Holland wrote:

Hi All,

This is to let you know we have just received the dates of the Wildacres Rules session. IT'S EARLY. We don't have much time to select a person from each region for this event.

The date is **APRIL 20–26, 2007**. The AFMS picks up the cost of the rules attendee. IF the spouse attends, the cost is \$330, and she/he must take one of the classes offered. The cost of transportation to and from Wildacres is not included in the AFMS package. This is the only date offered, and while I know it's early, it doesn't conflict with any of the regional shows. You'll have plenty of time to reflect before the big show in Roswell, New Mexico June 5–10.

I need your choices so I have time to process everything. **My final date for hearing from you with a candidate is January 10, no later.** Once I have your candidate, I will send him/her their applications to be sent in. And I have to coordinate with the AFMS Treasurer.

Contact me as soon as possible at: [beauholland@salmoninternet.com](mailto:beauholland@salmoninternet.com) and [shirleyleeson@msn.com](mailto:shirleyleeson@msn.com)

### Susan Lenz Update

*by Norm Lenz*

Dear HGMS Friends,

Susan's condition has improved further since my last update. Her blood tests

show that her counts are back in the safe range. Her doctor has restarted her chemotherapy after a seven-week break. She is taking the same chemotherapy as before but at about one-third the dosage.

### Positives:

- Our home health aid is working out well. She comes to us through Sheltering Arms, which is partially supported by United Way. She prepares lunch, assists with toileting, bathing, dressing, walking, Susan's laundry, hair care, and nail care.
- We hired a local home health aid on our last visit to San Marcos. That gave Tanya and me some time to begin painting my workshop.
- I returned to work last week
- We are tentatively planning to visit my family in Missouri for Thanksgiving and Susan's family in Indiana for Christmas
- Susan's blood cell counts are now in the safe range. She will have a weekly test to be sure they stay at safe levels
- Susan is feeding herself about 80 percent of what she eats
- She eats well and sleeps well
- She is communicating better these last few weeks
- The tremors seem to be slightly less. We are not sure if this is a result of her break from chemotherapy or if the tremor control medication is working.
- We have a verbal confirmation that Susan has been granted disability status by Social Security. This means early payments by Social Security and easy access to her 401k funds.

### Negatives:

- Chemotherapy treatments still have a negative effect on Susan's alertness, strength, and tremors
- Susan still needs assistance getting up, walking or sitting down, eating, etc.
- Susan's short-term memory is about 70% and long-term memory is at about 90% of normal.

I don't have any new photos worth sending with this update. As always, we thank you for your continued support of our family and our war against cancer. Norm

## HGMS Board Meeting

*November 7, 2006*  
by Margaret Hardman-Muye  
HGMS Secretary

X	President	Scott Singleton	X	Faceting Rep.	Phyllis George
X	1 <sup>st</sup> Vice President	Matt Dillon	X	Lapidary Rep.	Dave Hawkins
	2 <sup>nd</sup> Vice President	Beverly Mace	X	Mineral Rep.	Art Smith
	Treasurer	Paul McGarry	X	Paleontology Rep.	Terry Brawner
X	Treasurer Assistant	Lowell Stouder		Day Light Rep.	Sunday Bennett
X	Secretary	Margaret Hardman-Muye		Past President	Norm Lenz

**Call to order, 7:30,** by Scott Singleton, President.

Approval of October minutes done via e-mail.

**Treasurer's Report:**

- Lowell Stouder asked what he should do about several bounced checks. He was instructed to call the members and ask for them to take care of the money owed.
- Lowell said his hard drive crashed, and he is having to re-enter all of the data, so he does not have a balance statement. He will e-mail it to Scott in the next day or two.
- One of the CDs matured on October 16 and automatically renews. It was suggested he call the bank to see what interest rate it will get, and perhaps ask for a higher rate.
- Lowell was asked to get with Sigrid Stewart, the Show Chair, to get a specific accounting of the show accounts, including the preshow auction.
- There have been several auctions recently. Auction disbursements on several of them still need to be made as auction material was donated with proceeds to go 50/50 to the donor and the club. These checks will be sent once we know the exact amounts received from the auctions.
- Lowell agreed to get the invoice for the roof repair from Paul McGarry and to give it to Scott. He was given the dates and check numbers that paid these invoices.

**Committee and Section Reports:**

**Show:** Sigrid Stewart passed out several reports: a copy of the ticket sale count, information booth revenue, and the show budget totals. She was instructed to get the actual amounts from the Treasurer. Copies are attached to the minutes.

**Newsletter:** Phyllis George says the deadline for submitting articles to the December BBG is November 8. She is going through the 2006 BBGs looking for eligible articles to submit to the 2007 SCFMS Bulletin Editors' Contest. The contest entries are due November 15.

**New Business:**

The date for the 2006 HGMS **Christmas party** will be Saturday, December 9. Social hour begins at 5:30 p.m., and dinner will be at 6:30 p.m. It will be a potluck dinner with the club furnishing the meat and drinks. Art Smith will purchase the meat and Matt Dillon will bring ice, tea, and coffee. The Show Committee donated the sodas left over from the show. There will NOT be a live auction although two new silent auctions will close that night as there is no General Meeting in December.

**Change of power companies:** Terry Brawner has signed a two-year contract with Commerce Energy. It appears that the club will save a significant amount on the electric bill each month. The original contract will be filed in the office, and a copy will be filed with the minutes.

**Insurance coverage changes:** Scott gave a copy of the "Certificate of Liability Insur-

ance” to the Secretary to be copied and filed (original in office and copy with minutes. He will also keep a copy. The insurance policy has been amended with a new deductible. The level of coverage has been raised to cover the replacement value of the building contents. The policy will need to be renewed February 4, 2007.

**SCFMS information:** Phyllis agreed to fill out and send a listing of our new officers to the SCFMS after the elections in November.

**State nonprofit status paper work.** Terry Proctor has filed an update with the appropriate forms. A copy is filed with the minutes and in the office.

**Approval of Nominating Committee’s selection of Show Committee leadership positions:**

**Show Committee Chairperson .....** Sigrid Stewart

**Show Committee Assistant Chairperson .....** Michele Marsel

The Board unanimously approved the above nominees!

#### **Authorization to rekey locks on exterior doors**

- Tom Wright will have the keys made in December.
- Keys will be given to Board members, to Section leaders, and to instructors who teach regularly.
- It was requested that all Section representatives ask their Sections how many keys that Section needs and to report back at the December Board meeting.
- A master list of all key holders will be maintained by the President. Section Chairs will keep a list of all keys they have given out as well.
- An announcement will be made at the General Meeting to this effect. Persons known to need these keys will be contacted beforehand. The locks will be rekeyed after January 1.

**Clubhouse:** Tom has purchased three outdoor lights, and an electrician is coming to install them on November 11. Matt Phillips is working on a replacement for the smaller HGMS sign.

**Committee on child abuse prevention:** Matt Dillon says that Terry Proctor has reviewed their draft policy and has made several suggestions for revisions. Once revisions are made, the committee will report back to the Board.

**Clarification of policy regarding Club equipment offsite usage:** The Board approved the policy as revised. A copy is attached to these minutes.

Adjourned at 9:15 PM

### **HGMS General Meeting**

*October 24, 2006*

*by Margaret Hardman-Muye HGMS Secretary*

**M**eeting called to order at 7:30 by Scott Singleton, President.

New members and visitors were introduced: Steven Foster, Robin Kates, John

Bain, and Steve McCaleb.

**Education Committee:** David Hawkins stated that there will be a PMC class on November 5. Mold making starts on November 5 as well.

**Daylight Section:** Karen Burns reported that the Section birthday party is on December 10 at noon. Those who were at last year's party, bring the same food you brought then. Those who weren't, call Frances Arrighi regarding the food to bring. There will be a dichroic glass class in January or February. Mary Ann Mitscherling brought a ring and bracelet to show that was done in the last meeting.

**Faceting Section:** The last program was on how to charge laps. The next meeting is a "Faceting Free for All." Bring your machines if you have them.

**Lapidary Section:** Kathy Konkel says the last program was Karen Burns teaching hands-on wire wrapped rings. The November 20 program is metal texturing. The recent auction was very successful.

**Mineral Section:** Dean Lagerwald reported that the last program was on "Minerals of the Silver Trail" and "Gold Crystals." The first Wednesday of November, Art Smith will talk about "Minerals of Leadville, Colorado."

**Paleo Section:** The third Tuesday, November 21, will be the Section's annual party and auction, according to Terry Brawner.

**Youth Section:** Beverly Mace says that an additional volunteer is now helping with the children, Yolanda Ferrell. They have been very busy, and could use even more help on Saturdays.

**Show:** Sigrid Stewart asked that anyone with tickets left from the show to please turn them in. She read a thank you note from San Juan Gems.

**Membership:** Beverly Mace says there are a record number of adult members: 505!

**Newsletter/Website:** The due date for articles for the December BBG is November 8. Please get articles in to Phyllis George. She has put photos from the show on the Web site as well. If people are misidentified, please let her know.

**Library/Auctions:** Art Smith reports that two silent auctions finished tonight.

**Nominating Committee:** The Nominating Committee presented the following slate:

President .....	Matt Dillon
1 <sup>st</sup> Vice President .....	Matthew Phillips
2 <sup>nd</sup> Vice President .....	Beverly Mace
Past President .....	Scott Singleton
Secretary .....	Denise Bicknell
Treasurer .....	Lowell Stouder
Show Chairperson .....	Sigrid Stewart
Assistant Show Chair: .....	Michelle Marsel

Scott called for nominations from the floor, and there were none.

The Board decides on the Show Chair and Assistant Show Chair. The General Membership will vote on the other officers at the November General Meeting.

**New Business:** Terry Brawner has been researching vendors for electricity service. He submitted five names to the Board, and Commerce Energy was selected. A contract has been signed with that company.

**Announcements:** Fossil Mania is happening in Dallas the last weekend in October. Matt Dillon will be having a rock sale at his house on November 4 from 9-3.

**Show and Tell:** Steve McCaleb showed a sphere he made from an agate he found on one of Matt Dillon's field trips. John Anderson showed some Calico Mountain palm wood, and Pat Hildbold showed some White Creek petrified wood she found. James Wark talked about reclaiming metals. Seven pounds of mainframe computer parts yields 1 oz of gold. Several other less common metals are also found on these boards.

**Door Prize:** The polished agate donated by Matt Dillon was won by Robin Kates.

### **Federation Box Swap**

*by Michael Kessler, EFMLS*

*from the AFMS Newsletter 10/2006*

**T**he **Federation Box Swap** has continued to grow to the advantage of its many participants. For the past two years, the **Federation Box Swap** has been issuing guidelines for swapping specimens through the United States Postal Service. Clubs in 21 states have traded ten pounds of material at a time. Now normally this would be a serious expense were it not for the discovery of the **Flat-Rate Box** that the post office hands out for free to encourage the use of its services.

This is just a reminder that we still have clubs in several states ready to do some trading from their local sites. You can find some wonderful material coming from across the country.

The guidelines are simple. Choose a category for your trades. Make it **mineral crystals, mineral lapidary, fossils**, or work within **several categories**. Follow the packing rules of providing appropriate labels of I.D. and location for each specimen. Put each specimen in its own wrap to cushion it and then cushion between specimens. Let me know when you're packed. I will find you possible trades for your category. It's that simple. Trade once a year, or as often as you can accommodate the activity.

We're ready for you to rejuvenate your meetings. I only say to you, send the kind of specimens that you would want to receive. Discuss this with your club members. I am sure folks are ready to do something with the duplicate specimens they've got sitting around.

When you are ready to suggest trading to your club, send for the introductory letter from the **Federation Box Swap** coordinator. That's me.



Michael Kessler  
4 Longfellow Road  
East Stroudsburg, PA 18301  
(570)421-3113  
<quartz7228@aol.com> re: Box Swap

*[AFMS Editor's Note: Michael also serves as an Eastern Federation Regional Vice President and as their Supplies Chairperson. He's also a talented musician!]*

## **Truth & Some Consequences**

*by Jon Spunaugle*

*AFMS Conservation & Legislation Chair  
from AFMS Newsletter 11/2006*

### **America the Beautiful Pass Update**

On September 22, 2006, the U.S. Forest Service published a notice that it was going to use Recreational Resource Advisory Committees (RACs) for advising the Forest Service on fees required by The Federal Lands Recreation Enhancement Act for accessing certain lands managed by the Forest Service. Where possible, through a new interagency agreement, the Forest Service will utilize existing BLM Resource Advisory Councils (RACs) where appropriate, or new Recreation RACs will be chartered by the Forest Service. (see the Internet at <[www.fs.fed.us/](http://www.fs.fed.us/)>.)

This presents us with a great opportunity to have a significant say in the use and cost of fees for access to public lands. I strongly urge "rockhounds" everywhere to apply for membership on these advisory committees. Vacancies for these Advisory Committees are announced in the Federal Register. If someone wishes to do so and needs a letter of recommendation, they need only to contact me. I was honored to write such a letter for Isabella Burns as well as others, and would do the same for any AFMS Society Member.

Our AFMS Past President Isabella Burns has served on such an advisory committee in the past, and through this activity she brought the amateur hobby concerns and hopes to the attention of people who can make a difference. I know from conversations with Isabella how much she enjoyed the activity and how much she learned and how much she accomplished. She did make a difference. You can too.

### **Secure Rural Schools Land Initiative follow-up**

As promised in the April 2006 AFMS Newsletter, I am bringing to your attention an update on the Federal Land Acquisition program. As you may recall, the Administration is proposing land sales to assist the Secure Rural Schools and Community Act of 2000. Most of the land sales would be small parcels not connected to larger parcels of public land. For more information on the lands that might be sold see the USDA Forest Service Internet site at [www.fs.fed.us](http://www.fs.fed.us).

The President's FY 2007 Budget for the Forest Service included a legislative proposal that would reauthorize the Secure Rural Schools and Community Self-Determination

Act of 2000 to allow payments under the Act to continue for an additional five years. This proposal underscores the President's commitment to states and counties which have been impacted by the ongoing reduction in receipts primarily due to lower timber harvest levels on Federal lands. To provide a funding basis for an extension of the Secure Rural Schools Act, the President's proposal would authorize the sale of certain parcels of National Forest System Lands. Lands that are potentially eligible for this proposal have been identified at the Forest Service Internet site..

In my research, I find most of the parcels that could be sold are isolated small land areas of 60 acres or less and separated from larger Forest Service managed lands, but not all. To be certain of any impact on collecting activities and opportunities, local rockhounds need to review the maps available on the Forest Service Internet site.

I reviewed the National Forests maps in the states of Washington and Oregon, my home territory, and could not identify any impacted collecting sites. However Montana and especially Idaho potential sale locations seemed more likely to have collecting potential.

The Secure Rural Schools and Community Act of 2000 is up for renewal in Congress with the following Bills HR 515 and S-267 being considered.

### **Having Fun—AFMS Junior Activities**

#### *Careers in the Earth Sciences*

*by Jim Brace-Thompson*

For many kids, an initial fascination with colorful minerals or fantastic fossils ebbs with the teen years as school, sports, band, dating, video games, part-time jobs, cars, and so many other activities and temptations compete for their time and interest. But there are those few intense teens—and every club has seen at least a couple—who maintain a consuming interest in our rocky earth. For those kids who truly get bitten by the bug, you can offer invaluable guidance by introducing them to the varied career paths toward which their interest might lead.

Such careers are found in a number of industries and sectors, including: the gem and jewelry business, the petroleum and mining industries, environmental consulting, the federal government (USGS, BLM, National Park Service, or NASA, to name but a few agencies), national laboratories, state agencies, university research and teaching, paleontology, natural history museums, and K–12 education.

Last month I directed attention to Earth Science Week, an annual event sponsored by the American Geological Institute (AGI) to promote a better public understanding and appreciation of the earth sciences. The AGI Web site also provides helpful links telling about the varied careers open to youth wishing to take their interest in rocks, minerals, and fossils to the next level. Check it out at [www.agiweb.org](http://www.agiweb.org). Click on the “Geoscience Careers” tab. The Gemological Institute of America also has a “Careers” tab on their Web site ([www.gia.edu](http://www.gia.edu)).

Finally, you can direct teens to the Web sites of colleges and universities with particularly strong geology, earth science, or paleontology departments such as UCLA, Berkeley, San Diego State, or UC-Santa Barbara in my home state of California. You might give them an assignment to explore a department Web site, find the name of the department's undergraduate advisor, and contact that person to solicit more information about educational and career opportunities related to your teen's particular interest, and then write up a brief paper or give an oral report about their findings. Such an assignment also gives a teen a leg up when later making the big decision about going on to a college education.

Work to help direct your club's teens to Web sites of organizations like the AGI, GIA, and university geology departments as one way to direct their vision toward potential lifelong careers while—as always—having fun!

### **Future Rockhounds Forum**

*by David and Carol Abbott*

*SCFMS Juniors Program Co-Chair*

*from SCFMS Newsletter 9–10/2006*

### **Lapidary Arts**

Section 4 of the FRA Merit Badge Proposal is on Lapidary Arts. This is rather a tough area for children. First, it covers such a wide range of skills and tools. Second, with thousands of rocks and minerals to choose from, each with their own characteristics, it can be difficult not to confuse kids.

For example, our most common family of lapidary materials, the agates and jaspers, has hundreds of unique names and visual characteristics. But structurally they are all cryptocrystalline silicon dioxide. In the language of the geologist, it is all chalcedony. So, if it is all chemically chalcedony, why are some called agate and some called jasper? And, if three different students grab three different stones that all look different, how do you explain that they are all agate? We're not trying to discourage you, but it would be best to prepare a not-too-technical answer for questions such as these.

An excellent place to start learning about "lapidary rocks" is with a call to your club membership for donations. We have found our fellow rockhounds to be extraordinarily generous to the young generation.

Back in section 1.2, you would have built mineral ID kits. These would have included hardness testing kits. Also, there should have been an introduction to fractures, luster, etc. Now would be a great time to use that knowledge. Encourage the students to test your donated pieces using the mineral ID kit.

Expand upon some of the following to help introduce project options and appropriate uses for your available material:

- Most stones suitable for jewelry have a hardness of 7 or greater to withstand scratching from common dust (much of which is silica sand).
- Course-grained stones (like sandstone) typically do not take a good polish, but

they may be an excellent “canvas” for painting.

- Transparent to translucent stones can be used to make fun light-catchers.
- Soft stones may be shaped or carved with inexpensive readily available wood/metal-working saws and files.
- Stones with predictable fracturing can be used in “knapping” projects.
- Stones with lots of holes or other challenging characteristics may be used for rock critters.

In summary, work your presentation, projects, and ideas around the material readily available. It's cheaper and only requires a little creativity to maximize your bang for the buck.

### **AFMS 2007 Convention**

*by Howie Whiting*

*from AFMS Newsletter 11/2006*

**T**he next AFMS Convention and Show will be held in Roswell, New Mexico from June 5–10. We're planning on having lots of fun and are looking forward to seeing you there.

Many of you have already received CDs which include all the forms and information about the Convention. We'll print this in the coming months in the newsletter, but for now I want to alert everyone that there is a major error in the phone number for the host hotel on the CDs that are out there.

The correct phone number for the Sally Port Inn is (505) 622-6430. Please use this number when you call early for your room reservations.

### **Safety Report**

*by George Browne*

*SCFMS Safety Chairman*

*from SCFMS Newsletter 7/8 2006*

### **Careful Cleaning**

**I**t is that time of year when we start going on more field trips or more distant field trips, and the amount of material we bring home increases. When we get the material home, we often want to clean it. Generally, cleaning our newfound treasures is not a problem, providing we know what the material is. However there are some specimens that should be left exactly the way they were found because cleaning could destroy them. So we have two concerns—one is the safety of our specimens, and the other is our personal safety.

Most of the material we find can be safely cleaned with water and a brush or with a mild detergent. I prefer dishwashing detergents to laundry detergents because laundry detergents often contain bleach that could harm the material. However, again let me emphasize the importance of knowing what your material is. Remember, everything we collect is composed of chemicals that may react with our cleaning compounds.

Also be careful of mixing cleaning compounds. Some of our old safety books warned about adding bleach to cleaning solutions containing ammonia. This is still good advice—bleach often contains chlorine which may be released or may form other toxic compounds that could kill you. But we shouldn't just limit our warnings to chlorine bleach and ammonia. There are countless numbers of cleaning products available today. Just browse the cleaning products area of your local supermarket. There seems to be a cleaning product for every cleaning problem and a stain remover for every stain known to man. These products may be beneficial, but before you purchase or use any of these compounds, READ THE LABEL. Some may produce toxic fumes, or cause blindness, or be caustic and cause burns to the skin. If you do use them, be sure to use the appropriate respirators, eye protection, gloves, or other safety equipment.

**DO NOT MIX CLEANING COMPOUNDS** unless you know precisely what they will do. The cleaning compounds are chemicals, your rocks are chemicals, and when you mix the compounds or add them to your specimens, you may produce a mixture that is dangerous. Experimentation can be fatal. Knowledge is the key to safety. If you must clean, clean carefully and be safe.

### Tips 'n Hints

*from Stoney Statements 11/2006*

**Cleaning Copper and Brass:** Your copper and brass jewelry has turned that brackish green color with black spots. Just rub thoroughly with barbecue sauce and wash with soap and water.

**Orangewood stick:** This tool is sold for the purpose of working on cuticles and is available in all cosmetic departments. It is soft enough to not mar gold or silver, yet is hard enough to use as a pushing tool in setting prongs. It will not scratch gems and reaches into impossible places.

**Wipe a piece of chalk over your Jeweler's files:** The chalk keeps the file from clogging, and you can blow it off. Toss a piece of charcoal or chalk into your tool box. It will keep your tools rust free. You can also put that chalk in your jewelry box. Tarnish is caused by sulfur gases in the air. Chalk absorbs the gases.

**Shining Cabs:** To make cabochons really shine, wipe them with eyeglasses cleaner and polish until dry.

**Fluorescent Labels:** *via Golden Spike news 6/2000*

Fluorescent labels can be read in the dark by using ink made by mixing quinine and water. It glows bright blue under black light.

**How can you get rid of the iron stains on your other rocks?** Try Iron-Out®. Members of various clubs have found that it removes stain from quartz, dolomite, fire agate, chalcedony roses, some amazonite, ceramics, cloth, and carpet. Super Iron-Out® works better than bleach does on rust because bleach oxidizes iron which turns to rust. Super Iron-Out® de-oxidizes iron into a clear solution that easily rinses away and will not harm fabric as bleach does.

**Soldering:** *from Breccia 10/2003 via Shin-Skinner News, 9/2005*

Saw a piece of pumice to size and shape with a hacksaw. Use the pumice block instead of charcoal for a working "block." It will not reduce or burn metal being heated.

**Display:** *via Golden Spike News 5/2000*

Silver jewelry displayed in a case will not tarnish if the display cloth is sprayed with chlorophyll.

**Geode Cutting:** *via Golden Spike News 6/2000*

Cutting geodes in the right place can be tricky. Try rolling the geode on a flat floor several times and mark the "up" side each time. Then cut on a plane parallel with the floor. Crystal growth inside the geode is probably most developed at the top and bottom of its resting position,

**Tool Protection:** *via Pick and Hammer News 5/2000*

Your tools won't rust if you spray them with Pam or WD-40 then wipe them with a clean, dry cloth.

### **Twinkling Lights (using light as a tool)**

*Author unknown*

*from The Gemrock 11/1998, via The Roadrunner 8/2006 and others*

**T**here is no serious problem with tumbled or machine finished stones, but the lapidary who grinds and finishes stones must strive at all times to obtain the best possible surface finish and to reduce the dancing reflected light spots to a minimum. The lights should not "twinkle."

Try not to get hung up on how light behaves, but do try to use it as a tool to help you evaluate your work in progress. Broken reflections of light are more noticeable on large stones than on small stones, and your task of polishing larger stones is therefore more difficult. You need to use reflected light to measure and examine your finished stones. Keep in mind that you are a mere mortal striving toward the ever-elusive goal of perfection. A tube light will show you a different perspective than a round light bulb. Various shapes and sizes also present different pictures.

Some lapidaries who grind and finish many stones become quite adept at falsifying a surface. In other words, they can get a smooth and shiny stone that looks very good at a casual glance but would not pass a serious light test under a meticulous judge.

Be careful forming unalterable judgments based on the light test; there are other factors that can and do alter our-perspective and may lead us to reach false conclusions. Some things that could mislead you are your eye glasses, contacts, front glass of the display case, the kind of light bulb, the angle of incidence of the light, vibrations in the case, and vibrations of the wire filament in the light bulb.

You need to keep the shape of the stone in mind when doing a light test. A freeform with several break points on its surface will pull or flatten out light, and this could be misinterpreted as a surface flaw. Anytime there is an abrupt change in the surface curvature of the stone, the light will respond accordingly. It is possible for the surfaces

of some stones to be pulled or orange-peeled during polishing; however, if the lights are dancing around and "twinkling" like the stars above, it is more than likely that the sanding needs more work. Here, the light test is a very useful tool for improving the surface of a finished stone.

## Letters from Wesley Academy Following Their Visit to Our Show and School Daze



October 5, 2006

Houston Gem and Mineral Society  
10805 Brooklet  
Houston, Texas 77099

Dear HGMS members,

Enclosed please find letters written by my students. They had a wonderful time on their field trip.

We may try to do a fossil hunt trip at Whiskey Bridge later in the year (maybe January or February). We would go on a school day. Do you have any knowledgeable member(s) that might consider going with us? We would also welcome any words of advice regarding the basics (bathrooms, snakes, what to wear, etc.). We are aware that poison ivy might be an issue. Thank you in advance for any help you can send our way.

Sincerely,

Sue Hutchison  
Earth Science Teacher  
Wesley Academy

Wesley Academy  
10510 West Park Drive  
Houston, Texas 77036

The Houston Gem and Mineral Society  
10805 Brooklet  
Houston, Texas 77099

Dear Officials:

Thank you for letting us come to your place. I had so much fun. I learned a lot about rocks and what they are used for. I hope that someday your officials will find a rock that no one has found.

Your friend,  
Travis Meloy



Wesley Academy  
10570 Westpark Drive  
Houston, TX 77042

The Houston Gem and Mineral Society  
10805 Brooklet  
Houston, TX 77099

Dear Officials:

I really enjoyed the scavenger hunt for 6<sup>th</sup> grade. I enjoyed the Mad Science play as well. It was really nice that we learned the "3 ways of knowing a chemical changes."

I loved all the sites in, and learned a lot of things about the rocks and minerals. Thank you officials for letting Wesley Academy 6<sup>th</sup> grade come!!!

From,  
Omar Ay

Wesley Academy  
10570 Westpark Drive  
Houston, Tx 77042

The Houston Gem and Mineral Society  
10805 Brooklet  
Houston, Tx 77099

Dear Officials:

I had a great time at the show. The scavenger hunt was a lot of fun. My favorite station was the dinosaur fossils. I didn't know there was fossilized dung from a dinosaur. I hope to go to the show next year.

Sincerely,  
Matthew Holt



Wesley Academy  
10570 Westpark Dr.  
Houston, Tx 77042

Houston Gem and Mineral Society  
10805 Brooklet  
Houston, Tx 77099

Dear Officials:

Thank you for inviting the  
6<sup>th</sup> grade class from Wesley Academy.  
We had a great time and found a lot  
of rocks and gems. We would love  
to come back. We loved the big  
selection of rocks, minerals, and gems to  
buy. I personally didn't have a favorite  
part because it all was so cool.

Sincerely,  
Charlie Zinke

26 September 2006

The Houston Gem and Mineral society  
10805 Brooklet  
Houston, Texas

Wesley Academy  
10570 Westpark Drive  
Houston, Texas 77042

Dear Officials,

I had so much fun at the Gem and Mineral show. I liked the scavenger hunt, and learned so much from the hunt. The displays were cool with all those different gems and minerals. One of my favorite places was the gem and mineral food table. I plan to come back next year.

Sincerely,

Brandon Karnoski

Brandon Karnoski

**Show Photos**

*by John Mitscherling and Phyllis George*



**Left: Show crowd at Paleo Booth**

**Right: Kids as seen through Stan the T-rex's teeth**



**Left: Steve Blyskal and Wayne Barnett preparing for sales at the Information Booth**



Keith Harmon's Geode cracking booth and the crowd waitin their turn to have geodes opened

Right: Dreamstar Creations special display booth. They build dinosaur replicas while you watch.



Below: Siegrid Stewart (2006 Show Chair) and Pat Hildbold finally able to relax and enjoy shopping at the show.







Above left: Casting demonstration. Molten silver is being thrown into a mold.



Above right: Charlie Fredregill and James Wark relaxing after the casting demonstration

Right and Below: Kids breaking slabs in their search for fossils in the DinoDig area



Below left: Faceting  
Section show case  
Below right: Show crowd





**Left: Inside the Dinosaur World tent. Fossil dinosaur eggs are being held up on the right.**

**Below: Margaret Hardman-Muye demonstrating cabochon grinding**



**Elizabeth Fisher and Terry Brawner behind the counter in the Paleontology Section booth**



**ShowTime 2006**

- December 1-3     Austin, TX     Austin Gem & Mineral Society  
Palmer Events Center, 900 Barton Springs Rd.  
Josie Middleton, (512) 458-9546  
E-mail: [gemcapers@austin.rr.com](mailto:gemcapers@austin.rr.com)  
Web site: [www.austingemandmineral.org](http://www.austingemandmineral.org)
- December 1-3     El Paso, TX     El Paso Mineral & Gem Society  
El Maida Auditorium, 6331 Alabama;  
(877) 533-7153, [gemcenter@aol.com](mailto:gemcenter@aol.com)
- December 8-10     Norcross, GA     Georgia Mineral Society  
1700 Jeurgens Court  
Kim Cochran, 770-979-8331  
[decembershow@gaminal.org](mailto:decembershow@gaminal.org)  
[www.gaminal.org/december-show.htm](http://www.gaminal.org/december-show.htm)
- December 10-11     Nashville, TN     Mid Tennessee Gem & Mineral Society  
Tennessee State Fairgrounds  
Nolensville Rd. & Smith Ave.  
Contact Mary Sparks, (615) 509-4812.

**ShowTime 2007**

- January 19-21     Houston, TX     International Gem & Jewelry Show  
Reliant Center. 301-294-1640  
[info@intergem.com](mailto:info@intergem.com), [www.intergem.com](http://www.intergem.com).
- January 20-21     Fredericksburg, TX     Fredericksburg Rockhounds, Pioneer Pavilion  
Lady Bird Johnson Municipal Park  
Jeff Smith, (830) 895-9630  
[bjorn2soon@yahoo.com](mailto:bjorn2soon@yahoo.com)  
[www.fredericksburgrockhounds.org](http://www.fredericksburgrockhounds.org)
- January 24-25     Tyler, TX     East Texas Gem & Mineral Society  
Rose Garden Center, 420 Rose Park Dr.  
at Front St. (Hwy. 31)  
Keith Harmon, (903) 581-4068  
e-mail: [keithharmon@earthlink.net](mailto:keithharmon@earthlink.net).
- January 24-28     Quartzsite, AZ     Quartzsite Improvement Association  
235 E. Ironwood Dr., Diane Abbott,  
(928) 927-6325; e-mail: [gia@rraz.net](mailto:gia@rraz.net)  
[www.quartzsiteimprovementassoc.com](http://www.quartzsiteimprovementassoc.com).

2006 DECEMBER 2006						
Sun	Mon	Tues	Wed	Thu	Fri	Sat
					1	2 10-12 Youth Section 10-5 Shop Open
3	4	5 7:30 Board Meeting	6 7:30 Mineral Section	7	8	9 HGMS CHRISTMAS PARTY 10-5 Shop Open
10	11 NO Day Light Section	12 7:30 Show Comm	13 7:30 Faceting Section Social	14	15	16 NO Youth Section 10-5 Shop Open
17 Mineral Section Christmas Party	18 NO Lapidary Section	19 NO Paleo Section	20 NO Mineral Section	21	22	23 10-5 Shop Open
24 New Year's Eve 31	25 CHRISTMAS DAY	26 NO General Meeting	27	28	29	30 10-5 Shop Open

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

# **The BACKBENDER'S GAZETTE**

**The Newsletter of the Houston  
Gem & Mineral Society**

10805 BROOKLET  
HOUSTON, TEXAS 77099  
(281) 530-0942



## **SCFMS**

1998 - 1st (Large)  
2000 - 1st (Large)  
2003 - 1st (Large)  
2005 - 1st (Large)  
2006 - 1st (Large)



## **AFMS**

1998 - 2nd (Large)  
2004 - 3rd (Large)



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