The BACKBENDER'S GAZETTE

The Newsletter of the Houston Gem & Mineral Society

Volume XLIX—No. 3 **March 2018**

President's Message

by Paul Brandes

To start off this President's Message, I want to say "Thank You" to all of our members, and especially to our dedicated volunteers who come through when they are needed. A perfect example of this was the recent Trade Show held at the Clubhouse. I was there just a short time, but what I saw in that time was the truly outstanding work that you provide. From crowd control to security to handling new memberships, everyone was going above and beyond in their roles, and to that end, I say great job everyone!

Your President has also been busy. Earlier in February, I was in Upper Michigan meeting with a colleague on some new and exciting research into the formation of fulgurites and the minerals they produce. It is truly amazing what can be created in an instant from a lightning bolt striking the ground. This research has a lot of implications for future work into the formation of Earth and might answer some long-held questions as to what happened in those early years when Earth was just a molten ball.

Once I returned, I attended the 47th Annual Williamson County Gemboree in Georgetown, held February 17–18. This was my first visit to this show, and I must say I was quite impressed. While not large in comparison to our show, it had plenty to offer. The folks I talked with were very friendly and willing to go out of their way to ensure that I left happy. The following

President Continued on Page 4

Upcoming Program

by Sigrid Stewart, 1st Vice President

March 27, 2018: Vincent Barrows will fill us in on the Cahokia Mounds Bird man tablets and the Indian mounds .

Contents

Every article published in the BBG is edited for grammar and content. No flaming is allowed.

Articles now are due on the 15th day of the month before the date on the BBG issue.

Editor: Phyllis B. George
22407 Park Point Drive
Katy, TX 77450-5852
Phone: (281) 395-3087

Copy is due for the April 2018 issue by Thursday,, March 15, 2018.

E-mail the Editor at pgeorge4@comcast.net

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 $40 for an adult membership, $60 for a couple, $75 for a family (including all children aged 5-18), $25 for a youth membership (ages 5-18), and $500 for an adult life membership. Advertising rates: $70 for 2 months, ¼ page; $150 for 6 months, ¼ page.

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

All meetings are held at the Clubhouse which is 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 Web site address is http://hgms.org.

weekend (February 24–25) was the 43rd Annual Clear Lake Show. This too is a smaller venue than our show, but still they provided a great variety of shiny objects to ogle over as well. The first thing I noticed this year as I walked through the doors and down the aisle was a bright banner above a table with the letters "HGMS" on it. This table was being "manned" by a fine group of volunteers who were assisting show patrons and describing all that HGMS has to offer. We even picked up a couple wonderful donations as a result—excellent work to the volunteers!

In addition, I also plan to attend the Corpus Christi Show on March 3–4 and, if I haven't worn myself out from all the travel, the San Antonio Show on March 10–11. After all this, I'll definitely need Spring Break to recover!

And finally, as I stated earlier, the Society could not function without the assistance of our fine group of volunteers. However, the same people cannot do everything on their own. I am putting out a call to the general membership to think about volunteering for activities that interest you within the Society. If you would like to help, or are not sure just how you can help, I would recommend contacting our Volunteer Coordinator Nancy English for more information. She will be able to offer several different roles, introducing you to the many wonderful opportunities awaiting our members to enhance and benefit our Society even further.

That's all folks; see you next month!

A Craftsman's Eye

by Stephen Wilkerson

A metal smith finds gold in the morning sun,
silver in starlight, copper in the sunset,
bronze in a fire's glow, cold iron in rain clouds.

A gem cutter sees diamonds in the glitter of snowflakes,
sapphire in a cloudless sky, ruby in a drop of blood,
amethyst at twilight, emerald in spring leaves.

A stone carver finds malachite in an open field of grass,
jasper in the autumn leaves, lapis in the ocean depths,
obsidian in a midnight sky, opal in a rainbow.

An uninspired man lives in a dreary world.
Where things are what they seem, taken at face value;
and nature shapes his point of view.

But an artist sees what might be in what is.

IN MEMORIAM

Patricia Gannon-Hildbold

(10/1952–2/9/2018
by Sigrid Stewart

Pat was born in October 1952, and she passed away February 9. Her remains will be interred in the Chicago area after a wake/party in the Woodlands, date to be announced.

She was a Continental Airlines / United Airlines Reservation person.

Pat was of Italian heritage from Chicago, Illinois—and talking with her arms waving was the norm.

She joined HGMS about the time that the HGMS fall show was moved from the George R. Brown Convention Center to the Humble Civic Center.

Her primary interests were faceting and beading, and she loved making gifts for family members. Pat was the consummate beader. She could stab beads the size of an amoeba with a needle and string them onto a thread.

She was a "get the job done!" person, but didn't want to be "in charge." She often volunteered for the club, especially by cooking turkeys for the Christmas party.

She is survived by her two sons, Gary Hildbold and Cliff Hildbold. These young men and their close friend, Richard Gautchel, have run the HGMS fall show Hospitality Room for several years. All they need is funding—then they make the rest happen.

A funny story about the Hildbold family collecting: The Foxwood neighborhood association sent them a letter that their home was in violation because there was dead wood in their front yard. It was actually petrified wood that Gary and Cliff had collected and used to line a flowerbed.

Jewelry for Mineralogists

Blue lace agate—strange crystals

What do you give a girl who has everything? Obviously, you have not been looking hard enough to find something new. This is my usual problem. My wife has been getting mineralogically interesting jewelry for 47 years, and it is getting hard to find new things for her. Being a shop foreman does have its rewards—for one, you get to see lots of materials as they are brought into the shop.

Photo of Neal Immega after he set up a new lapidary grinding unit for the Fort Worth Gem & Mineral Club.

I was recently admiring some South African blue lace agate that a member brought in when I noticed that there were strange, cubic-looking crystals on one of the surfaces of the rough. I naturally snatched it away before the rough could end up in one of our saws to be cut into slabs showing the wonderful blue and clear banding. The owner of the rough was paying no attention to the crystals. Ah, a little gentle dickering, and the agate was mine.

Typical di-trigonal quartz termination

Trigonal termination of quartz

I had seen things like this before in Missouri geodes and Pecos "diamonds" (which are really quartz). Quartz often has a di-trigonal termination. Look at a common Arkansas quartz crystal, and you will see that the end is composed of two sets of three crystal faces, each set having similar-size faces. This diagram (from the Web site devoted to quartz) shows it nicely. Go to their Website (at the end of the article) to see a 3-D rotating

image.

I do not understand it, but the growth faces on one of the triplets can be blocked by something or other, and the other set of triplets grows alone (see a 3-D rotating image on the same Website). For quartz, these three faces intersect at nearly 90 degrees, making the termination look nearly cubic.

Pseudo-cubic quartz terminations on blue lace agate.

It was easy to cut a cab showing the crystals on one side and a bull's-eye of blue quartz banding on the other. Drill in a silver bail, and now I have a present fit for a mineralogist.

Side view

References:

A really comprehensive discussion of the crystal habits of quartz, including the pseudo cubic, is found in http://www.quartzpage.de/crs_habits.html

Lapidary Section Planning a Field Trip

by Richard Good

Some years have passed since the last Lapidary Section field trip, so the Section is now interested in planning one for late April. They have decided on Alpine, TX as the destination, and the 3-day weekend of April 27, 28, and 29. It's a long trip—about 600 miles and an 8–9 hour drive. Reservations will need to be made at the Antelope Lodge in Alpine.

I have not hunted the Alpine area since camping with my father in 1963. We camped at the now-gone Woodward Ranch by a creek in early June in 1963. We hunted 3 or 4 days, and only during the last day did the wind go calm and get noticeably hot. Nights in the dry air and clear skies at 4500 ft. got quite chilly. (No motel, only the back of a pickup.) I look forward to hunting there again. I am the contact person for the hunt (see the Roster for my contact info), and we anticipate 5 to 10 individuals will make the trip. Our contact (Teri) recommends spending a day each at the South Larremore Ranch, at East Needle Peak, and at Stillwell Ranch. The end of April is likely to be hot, so we may end the hunts in midafternoon. If it's not hot, they start at 8:00 a.m. at the Antelope lodge in Alpine and usually end about 5 p.m.

Teri says, "There is no minimum or maximum number of people for the trips. My deal with the landowners is they get the money, and I get to go rock hunting for free. I'll take you out to the good spots on the ranches, show you what to look for, and then hunt for rocks myself.

Rollin' Rock Club membership is required for all of Teri's field trips. Club membership is required because the South Central Federation of Mineralogical Societies has insurance that covers the landowner in case we damage a fence or something. **Rollin' Rock Club is $10/year for single membership, $16/year for dual membership.** :You can join when you go on your first field trip with her.

This trip is open to all members of the HGMS.

Fees

East Needle Peak requires high-clearance vehicles—**$40/day; no poundage fee**.

The Richie Ranch—$10 per day per person and $1 per pound

East Larremore Ranch—$40 per person per day, no poundage fee. This ranch is down-slope from the former Woodward ranch and receives the rain water runoff. Most of the rain in this area is strong late summer thunderstorms that can move a lot of rock and dirt. Only the East Larremore Ranch is really good for those with limited mobility."

All three days—minimum $100 plus per pound on one ranch. After a 600 mile trip and four nights in a motel, a bargain.

Archaeology Section

by Nancy L. Engelhardt-Moore

February 3, 2018: The Section had a field trip to the Houston Museum of Natural Science (HMNS) and toured the Special Exhibit "***Knights***" on Saturday afternoon. Dr. Dirk Van Tuerenhout, HMNS Curator of Anthropology, gave a wonderful in-depth tour with fascinating commentary on many of the splendid items in this outstanding exhibit that are on loan from the Museo Stibbert in Florence, Italy (see photos below). The tour lasted almost two hours as Dirk has behind-the-scene knowledge that made this outing special. If you have not had a chance to see this exhibit, it will be at the Museum until the fall 2018. Our next program will be held at the regular date and time at the HGMS Clubhouse. Please watch for upcoming promotions!

Knights Group — Photo by Xiuju Liu

Morian Helmet

Ornate Leg Harness

Crossbow

Four photos by N. Engelhardt-Moore

Breast Plate

(Archaeology Section Report Continued)

Upcoming Program:

March 1, 2018: This program will be held at 7:30 pm at the HGMS Clubhouse. Our special guest lecturer will be Jorge Garcia-Herreros, President and Cultural Director of the Gulf Coast Archaeology Group. He will present ***"Cartagena de Indias: Spanish Port an English Prize"***. The city of Cartagena, Colombia, known in the colonial era as Cartagena de Indias, was one of the most important Spanish ports in the Caribbean. Due to its significance, great effort and monies were spent on building its defenses. When the War of Jenkins Ear broke out between Spain and England, the English saw this city as a great prize and made an attempt to capture its port. In 1741, one of the largest naval invasion fleets, prior to D-Day, was assembled. This fleet was led by Admiral Edward Vernon. The English attack failed miserably. Jorge will discuss recent archaeological findings to demonstrate how the efforts of the Spanish and Don Blas de Lezo, known as the half man, to fortify and defend the city were the cause for the failed English attack. Mark your calendar, and don't miss this fascinating and informative talk!

Move Over, Clovis—There's a New Point in Town!

by Jim Brace-Thompson
from Rockhound Rambling, 6/17, via The Tumbler 02/2018

When did the Americas first become occupied by humans? Archaeologists have long come down on the side of the "Clovis people" who left behind thin spear points dated at 13,000 years toward the end of the last Ice Ages when an ice-free corridor opened between Siberia and Alaska. This supposedly allowed for humans (and other animals) to make a transit into the Americas.

However, that didn't fit with a village site way down south in Chile dated at 14,000 years ago, predating the opening of that ice-free corridor. A new theory emerged that migrants may have boated or kayaked along the coasts of Asia and North America, but there was little direct evidence of such a migratory path.

Now, per a report in the journal Science, "Western Stemmed points" that have long been known up and down the coasts of Asia, North America, and South America have recently been found at a site in Oregon that may date back to over 14,000 years. These short, stubby points may become the "new" Clovis points for a new theory on just when—and how—the Americas were first populated.

Get last-minute news about club events by sending a note to Jim Kendall at kendal_ja@yahoo.com

Another Story from the Miner

by John Anderson
Member of the Houston Gem & Mineral Society

The "Miner" was talking to his friend Mel Fisher just before Mel found the Spanish galleon ***Nuestra Señora de Atocha***, ("Atoscha" for short) in the State of Florida that was valued at $450,000,000.

I had known Mel Fisher for a few years. Local sources told him of my diving knowledge and that I had collected small marine animals for aquariums. I did some of that, and it branched off into my being allowed to collect certain marine animals with a special license. That in turn became a commercial diving venture. I had special permits and licenses issued by the State of California, and this allowed me to dive in places where diving was prohibited.

Mel Fisher owned a Dive Shop that was in the Hollowed Rivera area that is located next to Redondo Beach, California. I loved mining and finding lapidary-quality rocks about as much as I love SCUBA diving. I started both of these pursuits when I was just barely 18. I am now 86, so I have been associated with these two for many years and that I am not a rookie in either one. It was only natural that I became interested in the gold dredging operation when I was in my 20s. So, now let me set the stage for this story.

I was at Mel's Dive Store and talking to Mel about a diving program that I was going to present next month to his dive club. As we were talking, a man came into his store and he said, "Hi Mel, do you remember me?" Mel thought for a moment and said, "Yes, I believe that you bought a small gold dredge unit from me about three or four months ago. The man said "Yes," and I thought he was now going to ask if he could bring back a damaged or broken unit, but that was not the case.

Next he said, "I would like to tell you a story." After he and his wife bought the dredge unit, they decided to drive up into the Sierra Nevada Mountain Range, but they did not have the foggiest idea where to look or even to start looking in the Sierra Nevada Mountain Range. After driving in those mountains for many hours, they became exhausted and parked at a campsite area. In the early morning, they set out again with all of their dredging equipment in the direction of a distant hill. They thought that it would be a safe way to have a destination because the forest was everywhere. They had to carry, and sometimes they even had to drag their equipment up an incline for about one mile.

When they were exhausted and finally stopped, they decided that they would stay there and make camp. While making camp, his wife slipped and fell on her left arm. Her arm looked like it needed immediate attention because it was not just a bad bruise, and maybe it was broken. It was still early in the day, so they both sat down and tried to collect their thoughts. They both knew that they had to head back to their car, and that he would have to carry the major amount of the load. It now would take much longer hiking back than it had taken them to reach this spot. Even after they reached their car, it would still take lots of time to find a medical facility for her arm. As they were both sitting and trying to collect their thoughts, his wife said, "We are not going back just yet. We are not leaving until you have at least tried to use the gold dredge for a couple hours. But you must do all of the work yourself because I am in great pain. We can at least can say that we tried." As she said that, she moaned and said, "You need to try for both of us."

Then he opened a large briefcase that he had carried into Mel's store and set on the floor. He put on the counter one of the largest-size Alka-Seltzer bottles, and it was filled with large gold

nuggets. I had never seen such large Alka-Seltzer bottles, and they were completely crammed full of gold nuggets. They were so crammed in, that we had difficulty removing any except the smaller ones when he said, "Take a look at these nuggets." They were the largest gold nuggets that I could remember seeing. I said "Wow, those are sure big gold nuggets," when he reached for two more bottles, and they were also chock full. His briefcase containing his bottles of gold samples had to be extremely heavy with that quantity of gold. After Mel and I had both handed back all of his gold samples, I wondered if he had just brought those samples to show off.

He then withdrew his checkbook and said, "I want you to order for me the biggest gold dredge unit that you feel that me and my wife and maybe one other person would be safe to operate." Mel pulled his catalogue out from below the counter and found the page with the dredges. I tried to see the cost, but all I could see were the lot numbers because the cost was on another page. I know the bigger dredges were very expensive. A friend of mine had recently paid the interim price for a gold dredge, and it was more than $300. I did know the value for the nuggets that he had shown us; I believe that it was in the many, many, thousands of dollars in value. When he started to leave, he asked Mel, "When do you expect the unit will be here"? Mel said in about four weeks. The man said as he closed the door, we are going back to that same area and try again, but this time no one is going to break any bones. When the man had left, we were both impressed with the big gold nuggets, and we talked about them for a while.

As we were talking, he motioned for me to look in his showcase where we were standing. It contained some silver pirate coins that he collected on his last trip to Florida. He said that he was now preparing for another trip there in the same place where he had found these coins. He had tried a few other different spots about three years before, but now he is sure where he next wants to look. He asked if I would be interested in investing in this new trip, but added we might find nothing or just a few coins like we did this last year. The investors were only able to share some coins that he found, and that hardly paid for their investments. He then said, "Why don't you go with me? I will need some good, accomplished divers—not like the one I was able to get this past year. I said, "I have a good Job with Shell Development now, and I have a wife and three children to support, plus a house payment. I am sorry that I cannot accept your invitation, because I would just love to do that, but I could not quit my job with Shell for three months as you mentioned.

As I said before, I have tried gold dredging with very little success—not like the man in the story. Most of what I have found is after removing tons of rock, gravel, and sand. The new laws many states have make it almost impossible because they want you to refill the area that you removed from the bottom. Also, special suits are needed. Much of the water is from melted snow, and it is lower than 50 degrees Fahrenheit (or colder) so a ½-inch wet suit or even the new dry suits are necessary. I have tried doing gold dredging without these warmer, very costly suits.

This is not only about gold dredging; it is also about finding lapidary-quality rocks (if you are lucky) while diving underwater. I have found some nephrite dark jade in the ocean while diving in the country of Honduras and along the California coast—which was a real treat to find.

My biggest find was a large underwater vein of the mineral chrysocolla. Once I found the deposit, I sat for many long hours in about eight feet of water with my air tanks and a small sledgehammer. Please do not run out and start looking—you will never be able to find it. It is almost impossible for you to get to or to find where the area is. I reburied the deposit. If you think both of these stories is fiction, all you have to do is ask any member of my family—they will verify them.. The Miner

Board of Directors' Meeting

February 6, 2018
by Nancy English

	President—Paul Brandes	X	Beading Rep—Kim Fuselier
	1st Vice President—Sigrid Stewart	X	Day Light Rep—Fred Brueckner
X	2nd Vice President—Beverly Mace	X	Faceting Rep—Jeanne Barna
X	Treasurer—Liane Linehan	X	Lapidary Rep—Phyllis George
X	Secretary—Nancy English		Mineral Rep—Mike Sommers
X	Archeology Rep—Garth Clark	X	Paleontology Rep—Mike Dawkins

Second Vice President Beverly Mace called the meeting to order at 7:30 p.m. A quorum was present. Non-voting members in attendance: Quentin Boyer—New HGMS Education Coordinator, Karen Burns, and David George.

Second Vice President's Comments:

January 27, 2018 Trade Show: Thank you to all the people who made the Trade Show work so seamlessly.

Clear Lake Show: February 24, 2018 from 10:00 to 6:00 and February 25 from 10:00 to 5:00 at Pasadena Civic Center. HGMS will have a table there to promote the Club, the Annual Show, and Classes. Volunteers are still needed for Sunday.

Approval of Previous Month's Board Minutes: Kim Fusilier moved to approve the minutes of the January 9, 2018 Board Meeting. Mike Dawkins seconded the motion, and it passed.

Treasurer's Report: Liane Linehan emailed financials to all Board members in advance of the meeting.

Office, Committee, and Section Reports

Archaeology Section: March 1, 2018 7:30 p.m. Our guest speaker will be Jorge Garcia-Herreros, President and Cultural Director of the Gulf Coast Archaeology Group. He will present ***"Cartagena de Indias: Spanish Port, an English Prize."***

Beading Section: February 17, 2018 1:30 p.m. The members will make a **Love's Knot Bracelet.** Supply needs can be found on the Web site: hgms.org, Events, Upcoming Programs, Beading.

Day Light Section: On February 7, 2018 at 1:00 p.m. Members will learn to make triangular, wire, beaded earring. The Day Light Section Chair position is still open.

Education Committee: Quentin Boyer has accepted the position as HGMS Education Chair. He put links to two surveys on the Sunday E-blast to get more information about the interest in classes. The BOD discussed pricing and made a tentative decision. Depending on feedback from the prospective teachers, the BOD will readdress the pricing in March. Quentin is hoping that modifications to our Web site will be made that allows class scheduling, student sign-up, and payment with PayPal all to be done online.

Gemstones and Faceting Section: February 15, 2018 Program to be announced.

Lapidary and Silversmithing Section: February 19, 2018 6:30. Dave Janus will demonstrate mounting stones on wood for slabbing, also how to remove the end stones from the wood after the slicing. The group will practice cutting stones by hand on the 6" and 10"saws. Future meetings can be found on the Web site, HGMS.org under Events, Upcoming Programs and Meetings, Lapidary. The program list is complete through October 2018 on the Web site.

Library: Quentin Boyer reported that he and Nancy English met with Librarian Nathalie Brandes on January 20 to learn the status of the Library project and to help finish it. Quentin has reviewed Art Smith's database that lists 2600 book titles, authors, and subjects. Only the Library of Congress numbers need to be added. He and Nancy have the lists available to work on outside of the Library. Quentin proposed reopening the Library in March **for read-only use**.

Mineral Section: The year begins with the meeting on **February 21, 2018, at 7:30**. Program to be announced. The **February 7** meeting is cancelled because most of the members are in Tucson.

Paleo Section: Tuesday, February 20, 2018. 7:30 p.m. Program to be announced.

Security Report: Garth Clark has installed two new cameras at new locations. The new, larger-capacity hard drive is running the security system.

Shop Report: If you are not already receiving Jim Kendall's HGMS Sunday e-blasts, email him at (kendallja@att.net). Jim also includes weekly shop status updates from Neal Immega.

Youth Section: The next meetings will be **February 3** and **February 17, 2018** from **10:00 a.m.** to **noon,** and **March 3 and March 17, 2018** from **10:00 a.m.** to **noon.** New members from the Trade Show came to the Youth Section meeting on Saturday.

BBG Editor and Web site committee member: The deadline to send in articles and other pertinent information for inclusion in the February 2018 BBG is **Thursday, February 15, 2018.**

Old Business

Trade Show—January 27, 2018, 10:00 a.m. until 6:00 p.m. Chase Jennings handled advertising, dealer registration, and organizing the set up. Beverly Mace and Karen Burns worked the membership table and door prize sign-up. Beverly Mace sold two youth memberships, two couple memberships, plus one Pay Pal signup later. Also the club gained seven single memberships, plus two Pay Pals; three family memberships, plus one Pay Pal. That's eighteen memberships, twenty-nine to thirty people. Good work. Neal Immega conducted tours of the shop. Logan Wilcox demonstrated faceting. Joy Lester demonstrated wire wrapping. Demonstrations are a new aspect of the Trade Show. Quentin Boyer, Paula Smith, Jeanette Fritsche, and Nancy English maintained a security presence and counted the customers as they entered the garage: totaled 773. Dealers did well too, despite the rain.

New Web Site: Sigrid has made updates to the Web site, adding a Current Events area on the front page, and updating news about the Trade Show and Annual Show. She plans to update Current Events with news from the e-blast.

Show Committee 2018: The Show Education Committee still needs at least two more people. Section Representatives were encouraged to ask for volunteers at the Section meetings. The **Annual Show 2018 Flyer** will be ready for the Georgetown Show the week end of February 17 and 18, and therefore ready for the Clear Lake Show on February 24 and 25.

The Club needs a new projector system. President Brandes reported via email that Garth Clark and Fred Brueckner have reviewed the choices. Garth discussed a new model (that David George coincidentally knows a lot about and was about to recommend). The BOD will hear more about it at the March 6, 2018 BOD meeting.

Past Presidents Board: Beverly Mace continues to work on it.

Preservation of Documents: No volunteers yet.

Creating "How-To" videos: Sigrid Stewart was out-of-town. She will renew her efforts in March and have a **How-To Video** Meeting.

Phone Services: President Brandes is out of town. The Board will continue the discussion of a new phone service at the March 6, BOD Meeting.

HGMS Spring Mineral Collecting Field Trip to the Hill Country. President Brandes reported via email that no date has been set.

Volunteers: After hearing an NPR TED TALK, Nancy English was moved to honor, again, our volunteers. HGMS is fortunate and grateful to have so many dedicated volunteers—people who volunteer daily, weekly, monthly, and for special events. More opportunities to inspire and reward volunteers are available to HGMS. Nancy will pursue those in the future.

New Business

Handheld Vacuum: Jim Paras asked that the BOD buy a Dust Buster for the club. He cleans up the shavings from his projects and from the projects of others. After discussion, the BOD authorized the purchase of a handheld vacuum, preferably of high quality. Other brands were discussed. Jim will be reimbursed. Thank you, Jim for bringing this to our attention.

Next Board of Directors meeting: March 6, 2018 at 7:30.

The next General Meeting: The February General Meeting is on February 27, 2018. Sigrid Stewart will present "Midnight Miners." This refers to collectors who visit quarries and other sites under the cover of darkness to collect specimens.

Adjourn: Nancy English moved, and Phyllis George seconded the motion to adjourn the meeting. The motion passed, and the meeting was adjourned at 8:51 p.m.

AFMS President's Message

by Sandy Fuller, President
from AFMS Newsletter 2017/12-2018/1

As a child I grew up often hearing the "Good, Better, Best" adage to encourage me to pursue excellence. As a rockhound, this adage holds special meaning when I look at the AFMS awards programs.

Across the nation, groups of people have come together to study, learn, collect, exchange and support each other around our common love of geology, with a special emphasis on rocks, minerals and fossils. As a group we are able to help each other and grow together into a club that others want to join and enjoy. This is good!

Our club quickly learns the local resources and identifies opportunities to reach out beyond the local community. A successful club starts working with similar clubs from nearby

communities, across the state and eventually across the region. Our regional federations provide a forum to help local clubs access resources and strengthen their services. This is even better than the lone club struggling to meet the varied interests of its members.

Within the American Federation, we have established a variety of programs that are administered at both the regional and national level to help clubs and individual members achieve excellence. Using nationwide criteria, local clubs earn scores at the regional level. The best entries from each region are re-evaluated by a panel of national judges. The winners are then recognizes as the best of the best from across the nation.

The purpose of the national awards programs, including the All American, Bulletin Editors, Website and Competitive Exhibits, is to help clubs strive toward excellence. There is enough flexibility within these programs to allow and recognize creativity while also rewarding the tried and true methods for making good the BEST.

In 2018, our National Convention will be in April, which means that our regional and national judges hopefully have a lot of entries to evaluate in a relative short period of time. I encourage all clubs to begin now to prepare your entries and get them submitted at the earliest possible time to your regional chairperson. We are counting on you to pursue excellence for your club!

"Good, better, best.
Never let it rest
Until the good is better
And the better best." -- St. Jerome

Here's wishing everyone a very happy holiday season.

Sandy

SCFMS President's Message

by Walter Beneze
from SCFMS Newsletter 11-12/2017

I want to thank every member of the SCFMS for allowing me two years of presiding over the business of the Federation, and for all the memories that I will carry for years to come. I have enjoyed my interactions with so many new people whom I would never have met in any other circumstance.

Knowing that the true strength of any position one holds lies in the people who support and help you in that position, I want to thank the officers and Committee members who keep the SCFMS on track. Everyone plays an important role, and I want to give special thanks to Kimberly Brannon and Don Shurtz as examples of people who have gone above and beyond expectations.

Wishing all of you a great holiday season and a great year for 2018, I will see you at a show down the road. Thanks for everything,

Walter Beneze SCFMS President for a few more minutes,

Walter Beneze, SCFMS President

Bench Tips

by Brad Smith
For more tips or to learn new jewelry skills see
Amazon.com/author/bradfordsmith
www.BradSmithJewelry.com

MODIFYING PLIERS

Pliers– Tip 1

Sometimes a few changes to your tools can make work go faster and improve the quality at the same time. Stock tools need to be polished and can be customized using standard jewelry skills. Here's an example:

While making a lot of chainmaille, I noticed I was ending up with a few scratched jump rings that required extra cleanup time before the chain could be polished. So I started looking into what I was doing wrong.

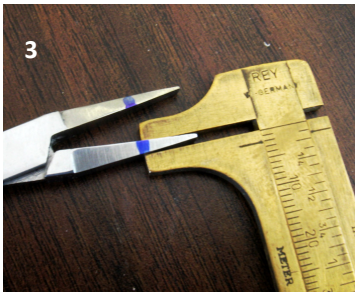
Making jump rings and weaving them into chainmaille designs involves a lot of opening and closing of the rings. I typically use two square jaw pliers to do this, one for each hand. The jaws of my pliers were pretty much scratch-free because on a new tool, I typically relieve any sharp edges, sand away any tool marks on working surfaces, and give those areas a quick polish.

Pliers– Tip-2

That helped but was not the whole problem. While making chain, rings would sometimes slip out of the pliers or slide within the jaws as I was trying to twist them open or closed. I noticed the jaws close at an angle, and gave me the idea of forming a groove at the end of the jaw that would grasp the ring gently without scratching it. Not only have these pliers worked well for chainmaille, but I've found several other problem jobs that this modification solves very nicely.

Pliers– Tip-3

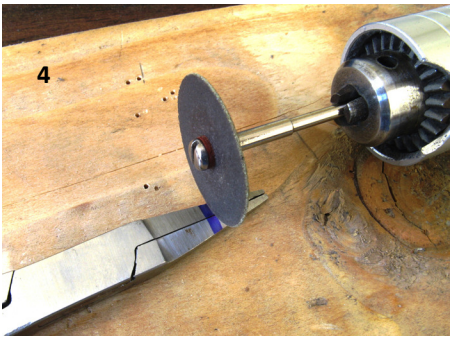
To make up what I needed, I bought two inexpensive sets of square jaw pliers. My preference is



for jaws that are about 3.5–4 mm wide. This provides a good fit for the jump rings I use. You need to have enough metal at the tip of the jaws to be able to cut a groove that is deep enough. If your plier tips are too thin, you will have to cut them back. Locate and mark the position on the jaw where the thickness is about 1.6–2mm. If the tips of the pliers are too thin, there will not be enough thickness to cut the groove. 1.6–2mm is needed. Locate and mark the position on the jaw for this thickness.

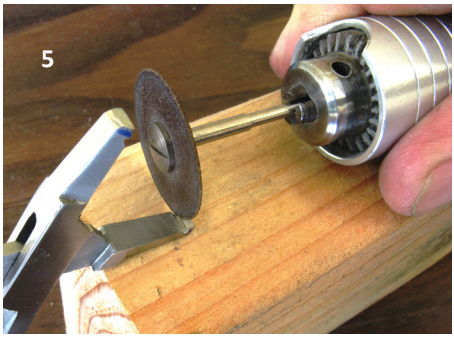
Pliers– Tip-4

I used a separating disc to cut the jaws, but a bench grinder would work well. If using a separating disc, be sure to brace and hold both the work piece and the rotating hand piece securely. If either moves, you will break the abrasive disk. In addition, remember when cutting any metal with a motorized tool, be sure to use good eye protection. A little piece of debris in your eye makes for a bad day.

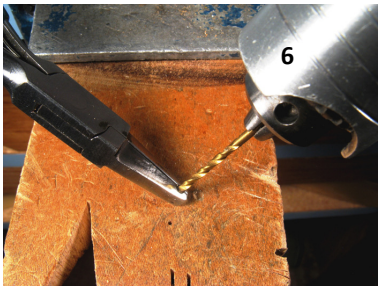


Pliers– Tip-5

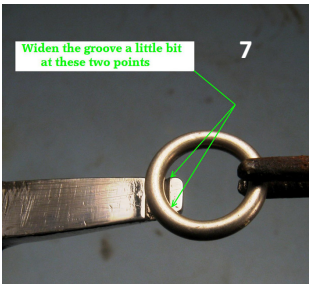
Cut the tips off with a cutoff wheel or grind them off with a bench grinder. If using a cutoff wheel, be sure to brace and hold both the work piece and the rotating hand piece securely. If either moves, you will break the abrasive disk. And remember—when cutting any metal with a motorized tool, be sure to use good eye protection. A little piece of debris in your eye makes for a bad day.



Pliers– Tip-6



Start forming the grooves by making a cut with the separating disc in one jaw. Close the pliers and mark both ends of the groove on the opposite jaw. Then cut that groove with the separating disc.



Pliers– Tip-7

Test for proper fit by laying a jump ring into each groove. In particular, inspect the way the edges of the groove contact the inside of the ring. You may need to widen the groove at this point to avoid the pliers leaving a nick. Do a final polish so the jaws will not scratch as they grip a ring. I used a medium grit, knife-edge, silicone-polishing wheel, but a sewn buff with Tripoli or Zam would also work well.

MANAGING PRODUCTION

Many readers of these BenchTips sell their jewelry at shows, in galleries, or online. They are sole proprietors and are constantly under pressure to design new pieces and to make enough product to keep up with demand. So their options are few when a large order comes in. They can burn the midnight oil themselves, or they can be smart and get some temporary help. But you need good help, and you often need it fast.

Jewelry assemblers are skilled, trustworthy, and reliable craftsmen who make it their business to help others handle overloads and meet deadlines. Flexible arrangements are possible—working by the job, by the hour or by the piece. Each has a different mix of skills, from fabrication to enameling, casting, stone setting, lapidary, and others.

Assemblers are known to the trade, so you may have to ask around to find some references. But some assemblers advertise on the Net. For instance, a good friend of mine, Janice Metz <JenFT4@aol.com>, has been working with designers and fabricators in the West Los Angeles area since 1997. She specializes in silversmithing, wire-wrapping, beading and stringing.

A ROCKHOUNDER'S CHECKLIST

by Kevin Colvin, Field Trip Director
from The Conglomerate 05/2017

I created this list a ways back for myself, and I just want to share it with all of you. This list is by no means a complete and comprehensive guide to the gear you want to bring on your trip. This is just a reminder that sometimes the important things can be forgotten. Make your own list, post it with your gear, or put it on your fridge. Being prepared for your outdoor adventure is half the fun!

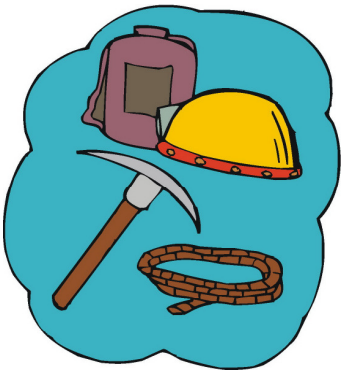
Tools

- **Short Shovel:** For those hard-to-get spots, or when you're sitting and digging
- **Long Shovel:**-Kind of a no brainer
- **Big shovel**: more dirt removed
- **Mining Pick**: Really comes in handy when you need to dig down a ways or dig around larger rocks.
- **Rock Pick**: Often called a geologist's pick. This hammer/ pick has a sharp point on one end and a square hammer head on the other end. The sharp point is used for digging, and the hammer head is used for breaking rock.
- **Pry Bar:** Depending on your area, the length and weight of this bar is important.
- **Crevice tool:** Helps get out that delicate, hard-to-reach material.

- **Sledgehammer and Chisel**: For breaking up larger material
- Brush: Never hurts to have a brush if you need to clean a surface gently.
- **Knife**: Rope cutting, crevice picking—a good knife is a must-have in the outdoors, even if you're not prospecting.
- **Axe:** Takes care of roots, downed trees, and dangerous branches. An Axe is a handy tool to have around.

Containers

- **Buckets**: I usually take 4 to 6 buckets, depending on the area and the distance I need to travel. In the end, when I don't bring a chair, a 5-gallon bucket is a nice substitute.
- **Backpack**: Works great if you don't want to carry a bucket; it also frees up your hands.
- **Documentation/Guides**
- **Local Map**: Never rely solely on a GPS; always bring a map, a topo map if possible.
- **Hand Field Guide**: It's always nice to have a pocket field guide to help identify your material.
- **Various Tools**
- **Work Gloves**: Help protect your hands from injuries.
- **Knee Pads**: Help protect your knees when kneeling on rocky surfaces.
- **Small Hand Lens**: Not needed, but it' small and fun to have to look at your treasures.
- **Rope and Tie Downs**: I do not leave the house without these babies. They are tools every trip needs.
- **Compass/OPS**: I hate getting lost; with Map/GPS/Cell Phone, you can go just about anywhere.
- **Eye protection**: For the sun, and for when the rocks start flying



Cameo Jewelry

by Ruth Rolston
from The Rock Prattle 01/2018

I was looking through my jewelry recently and came upon a beautiful cameo given to me by my late husband. I haven't thought much about it for years.

I decided to do a little research on this type of lapidary and found some interesting information. The cameo is not often seen today, but was better known in Ancient times as early as the 3rd century B.C. and later the Renaissance Period. They were popular in Ancient Rome. During these times, the cameos were made from semi-precious gemstones. The main stones were sardonyx, onyx, and agate. Also used were carnelian, coral, lava, and jet.

Agate cabochon set in 14k gold.

The stones needed to have a flat plane where two contrasting colors meet. The Romans used glass blanks to imitate the stones in the periods between around 25 B.C. and 50/60 AD and later around the mid-third and mid-fourth century. These are very rare today with only a few fragments and few complete pieces known.

The use of shell for cameos began during the Renaissance in the 15th and 16th Centuries. Before this, hard stones were used. The shell of a mussel or cowry or later a tropical mollusk was used. Shells with layers of two or more colors are often carved so that a figure in one color stands out against the background of another color. The shells most often used are helmet shells (Cassis tuberosa) from the West Indies and the queen conch shells (Eustrombus gigas) from the Bahamas and the West Indies.

Cameo is a method of carving an object which can be a gemstone, a vessel, or a piece of jewelry. Cameo is the modern Italian word meaning "to engrave" and is thought to have come from the ancient Arabic word "khamea." It utilizes the raised image or relief in contrast to the negative image which is called intaglio. The idea is to remove the first color except for the image to be formed, leaving the contrasting color behind to form a picture.

Cameos were used mainly for signet rings and large earrings. Some of these were so large they could not be worn, only admired. The cameos were used for personal adornment and were often sentimental. They were and are works of art. They could depict the head of a person or small scenes. Some were seen as mystical with the capacity to affect the health of the wearer or to bring good fortune.

Shell cameo, set with pearls.

The major centers for superior shell cameos in

the ancient world were Greece and Rome. The Italian city of Torre del Greco remains a major center for cameo cutting to the present day. France enjoyed some time as a center for making cameos, as did the United States and Bavaria.

There is a great carving center in Idar-Oberstein, Germany. It is famous for its cameos of agate and other gemstones.

These cameos are carved ultrasonically. There is a white agate found only in the area. This agate is dyed in a variety of colors, carved, and the color drawn back out of the face of the stone leaving the picture or figure.

If you, your mother, or grandmother has one of these beautiful cameos, you may want to take another look at it. It may not be worth millions, but it may be worth passing it down through the family because it sounds to me like the CAMEO is a treasure well worth keeping.

Our Hobby's History
It started with a passion, and a sharing of ideas

by Jennifer Haley, AFMS HISTORIAN
from the March 2018 AFMS Newsletter, via The Conglomerate 3/2018

I have been hitting the books again, investigating the earliest AFMS Historian files to see what gems of information I can write about for you.

1928 is a year to remember. The first radio and telephone connection between the Netherlands and U.S.A. occurred; American aviator Amelia Earhart became the first woman to fly across the Atlantic Ocean; sliced bread was sold for the first time; and Scottish bacteriologist Alexander Fleming discovered penicillin while studying influenza.

And in 1928, an earth science teacher noticed the need to have the earth sciences taught at schools below the college level. Unfortunately, I do not have the man's name, but what we do know is that he started a club for his students and community. The club was such a big hit, he hoped something similar could go national.

Peter Zodac, founder and first editor of *Rocks & Minerals Magazine* was a big supporter of the idea, and he began writing monthly articles which appeared in his magazine about forming earth science clubs. In those articles were ideas for programs and activities, and of course information about minerals.

Learning about minerals and collecting minerals was becoming extremely popular, and that was the main focus of our hobby in the beginning. Individuals and families were fascinated with what they could learn, and they were enchanted by the adventures they were exploring.

Mineral societies slowly, but in a big way they began to spring up around the country. The first two in California in 1931 and 1932, and the third in Oregon in 1933. That one was called the Oregon Agate and Mineral Society.

The Oregon club got busy promoting themselves and started a bulletin. The club grew by leaps and bounds its first year, becoming what then was believed to be the largest club of its kind in the world. The monthly bulletin was called the *Oregon Mineralogist*. By its second year, a person with whom you are now familiar from a recent AFMS Historian article—Dr. Dake—became their editor, and he renamed the bulletin *The Mineralogist Magazine*.

Two other publications were born from the excitement of the hobby, *Earth Science Digest* and

Mineral News and Notes. Advertisements for lapidary equipment became a popular aspect of the magazines.

Clubs across the country were corresponding with one another, visiting each other's club meetings, and venturing out together to collecting sites for minerals. With so many clubs forming, the idea was sparked to form a Federation. Those first visionaries of our hobby wanted to keep the spirit and the knowledge of the science and the hobby alive instead of seeing it dwindle over time. As a synergy, they felt their combined efforts would be far greater than the sum of what an individual club could do on its own.

Backed by the eagerness and the efforts of the clubs over a course of years, the seven federations one by one were formed: California Federation-1936; Northwest Federation-1938; Midwest Federation- 1940; Rocky Mountain Federation-1941, and South Central Federation - 1943.

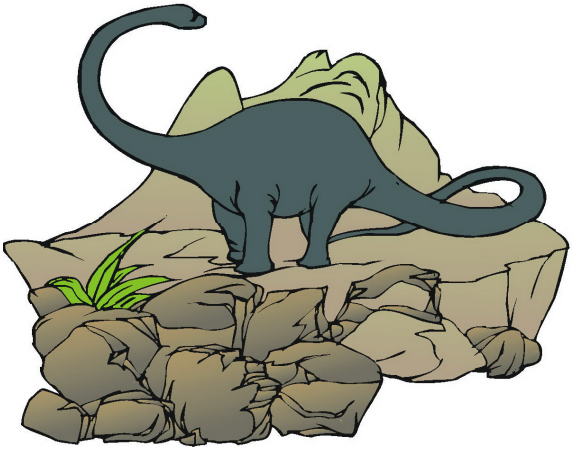
During the time of WWII efforts to advance, the federations was suspended. In 1946 came the inspiration for forming a national federation, and by 1947 the American Federation of Mineralogical Societies was born. Two other federations followed with the formation of the Eastern Federation of Mineralogy and Lapidary- 1950, and the Southwest Federation-1976.

When you hear society members asking why we have the federations and the AFMS, you now have a great story to tell them that they can take to heart.

The Mask of Zorro in the Dinosaur World

by Jim Brace-Thompson
from Rockhound Rambling, 11-12/17, via The Tumbler 02/2018

They used to say that dinosaur artists had free reign in crafting colors and patterns on dinosaurs because, after all, color doesn't fossilize. Again, they USED to say that! Many fossil finds are being re-examined with increasingly sophisticated techniques, and some of these have indeed found indications of color pigments, particularly in feathered dinosaurs. The latest analysis, reported in the October 27 issue of USA Today, shows a 126-million-year-old, 3-foot-long, feathered dinosaur called Sinosauropteryx from China that sported distinctive color patterns across the body along with a bandit-like mask across the eyes. In present-day animals, such bands help hide eyes from would-be predators and prey.



LOUPES 101 (Excerpted)

via Stoney Statements 12/2017

Loupes come in several varieties. Gemologists prefer the hand loupe. For gemologists, the 10X loupe (with ten-power magnification) is the standard for hand-held gem identification. Although you will find more powerful loupes, the depth of field (the area that is in focus) is so small above 10X that they are hard to use. With lower-powered magnification, you just cannot see as much detail.

How to Use a 10X Loupe

Using a loupe gracefully takes some practice but soon becomes second nature. Before you focus on anything, consider the light around you.

To evaluate cutting and polishing, you need to see the gem surface. Shine your light down on the stone. This is simple in a room with overhead lighting. If your best source is a window, position yourself so the light comes over your shoulder. Most importantly, avoid casting your shadow on the stone. To see the inclusions in a gem, you need to see the interior. Place your light behind the stone so that it shines through it.

With minimal adjustments and a little thought, you can often see both the surface and interior of a gem. Having too little light to see well is usually the only limitations. When you open a loupe, the cover becomes a handle. To focus your loupe, slide your index finger through the opening, then rest your hand against your cheek to steady the loupe. Now, you only have one hand to move for focusing.

Keep both eyes open to reduce eyestrain. Position the gem in front of the loupe. Next, move it slowly upwards and away from the loupe until it comes into focus. Practice adjusting the focus from the top surface to the far side. On a smaller gem, you can get the entire stone in focus at once. On a larger gem, you will have to focus on one area at a time.

To judge the quality of a gem's lapidary work, you need to study its surface. A smooth, glass-like surface is the sign of a perfect polish. You may see pits or scratches. However, if they are few and invisible without magnification, they will have little effect on the beauty of the gem.

Sometimes, you will see a stone with small pits covering its entire surface. Although invisible to the naked eye, they do affect the gem's brilliance. If you compare the stone to non-pitted stones of the same species, you will see the reduction in brilliance more readily.

Occasionally, you will have trouble distinguishing whether marks are on the surface or inside the gem. To resolve this, rotate the gem so the light reflects off the facets. When a facet acts as a mirror, inclusions beneath it disappear. However, scratches on the surface remain visible.

An unpolished girdle reveals the gem cutter was in a hurry (a custom gem cutter would finish this off).

Diamonds are an exception. Gem cutters cut them differently than colored stones because of their extreme hardness. Rounded, unpolished girdles are common in diamonds.

11 Interesting Facts about Rocks and Minerals

by Kat Koch
from The Tumbler 10/2017

There are about 4,000 known minerals on the Earth. All rocks are made of two or more minerals, but minerals are not made of rocks. A mineral is the same all the way through.

Diamonds (a mineral) are the hardest natural substance found on earth.

Rubies (a mineral) are the most popular gemstone today.

Geodes (a rock) are plain balls of igneous or sedimentary rock on the outside, but contain a hollow cavity filled with crystals on the inside.

Thunder eggs (a rock) are plain balls of rhyolitic lava on the outside—generally the size of a baseball (although they can be found from very large to very small), but have a solid cavity of various deposited minerals forming unique intricate patterns and colors.

Gold (a mineral) is so soft and easily worked that you could roll on ounce of it into a hair-thin wire 50 miles long. The biggest pure-gold nugget was found in Australia in 1869, and it weighed 156 pounds.

Quartz (a mineral) is one of the most common minerals on earth.

Turquoise (a rock) First recorded use dates back to 5000 BC in Mesopotamia where people used the gemstone to make beads.

Jade (a rock) because of its toughness, it has been used for centuries for cultural things like hammers, fish hooks, and stone axes

Pumice (a rock) is the lightest rock. It's so light it can float on water. There is a pumice island or raft floating on the ocean near Tonga. This happened after a volcanic eruption occurred in Tonga in 2006.

Basalt (a rock) can be found on the Moon, Venus, and Mars. It also happens to be the most common rock on the Earth's surface and makes up large parts of the ocean's floor.

from Rockhound Rambling, 07/2017

Most radioactive materials do not glow in the dark. However, some radioactive metals either glow from internal heat or else release radiation that reacts and produces visible light. Examples of radioactive metals that glow include plutonium (red from heat), radon (yellow to orange to red), and actinium (blue).

New Test for Mineral Hardness!

from Gem Cutters News, 3/2011, via others, via The Mountain Gem, 8/2011

You are out in the mountains, near Tarry-All Creek. You see a sparkly clear crystal in the water and pull it out. How do you tell if it topaz and not quartz—without using a quartz crystal to test the hardness?

Dry it off, wipe it clean with a cloth to remove all grease, and then drop a drop of water (that's right—good old H_2O!) on it from an eyedropper or soda straw. Watch the water bubble. On stones 7 or less in hardness, the water drop will disperse! On harder stones, it will form a globule. The harder the stone, the bigger the globule! The principle is called "cohesion." The water drop "pulls" together on a hard surface. The greater the difference between the surface tension of the water and the stones, the bigger the water globule.

Show Time—2018

Mar 3-4	Robstown, TX	Gulf Coast Gem & Mineral Society Richard M. Borchard Regional Fairgrounds
Mar 10-11	San Antonio TX	Southwest Gem and Mineral Society San Antonio Event Center; 8111 Meadow Leaf Dr. krbotx@gvtc.com; www.swgemandmineral.org
Mar 30-1	Alpine, TX	Chihuahuan Desert Gem & Mineral Club, Alpine Civiv Center; 801 W. Holland Ave., (W. Hwy 90) ocoent895@gmail.com
April 6-8	Raleigh, NC	EFMLS/AFMS/Tar Heel Gem & Miineral Club North Carolina State Fairgrounds Kerr Scott Bldg., 1025 Blue Ridge Rd. http://tarheelclub.org/
April 14-15	Abilene, TX	Central Texas Gem & Mineral Society Abilene Convention Center, N 6th & Pine kmcdaniel23@suddenlink.net; www.new.calichetimes.com
May 5-6	Lubbock, TX	Lubbock Gem & Mineral Society **hosting SCFMS Federation** Lubbock Memorial Civic Center; 1501 Mac Davis Lane walt@lubbockgemandmineral.org; www.lubbockgemandmineral.org
May 26-27	Fort Worth, TX	Fort Worth Gem and Mineral Club Will Rogers Memorial Center; 3401 West Lancaster; fwgmc.info@gmail.com; www.fortworthgemandmineralclub.org
Jun 30-Jul 1	Grapevine, TX	Arlington Gem & Mineral Club Fossil Show Grapevine Convention Center (10 min. from DFW Airport) 1209 S. Main St., Grapevine, TX 76051 show@agmeclub.org, www.agemclub.org
Aug 11-12	Gonzales, LA	Baton Rouge Gem & Mineral Society Lamar Dixon Expo Center-Trademart Building 9039 S St Landry Ave; mercymom3@gmail.com; www.brgemandmineral.org
Aug 18-19	Bossier City, LA	Arklatex Gem & mineral Society Bossier City Civic center; 620 Benton Rd, 2009 Chelsy Dr larockclub@gmail.com; larockclub.com
Oct 12–13	Mount Ida, AR	Mount Ida Area Chamber of Commerce 31st Annual Amateur World Championship Quartz Crystal Digging Contest against other miners—maybe win cash & a trophy director@mountidachamber.com; mountidachamber.com
Nov. 9-11	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 hgms.org; showchair@hgms.org

2018 March 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 7:30 Archaeology Section	2	3 10–4 Shop Open 10–Noon Youth Section
4 10–4 Shop Open	5	6 11-3 Shop Open 7:30 Board Meeting	7 10–3 Shop Open 1:00–3:00 Day Light Section 7:30 Mineral Section	8	9	10 10–4 Shop Open
11 10–4 Shop Open Day Light Saving Begins	12	13 11-3 Shop Open	14 10–3 Shop Open 6:30 Gemstone & Faceting Section	15	16	17 10–4 Shop Open 10–Noon Youth Section 1:30 Beading Section
18 10–4 Shop Open	19 7:30 Lapidary Section	20 11–3 Shop Open 7:30 Paleo Section First Day of Spring	21 10–3 Shop Open 7:30 Mineral Section	22	23	24 10-4 Shop Open
25 10-4 Shop Open Palm Sunday	26	27 11–3 Shop Open 7:30 General Meeting	28 10–3 Shop Open	29	30 Passover Good Friday	31 10-4 Shop Open

2018 April 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 10–4 Shop Open EASTER	2	3 11-3 Shop Open 7:30	4 10–3 Shop Open 1:00–3:00 Day Light Section 7:30 Mineral Section	5 7:30 Archaeology Section	6	7 10–4 Shop Open 10–Noon Youth Section PASSOVER ENDS
8 10–4 Shop Open	9	10 11-3 Shop Open	11 10–3 Shop Open 6:30 Gemstone & Faceting Section	12	13	14 10–4 Shop Open
15 10–4 Shop Open	16 7:30 Lapidary Section	17 11–3 Shop Open 7:30 Paleo Section	18 10–3 Shop Open 7:30 Mineral Section	19	20	21 10–4 Shop Open 10–Noon Youth Section 1:30 Beading Section
22 10–4 Shop Open 10–4 Shop Open 29	23 30	24 11–3 Shop Open 7:30 General Meeting	25 10–3 Shop Open	26	27	28 10-4 Shop Open

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)
2006–2016- 1st (Large)
2017—1st (Large)

AFMS

1998 - 2nd (Large)
2004 - 3rd (Large)
2007 - 1st (Large)
2010 - 2nd (Large)
2012 - 3rd (Large)
2013 - 3rd (Large)
2014 - 2nd (Large)
2017—3rd (Large)

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
BELLAIRE, TX 77401
PERMIT NO. 303

DATED MATERIAL—PLEASE DO NOT DELAY !