



The BACKBENDER'S GAZETTE



The Newsletter of the Houston Gem & Mineral Society

Volume LXII

May 2020

PRESIDENT'S MESSAGE

by Sigrid Stewart

At this point in time, I have no idea when it will be safe to reopen our clubhouse. I wish I had the answers. I hope someone does! I do know, that even as the economy begins to restart, the fear and uncertainty will not go away.

A major problem is that many of our members, including my husband and me, are in the most-threatened demographic. We must continue to take precautions for some time, until there are working treatments, antibody tests and vaccines, and none of the reporting at this time offers a lot of good news on that score. Even as tests are rolling out, medical professionals are reporting problems with accuracy.



Please let me know of your concerns via email to president@hgms.org. If you have interesting links to share, or have made a video, or worked on a project, or have managed to go on a rock hunt, let me know. Everyone else will be interested too!

An announcement: our Backbender's Gazette editor, Sharon Thomas, has resigned. Your Website team will be assembling and publishing the newsletter for the time being, so you will notice some differences. If you are interested in helping, give us a call!

VICE PRESIDENT'S MESSAGE

by Michael Sommers

The program for May will be "Water on the Moon" presented by Dr. Georgiana Kramer. Dr. Kramer will talk about some of the research in which she has personally been involved.

If stay-at-home orders are still in place in May, we may try to do this presentation remotely (there might also be a way to stream it from the clubhouse). Stay tuned to the weekly eblast, our Website, and Facebook pages for further updates!

TABLE OF CONTENTS

President's Message	1
Vice President's Message / Upcoming Program	1
Section Reports - Archaeology	3
Bench Tips	5
Tanzanite	6
Chrysoberyl	8
The Little Gallery and Rock Shop	10
An Apology	12
AFMS 2020 Program Contest	14
Purpose of HGMS / Membership Details	17
General Meeting Minutes – previous month	17
Board of Director Meeting Minutes – current month	19
Officers List	26
Calendar	27

Permission to use material originating in this newsletter is given freely providing that credit is given to the author and the source. Every article published in the BBG is edited for grammar and content. No flaming is allowed.

BACKBENDER'S GAZETTE SUBMISSION DEADLINES

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

Copy is due for the next issue by the 15th of this month. Email content to editor@hgms.org

SECTION REPORTS

ARCHAEOLOGY SECTION

by Nancy Engelhardt-Moore

Due to the Coronavirus, the Section will not hold any spring programs. They have been postponed until fall at the earliest (see below). In addition, the Section will be taking a summer break. Maybe things will return to normal by September when the Archaeology Section plans to hold new meetings. In the meantime, enjoy the article and watch for HGMS announcements.

AZTEC RUINS NATIONAL MONUMENT: A REAL TREASURE

The Monument is located in northwestern New Mexico along the western bank of the Animas River in Aztec, New Mexico. It is about 12 miles northeast of Farmington, NM. Last May, my husband Bob Moore and I decided to spend a day touring the ruins.

It turned out to be an absolutely gorgeous day full of wonder. To clarify, the ruins were built by Pueblo Indians nearly a thousand years ago. Early settlers thought they were built by the Aztecs and the name stuck. The site was declared a National Monument in 1923 and then, UNESCO listed it as a World Heritage Site on December 8, 1987. Although it is off the beaten path, it is definitely worth a visit. For your enjoyment, I've included a few photos I took during our visit.



View of Reconstructed Great Kiva



View of Interior of Great Kiva

In 1916, archaeologist Earl Halstead Morris oversaw the first dig at Aztec Ruins. He worked on both Aztec East and Aztec West as well as the Great Kiva. Then in 1934, he supervised the reconstruction of the Great Kiva as seen today. The project was funded by the American Museum of Natural History.

Continued on next page...

The photo to the right is a view of the ceiling of the Great Kiva. It is absolutely beautiful. This reconstruction was possible because many of the site buildings still have their original 900-year-old ceilings. The builders used high-quality lumber from spruce, Douglas fir or ponderosa pine for the beams that were brought from high elevations 20 miles to the north. Above the beams are overlying smaller beams called latillas that are made of pine or aspen. They support a layer of thin juniper splints.



Beamed Ceiling of Great Kiva

The splints are topped by a heavy layer of tamped mud. The excellent preservation of the wood has allowed the precise dating of the intact structures scattered throughout the site.



View of a Portion of the Pueblo Great House with Over 400 Rooms

When the park reopens, you can explore the spectacular Pueblo Great House and walk the half-mile trail through the ruins. At the Visitor Center, you can see a video about the ruins, tour the museum that contains numerous artifacts, and learn about the ranger-guided programs. For more information, check out this link:

<https://www.nps.gov/azru/index.htm>.

Upcoming Archaeology Section Programs

April 2, 2020: Dr. Justin Parkoff with the Houston Maritime Museum, will present the “USS Westfield Recovery and Restoration Project” (POSTPONED).

May 7, 2020: Bob Moore will present “Excavating at Ancient Salona, Croatia” (POSTPONED).

June – August, 2020: The Section will take a Summer hiatus. Watch for our planned exciting lineup of fall programs in the August Issue of the Backbender’s Gazette. Hope to see you soon!

BENCH TIPS

by Brad Smith



DRILLING SMALL ITEMS

While drilling, small pieces need to be held securely to prevent them from spinning if the drill catches. Having sliced my fingers occasionally in my younger days, I avoid Band-Aids® now by using flat-jaw pliers or a ring clamp. Pliers also save you if the piece gets hot. Put a little tape or a piece of vinyl tubing over jaws of the pliers if needed to avoid scratches.

DRILLING A STONE

My students often ask, “How do you drill a hole through a piece of gemstone?” The usual thought is to get a diamond drill, but I have been disappointed with them. The tip of the drill just pivots in the hole and fails to cut well. When it looks like the drill isn’t cutting, the tendency is to push with more force. The drill gets hot, and the diamond grit falls off.

A much better approach is to use a core drill. This is a small, hollow tube with a coating of diamond grit at the business end. The diamonds easily carve out a circular arc without undue pressure or heat buildup.

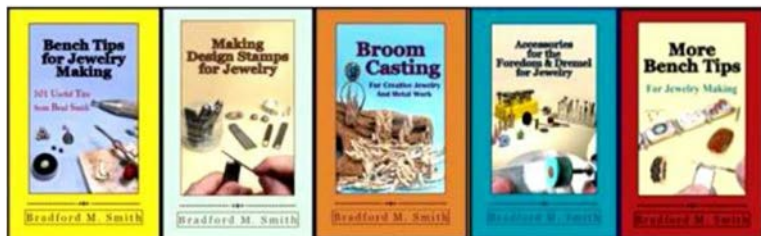


Core drills are readily available from lapidary and jewelry supply companies. They come in sizes as small as 1mm, and the price is very reasonable. For instance, a 2mm diameter drill is about \$7.

Chuck the core drill in a drill press, Dremel, or Foredom. Keep the drilling zone wet to cool the tool and to flush out debris. If you’re drilling a through hole, go very easy on the pressure as the drill is about to cut through. Using too much pressure will cause the stone surface around the hole to chip.

Discover New Jewelry Tricks in Brad’s “How To” Books

<https://Amazon.com/author/bradfordsmith>



TANZANITE

by Don Shurtz

Pleasant Oaks Gem and Mineral club of Dallas

Tanzanite is a colorful stone that was recognized as a December Birthstone in 2002. Originally called Blue Zoisite (a technically correct name), the name was changed to tanzanite by Tiffany & Company as a marketing decision to honor the only country where the stones can be found. Tiffany's marketing campaign touted that tanzanite could only be found in two places, "In Tanzania and at Tiffany's". Today it can only be mined in Tanzania, but about every jeweler in the world and a host of TV sales channels carry tanzanite rings, earring, pendants, and other jewelry items.

Stories about the initial discovery of tanzanite vary. One story is that Manuel de Souza, a tailor and part-time gold prospector from the state of Goa, India and living in Tanzania, found blue stone fragments while prospecting in 1967. He assumed they were a form of olivine. However, a chain of events found the fragments at the Gemological Institute of America that correctly identified the mineral as zoisite. Another story is that lightning ignited a grass fire and heated the brown zoisite crystals on or near the surface, turning them blue. Maasai tribesmen found the transparent blue stones, but thought them worthless. However, one of the tribesmen gave de Souza some of the stone fragments. Although these stories may define the discovery blue zoisite in Tanzania, the U.S. Geological Survey records show identification of blue zoisite crystals by Dr. William Pecora in 1959. My research does not indicate where Dr. Pecora obtained the blue zoisite. His primary areas of research were the Bear Paw Mountains in Montana and geological features in Oregon.



*Approximate 8-inch
Untreated Tanzanite*

Tanzanite is a member of the sorosilicate group that includes hemimorphite, vesuvianite, and the epidote group. The epidote group includes epidote and zoisite, and tanzanite is a member of the zoisite subgroup. Sorosilicates are characterized by isolated pyrosilicate anion, $\text{Si}_2\text{O}_7^{6-}$, a double tetrahedral with a shared oxygen atom. The chemical formula for tanzanite is $\text{Ca}_2\text{Al}_3\text{O}(\text{SiO}_4)_2(\text{Si}_2\text{O}_7)(\text{OH})$. It has a Mohs hardness of 6.5. From most mines, the crystals are brown or reddish-brown and are trichroic (shows three colors or brown, blue, and violet). When heat treated, the brown and reddish-brown colors disappear, generally producing a dichroic (two colors) stone of blue and violet. Heat treated tanzanite will sometimes turn into a green and blue stone (green being stronger), but these seem to be of no interest to the commercial buyers. The heat treating of tanzanite may occur naturally due to geological metamorphic processes or grass fires, or it may be heat treated in a furnace to 700 – 730 degrees Fahrenheit for 60 minutes. The stones from the original mining area (called Block D) are naturally-heated stones, likely due to grass fires. It is almost impossible to find a non-heat treated tanzanite specimen. In 2003, the Tanzanian government passed legislation prohibiting export of rough stones weighing more than one carat, but the legislation was not well enforced. It was estimated that only 40% of the mined tanzanite was complying with the one carat legislation. In 2016, the Tanzanian government completed a 15-mile long wall around the Tanzanite mining area.

The government reported production of tanzanite jumped from 0.7 million carats in 1917 to about 3.9 million carats in 2018 – over a 550% increase!

How long will tanzanite be available from the mines? Tanzanite is only found in an area of about 1.25 miles by 2.5 miles (just over 3 square miles of surface area). Many experts feel that it is extremely unlikely that additional Tanzanite mining locations will be found. Individuals using hand tools perform most of the mining. Only one mine benefits from modern mining techniques and equipment, Tanzanite One's Block C mine. In 2013, the mine was operating to a depth of 800 meters, but core samples indicate tanzanite layers are found down to 2,000 meters. The estimated life of the mine is projected to be 30 years. Perhaps before the end of the 30 years, some of the remaining artisanal mines will find better mining techniques extending the life of the mining field.



*Approximate 2-inch
Treated Tanzanite*

Some interesting facts about tanzanite:

- The largest tanzanite crystal was 16,839 carats (about 7.5 lbs) mined in 2005.
- Tanzanite, based on its rarity, the foreseeable end to mining, and popularity is considered the most undervalued gemstone.
- Of the major minerals produced in Tanzania, tanzanite comes in third (based on production value in U.S. dollars). Gold mining (producing gold, silver, and copper) was first, diamond mining was second.

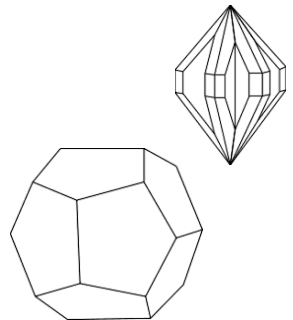
References:

- [Export.gov](https://www.export.gov/), Tanzania Commercial Guide, <https://www.export.gov/>
- The Tanzanite Experience, News and Articles, <https://www.tanzaniteexperience.com/>
- Tanzanite Jewelry designs, Tanzanite History, <https://www.tanzanitejewelrydesigns.com/pages/tanzanite-history-html>
- Tanzanite Mining, TanzaniteOne, <https://www.tanzaniteone.com/tanzanite-mining>
- Tanzanite and related articles, Wikipedia, <https://en.wikipedia.org/wiki/>

Pictures: Tanzanite specimens on display at Perot Museum of Nature and Science, photographs by Don Shurtz



*Pyrite Pete says:
“Remember,
masks aren’t just
for cutting rocks
these days - be
safe, everyone!”*



CHRYSOBERYL

by Randy Carlson



The mineral or gemstone chrysoberyl is an aluminate of beryllium with the formula BeAl_2O_4 .

The name chrysoberyl is derived from the Greek words χρυσός chrysos and βήρυλλος beryllos, meaning “a gold-white spar”.



Despite the similarity of their names, chrysoberyl and beryl are two completely different gemstones, although they both contain beryllium.

Chrysoberyl is the third-hardest frequently encountered natural gemstone and lies at 8.5 on the Mohs scale of mineral hardness, between corundum (9) and topaz (8).



CHRYSOBERYL VARIETIES

Ordinary Chrysoberyl is yellowish-green and transparent to translucent. When the mineral exhibits good pale green to yellow color and is transparent, then it is used as a gemstone.



Cymophane is popularly known as “cat’s eye”. This variety exhibits pleasing chatoyancy or opalescence that reminds one of the eye of a cat. When cut to produce a cabochon, the mineral forms a light-green specimen with a silky band of light extending across the surface of the stone.

Alexandrite, a strongly pleochroic (trichroic) gem, will exhibit emerald green, red, and orange-yellow colors depending on viewing direction in partially polarised light. However, its most distinctive property is that it also changes color in artificial (tungsten/halogen) light compared to daylight. The color change from red to green is due to strong absorption of light in a narrow yellow portion of the spectrum, while allowing large





bands of more blue-green and red wavelengths to be transmitted. Which of these prevails to give the perceived hue depends on the spectral balance of the illumination. Fine-quality alexandrite has a green to bluish-green color in daylight (relatively blue illumination of high color temperature), changing to a red to purplish-red color in incandescent light (relatively yellow illumination).[7] However,

fine-color material is extremely rare. Less-desirable stones may have daylight colors of yellowish-green and incandescent colors of brownish red.[7]



PHYSICAL PROPERTIES

Refractive index: generally 1.746 – 1.755

Moh's Density Rating: 8.5 (Third hardest stone, behind Diamond & Sapphire)

Specific gravity: 3.73 +/-



Crystal System: Orthorhombic

Optics: Double Refractive, Biaxial Positive, Birefringence of .008

Identification:

- Yellow, Yellow/Green & Honey, Alexandrite is color change between red & green.
- Alexandrite is colored by chromium and shows textbook spectroscopy chromium RR lines.

Unusual Properties: chatoyancy and color change.

Synthetics: Yes for Alexandrite! Both flux and pulled type. Flux type "rain" is very visible and unlike anything in natural Alexandrite.

Imitations: Yes, with flame fusion, color changing corundum since 1890! Doped with vanadium gives it the color change effect.

MINING LOCALES

Source: Most Chrysoberyl comes from Brazil. There were mines in Russia for many years, but these have played out.

Minor sources include those in the Far East.

Formation: Pegmatite dikes



Information Sources: Wikipedia, ISG, Google Images

THE LITTLE GALLERY AND ROCK SHOP

by Sigrid Stewart

If you are driving from Houston to Austin on State Highway 71, about 5 miles north of Smithville you will see a Chevron station. Slow down, and prepare to turn in to a small shopping and office area on the right-hand side of the road and visit the Little Gallery and Rock Shop! This wonderful little rock shop is well known to travelers, and well worth a stop. The owner, Katherine Martin, will greet you and show you her latest acquisitions.

The original proprietor, Miss Lorene who was an artist, ran the Little Gallery and Rock Shop for 25 years. Following her passing, the Martin family, originally from the Houston area, acquired the shop in May of 2017. The business has been in the same location now for 18 years. The Martins have made some changes: the shop has some of the old vendors, but they have added some new ones, including Internet vendors, and they have begun accepting credit cards. Currently they carry geodes, crystals, and clusters of amethyst and smoky quartz, jade carvings, mineral specimens, spheres, salt lamps, lapidary rough, fossils, jewelry, stone inlay boxes, and local Bastrop area petrified wood, including palm. For the last three years, they have been the only rock shop participating in the Conscious Cooperative Holistic Fair at the Brazos Convention Center in College Station.



If you can't stop by, you can also find the Little Gallery and Rock shop via email (the_rockshop@outlook.com), and on Etsy [@LittleTexasRockShop](https://www.etsy.com/shop/LittleTexasRockShop). You can also reach Katherine at ktmartin@hotmail.com or at 713-376-2122.



The Little Gallery and Rock Shop
[125 Kellar Rd. #C6](#)
[Smithville, TX 78957](#)
 (512) 237-3635

Open Wednesday through Sunday
 10AM – 5PM
the_rockshop@outlook.com



AN APOLOGY/ QUARANTINED FROM THE 1 APRIL 2020 ISSUE OF THE BBG

by Neal Immega

HGMS Senior Shop Foreman

Member of the Houston Gem & Mineral Society

I just figured it out! After 20 years as a shop foreman, I just figured it out.

I guess that a little social distancing may be good for me because I have started reading back issues of *Canadian Rockhound*, and I discovered I have an appalling personality flaw — I do not appreciate all rocks. I am sure you have been on the receiving end of my criticism, and I am sorry. People show up at the shop, and are so proud of a rock that they foolishly show it to me, expecting me to praise it. But no. I typically tell them that they have just entered the Ugly Rock Contest, and that they should consider using their stone as a boat anchor.

Let me tell you about Foster. He loves to inflict BIG polished slabs or slabbed lumps on his children. One of his sons moved far from home, possibly to just to get away from Dad's strange hobby. His other son is more unfortunate because he lives close by. Since he is an important man in his city, he could have his Dad brought up on charges for being "reckless and endangering" since his second-floor office is in danger of becoming a first-floor office from the excess weight. Last year, Foster paid good money for what he was told was a lump of marble, and he wanted my help to saw it up. I told him that he won the Ugly Rock Contest for the day for his piece of sandstone, and that he should consider using it for a boat anchor. I was so insensitive.



So, how does this connect to the June, 1977 issue of *Canadian Rockhound*? There is an article on Japanese Suiseki (pronounced sue Zek e) that opened my mind. Wikipedia

says “These stones are not just any stones which can be found in nature; they must be expressive stones” The picture is from Wikipedia. Now I understand. It is obvious that the shop users would not have brought in these rocks unless they appreciated them, and that I should not have belittled their selection. So, the next time Ray brings in a particularly strange rock, I am going to praise his esthetic sensibilities and suggest that he display it in an artistically raked sand-filled bowl (maybe with the sand heaped up really high). Knowing our members, we are going to need a low-cost option, so I will start recycling the Whataburger boxes that Logan leaves behind as artistic containers. It took me 20 years, but I can learn.



AFMS 2020 PROGRAM CONTEST

*Darrell Watkins, Program Competition Chair
from AFMS Newsletter 4/2020*



Darrell Watkins

One contest comes to a close, and another one begins. I would be really excited to receive entries from every Federation. An entry from anybody concerning anything lapidary, geological, field trips, mines, museums, or anything a rockhound might like to look at or that would interest us, as the new contest is open! With all of us having cameras and cell phones that can make movies, I think that we should start getting some of the field trips, mines, rocks, and minerals on film. Of course, shop techniques and other items of interest concerning our hobby would be good to share. We have a **Programs Competition** every year that anyone can enter.

WHAT IS IT ABOUT

The purpose of this competition is to recognize and reward authors of presentations about the Earth Sciences and Lapidary Arts and to make winning programs available to affiliated clubs across the country.

AWARDS

A \$200 cash prize for the highest scoring program scoring 95 and above, and a \$100 for a score of 94-90 points in Classes 1-4. In addition, winners receive national recognition. A copy of each winning program is given to each AFMS Regional Program Library; thus, winning programs are available to clubs across the country. Each program is judged on its own merits. Entrants will receive a composite score sheet with Judges' comments and score. Winners may be asked to make some changes based on Judges' comments before the final version is produced for duplication.

HERE IS WHAT YOU NEED TO KNOW TO ENTER

All digital presentations or videos relating to the Earth Sciences and Lapidary Arts are eligible. Submit entries in one of the four amateur classes (See below).

Any Club, Society, or members thereof, with 2020 dues paid to the AFMS may enter (all regional members).

The Judging Form and "Tips for Good Programs" are available on the AFMS website (www.amfed.org), or from me.

WHAT WE CAN'T
DO ALONE
WE CAN DO
TOGETHER



CLASSES FOR ENTRIES

Class I Educational - About geology, minerals, gems, fossils, etc.

Class II Field Collecting - Showing site(s), specimens, with some geology, collecting methods and other aspects of interest.

Class III "How to Do It" - Techniques/equipment for fossil preparation, jewelry, metal work, carving, faceting, other lapidary, etc.

Class IV Just for Juniors - Any of the above for/by youngsters.

"Excellence in Education" Class - For "commercial" Presentations (entries are judged separately).

JUDGING

Judges look for:

- accuracy of information / educational value
- quality of photographs / visuals completeness of story, but not "too much" information
- narration that moves well from one image to the next
- presentations that explore an area of interest or demonstrate ideas / techniques which viewers may try
- title, credits, and "The End" slides for CD, DVD or VIDEO entries

For CD, DVD or VIDEO amateur entries, do not send in a DVD format for judging. Submit a copy preferably in PowerPoint or similar format on a flash drive instead of CD, **without author's credit (for anonymity)**. Entries may be 'live action' or 'static slides'. Integrated audio is preferred but not required for judging (audio will be added for final version). Please include a typed script if there is no audio.

35mm SLIDE PRESENTATIONS can be considered (Please contact me before submission).

SUBMISSION DEADLINE: NOVEMBER 15, 2020

ENTRY FORM ON FOLLOWING PAGE



2021 AFMS PROGRAM COMPETITION ENTRY FORM

I/We submit: _____

(Presentation title)

Name (s) -include your office if club entry: _____

Parent (s) (if junior entrant) _____

Member of: _____
(Club name)

Address:

Preferred Contact(s)

Name: _____

Phone: _____

Email: _____

Name: _____

Phone: _____

Email: _____

IS THIS PROGRAM FOR SALE? No _____ Yes _____ Cost: \$ _____

REPRODUCTION / DUPLICATION

By entering, all winners grant permission for AFMS to duplicate/ transfer their entry to DVD format for the Regional Libraries. Flash drives will be returned after duplication. 35mm slides will be scanned, and returned to producer. Non-winners will be returned after AFMS Convention. Reasonable precautions will be taken to protect program while it is in our hands.

SUBMISSION DEADLINE: NOVEMBER 15, 2020

SEND ENTRIES TO: AFMS Programs Chairman, Darrell Watkins PO Box 635 Tieton, WA 98947 509-673-0085 AFMSprograms@gmail.com

A.F.M.S. News Volume 73, Number 3– April 2020 <www.amfed.org>

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, 1/4 page; \$150 for 6 months, 1/4 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 (except December) at 7:30PM.

The HGMS web site address is <https://hgms.org>

HGMS GENERAL MEETING MINUTES

FEBRUARY 25, 2020

by Nancy English

President Sigrid Stewart called the meeting to order at 7:40 p.m. She welcomed sixteen attendees. John Laney, a new member attending for the first time, likes everything about the hobby of rocks.

Nancy English regrets that she cannot be at the meeting tonight. She is working the Early Voting Polls in North Houston and does not get home until after 8:00 p.m. Nancy encourages everyone to **VOTE**, and to **VOTE EARLY**, when there are no lines, and you can vote anywhere in Harris County (or Ft. Bend, or other counties). Go to [Harrisvotes.com](https://harrisvotes.com) for locations, sample ballots, and more.

PRESIDENT'S COMMENTS

Silent Auction has been open since 7:00 p.m. It will end after the break. Pay after the program.

Clear Lake Gem & Mineral Society Show: Thanks to all the volunteers at HGMS table!

Approval of Minutes: The minutes of the January 28, 2020, General Meeting were not published in the BBG or posted in the E-blast so they could not be approved, yet.

SECTION/COMMITTEE REPORTS

In the interest of time, President Stewart asked members to look for reports of future Section meetings and presentations in the BBG, on the Web site <https://hgms.org>, or by reading the weekly e-blast from Jim Kendall. If you are a member and not on Jim Kendall's e mail list, please contact him at kendallja@att.net.

Gemstones and Faceting Section: Wednesday, 6:30, p.m., March 11, 2020 Randy Carlson is returning from Colorado. The last Faceting Class had five participants.

Lapidary and Silversmithing Section: Monday, 7:30 p.m., March 16, 2020. Tony Lucci will demonstrate using epoxy and a vacuum chamber how to repair cracks in stones.

Mineral Section rescheduled their meeting to **Wednesday February 26**, due to some members being in Tucson. They will review the Tucson and Clear Lake Shows.

President Stewart invited other Section Chairs and Standing Committee Chairs to make any additional announcements.

OLD BUSINESS

President Stewart asked members to look for the progress of Old Business items in the BOD Meeting Minutes in the latest BBG.

Membership: Dues are due. After April 1, 2020, only paid members can use the shops.

Web Site Committee: The committee has re-convened and will be working on some web projects.

Trade Shows: The Trade Show Committee will meet in March to discuss the possibility of a couple of Trade Shows this year.

Building Issues: Thank Mary Ann for putting up signs on how to set the air conditioners.

Shop News: Neal received a donation of a Highland Park saw and is working on it. He removed two old saws.

NEW BUSINESS

Classes:

Joy Lester has three classes scheduled.

- **Wire-Wrapped Bird Nest Ring** Saturday, March 28th, 2020 - 1:00 PM to 3:00 PM
\$25.00 (Includes all materials & tools)
- **Beginning Wire-Wrapped Pendant Wire-Wrap a Cabochon**
Sunday, May 17th, 2020 - 1:00 PM to 4:00 PM
\$45.00 (Includes all materials & tools)
- **Beginning Wire-Wrapped Pendant BWW-051720-JL** (no previous experience needed)
Wire-Wrap a Cabochon, Sunday, June 14th, 2020 - 1:00 PM to 4:00 PM
45.00 (Includes all materials & tools)

Tony Lucci has three courses of classes scheduled.

- **Wax Carving & Casting**—March 3, 5, 10, 12 and 17
- **(New) Welding Basics for Women**—Sunday March 22 from 9 AM to 2 PM
- **(New) Wax Carving & Casting**—May 5, 7, 12, 14 and 19 (Tues and Thurs 7 PM to 10 PM)

The next Board of Directors meeting will be Tuesday, 7:30 p.m. March 3, 2020.

The next General Meeting will be Tuesday, 7:30 p.m. March 24, 2020. Mike Sommers will present “Pyrites and Marcasites”.

Show-n-Tell: Steve Blyskal and Sigrid Stewart brought Show-n-Tell specimens from the Tucson Show.

Drawing: Ron Rogers won an obsidian slab.

Refreshments: Neal Immega brought tonight's refreshments. Please, **FEED THE KITTY!!**

Volunteer for next month's refreshments. No one volunteered to bring refreshments to the March meeting.

President Stewart explained that the refreshments will be reimbursed up to \$25.00 over the amount collected in the Kitty.

Adjourn: Phyllis George moved to adjourn. Steve Blyskal seconded it. The meeting adjourned at 8:15 p.m.

After a fifteen-minute break Vice President Sommers introduced the Program: Maggie Manley presented “The History of Beading”.

HGMS BOARD OF DIRECTOR MEETING MINUTES

APRIL 7, 2020

by Nancy English

X	President—Sigrid Stewart	X	Beading—Maggie Manley
X	1st Vice President—Mike Sommers	X	Day Light—Fred Brueckner
X	2nd Vice President—Beverly Mace	X	Gemstones & Faceting—Randy Carlson
X	Treasurer—Tatyana Kuhne	X	Lapidary & Metalsmithing—Phyllis George
X	Secretary—Nancy English	X	Mineral—Steve Blyskal
X	Archaeology—Nancy Engelhardt-Moore	X	Paleontology—Mike Dawkins

President Sigrid Stewart called the April 7, 2020 Board Meeting to order at 7:33 p.m. All Board members attended the online Skype meeting. A quorum was present.

Non-voting members in attendance: Sharon Thomas—BBG Editor.

PRESIDENT'S COMMENTS

The HGMS Clubhouse will remain closed for member use in order to minimize the danger of Coronavirus spread. The shop is closed for member use. All classes and Section meetings are canceled. The Clubhouse is closed until HGMS is advised that it is safe to reopen.

Approval of Minutes: Minutes from the February 4 and March 3, 2020 BOD meetings have not been approved. Nancy English acknowledged that the titles of the January General Meeting and the February Board Meeting both read "Agenda" instead of "Minutes." She asked for everyone's assistance in looking for this mistake in the future. Unfortunately, both were printed with the errors. Maggie Manley moved to approve both BOD minutes as corrected. Nancy Engelhardt-Moore seconded the motion, and it passed.

Nancy Engelhardt-Moore asked Nancy English to please include the last names of the various Nancys referred to in the minutes, since four different Nancys are active in the Club. Nancy English agreed with the suggestion.

Treasurer Report: Tatyana Kuhne sent the Treasurer's Report to members on April 2, 2020.

COMMITTEE REPORTS

BBG Editor: Pyrite Pete looks good on the cover page of the online April BBG. The hard copy cover has been altered to add Pyrite Pete and gravel in the lower area of the picture. The April online BBG published the February BOD minutes, the March BOD minutes, and the January General Meeting minutes. The February General Meeting minutes are ready to be published in the May BBG. The March General Meeting was canceled.

SPARK: Nancy English thinks we need to rethink the SPARK online version of the BBG. Although it allows more interactive downloads to viewers, it cannot be saved or archived on the HGMS Web site. Meaning that it cannot be retrieved to review later. Therefore, we do not have a permanent record of what was published in the February, March, and April 2020 BBGs. The hard copy version mailed to members also needs to be saved to the HGMS Web site. President Stewart decided that this problem will remain an agenda item until it is resolved. Sharon Thomas suggested that a separate file be created to store the online versions. Sharon Thomas, Phyllis George, Sigrid Stewart, and Nancy English agreed to meet to create a solution.

Education Committee: All classes are postponed. No new dates are proposed. Maggie Manley, Education Chair, said she and Sigrid Stewart agreed to refund all class fees that were paid in advance. Maggie and Tatyana Kuhne will work out the details of the refunds. To help people stay entertained, Maggie has many free online classes that she will post on the Web site.

Library Committee: Despite the Club being closed, Neal Immega continues to post periodical and book recommendations that may interest members.

Scholarship Committee: Mike Sommers reported that HGMS scholarship notices have been posted on Face Book. He will send notifications to the colleges now that Spring Break is over. Even though the schools are closed due to Coronavirus, classes are being

taught online. Mike will ask Sarah Metsa to post the notices on the HGMS Instagram and Twitter accounts.

Show Committee: Scott Singleton

1. The Rock Food Table is coming back to the Show. The East Texas Gem and Mineral Society purchased the Rock Food Table from its original owners. Discussions about rearrangement of the floor plan have begun.
Kinney Polve of the East Texas Gem and Mineral Society has penciled in bringing the Rock Food Table for the dates of our show. However, he will not finalize that until HGMS gives him a check to hold those dates for the Rock Table display. Given current Covid-19 circumstances, the down payment from HGMS has not yet been authorized.
2. Steve Blyskal sent contracts to Annual Show Dealers the first week in April. The 2020 HGMS Show is scheduled for November 6-7-8, the first weekend in November.
3. The Show Committee's Education section planned to attend three events to promote the HGMS Annual Show. The Scout Fair the first weekend in April is canceled. The Home School event on Memorial Day weekend is canceled. The Tenth Annual Energy Day is still scheduled for Saturday, October 17, 2020 at Sam Houston Park in downtown Houston 11:00 a.m. to 3:00 p.m. HGMS has reserved a table.
4. Beverly Mace finished the database from the 2019 Annual Show Grand Prize slips and sent them to Scott Singleton. According to Scott:
"The 'BIG 5' (most common ways Show attendees hear about the HGMS Annual Show) are still listed in overwhelming numbers. Those are Friend, Postcard, Facebook, Web site, and email. This indicates that if we just do those five and nothing else, we would produce a reasonable Show. But part of the trick to growing attendance is reaching out to previously untapped populations—where many if not all of the remaining categories are found. The challenge is growing those. Unfortunately, a majority of the Show publicity budget is going to areas that show low overall numbers.
Sarah Metsa's efforts are also paying off, which includes mass emails, Instagram, and Pinterest. This year's focus is to build up Instagram and Pinterest — like Facebook."

2020 Trade Show Committee: Scott Singleton polled the committee members about future Trade Shows. During that discussion, it became obvious that a Trade Show is not feasible until the World comes out of quarantine.

Web site Committee: The Skype meeting is scheduled for April 11, 2020.

SECTION REPORTS

All Section Meetings are canceled until further notice because the Club is closed.

Archaeology Section: Thursday, April 2, 2020 at 7:30 p.m. (POSTPONED) Dr. Justin Parkoff, Curator and Marine Archaeologist with the Houston Maritime Museum, will present the "USS Westfield Recovery and Restoration Project." Watch for a revised date for this fascinating story of the history and conservation of a Civil War gunboat!

Archaeology Section: Thursday, May 7, 2020 at 7:30 p.m. (Maybe POSTPONED) Bob Moore will present "Excavating at Ancient Salona, Croatia." Last fall, Bob and his wife, Nancy Engelhardt-Moore, had the exciting opportunity to participate in an archaeological

dig to probe the remains of a visible apse in the Greco-Roman City of Salona near Split, Croatia. Come find out what the Moores uncovered during their adventure.

Archaeology Section: On Thursday, 7:30 p.m. March 5, 2020, President Sigrid Stewart and Steve Blyskal attended the **Archaeology Section** program “The Invention of Rope and the Roots of Western Civilization,” presentation by Christopher Kilgore. They reported that the program was excellent. Chris talked about the invention of rope and his personal observations on artifacts key to understanding how rope played an important role in man’s technological development. He then demonstrated the amazing rope making technique that he learned from his mentor (see BBG article). Nancy English suggested that the speaker be invited to present a General Meeting program.

Archaeology Section: The Section will take a summer hiatus **June through August 2020.** Watch for our exciting lineup of fall programs in the August Issue of the Backbender’s Gazette.

Beading Section: Saturday, 1:30 p.m., April 18, 2020. Canceled due to Coronavirus. Section Chair Kim Fuselier is making masks and headbands at home for the emergency personnel. She will not be creating an online meeting project for this month.

Day Light Section: Wednesday, 1:00 p.m., April 8, 2020. Canceled due to Coronavirus. After the quarantine is lifted, Nancy Searle, Section Chairman, has programs waiting to be presented. If you have a program you would like to present, please contact her.

- Maggie Manley will teach us how to make Bead People.
- Neal Immega will teach us how to drill glass beads with a diamond saw.
- Mary Ann Mitscherling has volunteered for two programs:
 - wire wrapping cabochons and
 - making wire and bead earrings

Gemstones and Faceting Section: Wednesday, 6:30, p.m., April 8, 2020. Canceled due to Coronavirus. Randy Carlson reported on recent events and future plans.

Nancy Money made a major donation of faceting equipment, resulting in substantial income for the Section.

Over the last year, the Section went over all equipment and techniques for identifying gemstones. To finish, the Section will have a Gem ID workshop (future date to be determined) on a second or fourth Saturday (non-Kids Day).

In February, the Intro to Faceting class trained five new users. Now Randy Carlson has a list of several trained, authorized users. Logan Wilcox, faceter and Shop Foreman on Tuesdays, will allow those people to check out and use the faceting equipment while he is there. Steve Blyskal offered to do the same on Thursdays when he is the Shop Foreman.

While Randy Carlson was in Colorado in January and February, he attended the Littleton Rock and Gem Club. Their Cabbing and Faceting groups meet together. He made nice connections that led to sharing good information.

The International School of Gemology is offering their mini-courses—normally costing \$25—free! Go to their Web site to register.

Lapidary and Silversmithing Section: Monday, 7:30 p.m., April 20, 2020. Canceled due to Coronavirus.

Mineral Section: Wednesday, 7:30 p.m., April 22, 2020. Canceled due to Coronavirus. Steve Blyskal reported that he will be polling the Mineral Section attendees to authorize the purchase of a pair of books. Over the last fifty years, the **Mineralogical Record** has been publishing articles called “What’s New in Minerals?” Now they have compiled two volumes of those articles.

Paleo Section: Tuesday, 7:30 p.m. April 21, 2020. Canceled due to Coronavirus. Neal Immega reported via email that everyone who submitted an entry to the **Paleo Ad Contest**—(Dawkins the Troll, Debbie the carver, Pyro Paula, Nancy, exiled to Montana, Fisher) wins. They were so much better than his. “Just tell me what kind of fossil you want, and I will do my best.”

Youth Section: Saturday, 10:00 a.m. to Noon, April 18, May 2, and May 16, 2020. Canceled due to Coronavirus. On March 7, only two kids came.

OLD BUSINESS

RMGM Texas Mineral and Show April 24, 25, 26 in Conroe: *This Show has been postponed to July 17–19, due to the COVID-19 Virus.* Nancy English volunteered to contact the event producer and work out a way to get the contact information from the drawing forms this year.

Building Issues: *Items in italics are still outstanding.*

1. On Tuesday March 30, 2020 Tony Lucci did a marvelous repair. The roof is braced against the outer wall by a row of XXs of steel in the attic. When he was putting things away from repairing the ceiling, he found that one of the XXs in one spot was propped up, and it fell down when he touched it. Tuesday, he brought in his welder and welded it back where it belonged. Do you know what that would cost if contracted? This is important because one of the things that we worry about is the weight of the attic. It is hung from the roof by rods. One of the things that keeps the roof up is the XXs around the edge.
2. *New batteries are needed for the solar light under the parking lot door hood. Would anyone like to take ownership of this? If not, Sigrid will have someone look at it.*
3. *The filters in the shop have not been changed.*
4. Sigrid had a handyman install exhaust fans in the restrooms. She did not ask him to install one in the Metalsmithing Lab—she must consult with Tony Lucci first. The light switches needed to be replaced. Now the fan comes on when one turns on the light.
5. *A tech specialist from Lee Thompson Air Conditioning told President Stewart that we need to put larger vents into the doors of the libraries to facilitate circulation. Kris Dingfield may take care of this. He has been out of the country. If the doors come off to put in the vents, maybe we can re-stain them too.*
6. *Time to look at a new air conditioner for the shop area. Due to the Coronavirus quarantine, the replacement air conditioner is delayed until late spring.*
7. *We should replace the meeting room carpeting.*
8. *We should replace the hot water heater.*
9. *A flowerpot with sand in it will satisfy the need for the outdoor cigarette disposal requested by Dunn Southwest.*

Membership: Beverly Mace, Membership Chairman, reported information regarding membership renewals. She asked that members pay their 2020 dues by March 31. Many have paid, but there are still 45 couples, 127 singles, 23 families, and 26 individual youth memberships not yet renewed. More members than usual have renewed online. She extended the deadline to May 15. Beverly explained that these statistics are typical for this time of year, although this year lower membership may last farther into the year. Beverly Mace and the Board encourage members to use the HGMS.org Web site to renew. Neal Immega has been checking the clubhouse for dues mailed in, and he forwards them to Beverly.

NEW BUSINESS

Tax Issues: Due to an accounting error our 2018 taxes were not submitted on time, and the IRS penalized HGMS. Nancy English moved to pay the penalty immediately and work with the Non-profit Division to be reimbursed if possible. Phyllis George seconded the motion, and it passed.

Zoom vs Skype: During the Coronavirus Quarantine it will be necessary to have Board meetings, some Section meetings, and committee meetings using online visual conferencing software. President Stewart is investigating the best options for efficiency, usability, and security. The Board also is considering a General Meeting of online Show-n-Tell. Sigrid will report her findings at the next Board Meeting.

Shop News: Neal Immega -

- **Jig Saw**—HGMS was gifted a powered jigsaw with a water feed that can cut ROCK. Neal cleaned it of rust (and silver bits), and it now runs fine with a jewelers' saw blade in it. If you have problems using a jeweler's saw by hand, you need this. It will become very different when Neal gets diamond-coated wire from China so that he can try it on rock. This will allow members to do inlay and fancy shapes. Neal will enlist Fred Brueckner's help.
- **TIG Welder**—Neal was hoping to get some professional instruction in Fort Worth when he showed up for his sister-in-law's wedding. Well, that is off. So he is going to move the welder to his home workshop during the virus scare where he can look at YouTube videos and try welding on silver. He has no problems with steel, but silver reacts differently.

Mask Makers: Jill and John Moffitt, with Al Mowery have been fabricating whole face vinyl shields. They fill orders from the non-profit Face Book group, Masks of Hope. The Moffitts are the only ones making essential face shields. One hundred (100) seamstresses are sewing masks for free. Masks of Hope distributes them free to local clinics and medical professionals. On Monday, April 6, the Moffitts and Al Mowery made 110 masks. On Tuesday, April 7, they made 150 masks. Two more volunteers came forward to help with future mask projects. That is all Jill needs. This is the worst time to share space with anyone, so they all are practicing clean hands and spaces and distancing. The Board honors these dedicated members for volunteering to perform this life-saving task.

SCFMS NEWS: JCHC - Sandra Neeley, Vice Chair sent the following message through the HGMS Web site. "The Johnson Co. (TX) Historical Commission was given the research papers of a deceased local historian and author. Among the author's things is a "History of State Mineral Society of Texas" (1943–1948) and March 1948 newsletter. If this group still exists or you know of a group that would like to have these items, please

provide a name and address and we will forward it.”

Scott Singleton responded to Sandra. “Thank you for searching us out and presenting us with this offer. The answer to your question is ‘Yes, I would be interested in receiving these historical materials. I can put them with the references I dug up on the formation of our society. They will form a nice prelude. In fact, I might even summarize them and create a ‘prolog’ to part 1 of my history series.”

The next Board of Directors meeting (probably a visual online meeting) will be Tuesday, 7:30 p.m. May 5, 2020.

The next General Meeting will be Tuesday, 7:30 p.m. April 28, 2020. Canceled due to the Coronavirus.

Adjourn: Nancy English moved to adjourn. Maggie Manley seconded the motion, and it passed. The meeting adjourned at 9:01.

APRIL GENERAL MEETING

We did not have an official General meeting, with an agenda, at the clubhouse. Instead, we had a “Roll Call” meeting, and a few folks dialed in to share information about their activities during the lockdown. Participating were Neal and Inda Immega, Bob and Nancy Fischer, Sigrid Stewart and Steve Blyskal, Mary Ann Mitcherling, Mike Sommers, Maggie Manley, and Paul Brandes, all on a Skype meeting.

Meeting like this gives folks a chance to catch up. Bob and Nancy were in Wyoming socially distanced from nearly everything and they had even been able to go rock hunting. Mike Sommers has been working from home. Mary Ann has been going through rocks. Maggie has been very productive – she has been making beaded cabochons. Neal and Inda have been down at the shop. Neal has been working with the Tig welder and repairing various machines. He installed a stainless-steel shaft prepared by John Cooper in one grinding machine. One Saturday two people stopped by for advice on repairing a machine, and they had a nice conversation in the parking lot. Sigrid and Steve have been going through rocks and babysitting grandkids for telecommuting parents. Sigrid has also been doing some baking; bread is the great comfort food of the lockdown!

Paul Brandes has probably been the busiest. He and Nathalie are teaching at Lone Star College, and in the middle of the semester had to convert from classroom instruction to remote instruction. They have been creating and uploading videos for students and running meetings: Zoom, Skype, Webex and plain old phone calls. Lone Star may be running hybrid classes in the fall.

At this point, we are still considering whether to meet in May. I kind of doubt that we will, and if we meet remotely, we may also try a remote presentation. Be looking for an announcement in the eBlast in the weekend before the May General meeting!

2020 HGMS OFFICERS

President	Sigrid Stewart	President @HGMS.org
First Vice President	Mike Sommers	Programs@HGMS.org
Second Vice President	Beverly Mace	Membership@HGMS.org
Secretary	Nancy English	Secretary@HGMS.org
Treasurer	Tatyana Kuhn	Treasurer@HGMS.org
Archaeology Section Board Member	Nancy Engelhardt-Moore	Archaeology@HGMS.org
Beading Section Board Member	Maggie Manley	Beading@HGMS.org
Daylight Section Board Member	Fred Brueckner	
Faceting Section Board Member	Randy Carlson	Faceting@HGMS.org
Lapidary Section Board Member	Phyllis George	
Mineral Section Board Member	Steve Blyskal	Mineral@HGMS.org
Paleo Section Board Member	Mike Dawkins	Field_trips@HGMS.org



HGMS SECTION CHAIRS

Archaeology Section Chair	Bob Moore	Archaeology@HGMS.org
Beading Section Chair	Kim Fuselier	Beading@HGMS.org
Day Light Section Chair	Nancy Searle	Daylight@HGMS.org
Gemstone & Faceting Section Chair	Randy Carlson	Faceting@HGMS.org
Lapidary & Silversmith Section Chair	Anthony Lucci	Lapidary@HGMS.org
Mineral Section Chair	Stephen Blyskal	Mineral@HGMS.org
Paleo Section Chair	Neal Immega	Paleo@HGMS.org
Youth Section Chair	Beverly Mace	Youth@HGMS.org

HGMS APPOINTED POSITIONS

Assistant Show Chair	Clyde McMeans	
Backbender's Gazette Editor		Editor@HGMS.org
Clubhouse Chair	Neal Immega	ClubhouseChair@HGMS.org
Day Light Contact Person	Nancy Searle	Daylight@HGMS.org
Donations	Neal Immega	Donations@HGMS.org
HGMS Education Chair	Maggie Manley	Classes@HGMS.org
Lapidary Templates	Mary Ann Mitscherling	Templates@HGMS.org
Librarian for Main Library	Neal Immega	Librarian@HGMS.org
Publicity Chair	Sara Metsa	Publicity@HGMS.org
Scholarships	Mike Sommers	Scholarship@HGMS.org
Show Chair	Scott Singleton	ShowChair@HGMS.org
Trade Show	Scott Singleton	Tradeshow@HGMS.org
Trade Show	Sigrid Stewart	Tradeshow@HGMS.org
Volunteer Coordinator	Nancy English	VolunteerCoordinator@HGMS.org
Webmaster	Sigrid Stewart	Webmaster@HGMS.org
Youth Section Assistant	Elizabeth Guynn	Youth2@HGMS.org

MAY 2020

SUN	MON	TUES	WED	THURS	FRI	SAT
<div>  Due to coronavirus, many club events are postponed Please check our online calendar at hgms.org/events/calendar for updated information  </div>					1	2 10a-12p Youth Section 12p-3p Shop
3 10a-3p Shop Open	4	5 10a-3p Shop Open	6 10a-3p Shop Open 1p-3p Day Light Section	7 10a-3p Shop Open 7:30p-9:30p Archaeology Section	8	9 10a-3p Shop Open
10 10a-3p Shop Open	11	12 10a-3p Shop Open	13 10a-3p Shop Open 6:30p-8:30p Gemstones & Faceting Section	14 10a-3p Shop Open	15	16 10a-12p Youth Section 12p-3p Shop 1:30p-3:30p Beading Section
17 10a-3p Shop Open	18 7:30p-9:30p Lapidary & Silversmithing Section	19 10a-3p Shop Open 7:30p-9:30p Paleo Section	20 10a-3p Shop Open 7:30p-9:30p Mineral Section	21 10a-3p Shop Open	22	23 10a-3p Shop Open
24 10a-3p Shop Open 10a-3p Shop Open	25	26 10a-3p Shop Open 7:30p-8:30p General Meeting	27 10a-3p Shop Open	28 10a-3p Shop Open	29	30
31						

JUNE 2020

SUN	MON	TUES	WED	THURS	FRI	SAT
X	1	2 10a-3p Shop Open	3 10a-3p Shop Open 1p-3p Day Light Section	4 10a-3p Shop Open 7:30p-9:30p Archaeology Section	5	6 10a-12p Youth Section 12p-3p Shop Open
7 10a-3p Shop Open	8	9 10a-3p Shop Open	10 10a-3p Shop Open 6:30p-8:30p Gemstones & Faceting Section	11 10a-3p Shop Open	12	13 10a-3p Shop Open
14 10a-3p Shop Open	15 7:30p-9:30p Lapidary & Silversmithing Section	16 10a-3p Shop Open 7:30p-9:30p Paleo Section	17 10a-3p Shop Open 7:30p-9:30p Mineral Section	18 10a-3p Shop Open	19	20 10a-12p Youth Section 12p-3p Shop 1:30p-3:30p Beading Section
21 10a-3p Shop Open	22	23 10a-3p Shop Open 7:30p-8:30p General Meeting	24 10a-3p Shop Open	25 10a-3p Shop Open	26	27 10a-3p Shop Open
28 10a-3p Shop Open	29	30 10a-3p Shop Open	<div> Due to coronavirus, many club events are postponed - please check our online calendar at hgms.org/events/calendar for updated information </div>			

THE BACKBENDER'S GAZETTE

NEWSLETTER OF THE

HGMS | 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)
2018-1st Large
2019-1st Large

AFMS



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)
2019-2nd (Large)

PUBLICATION

DATED MATERIAL—PLEASE DO NOT DELAY !

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

