



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

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

Volume XLVII - No. 05

May 2016



## **President's Message**

*by Paul Brandes*

**S**pring has definitely sprung in Southeast Texas! As I look around, I see the trees with their buds appearing, colourful flowers adorning the neighbors' yards, people in the nearby park gearing up for baseball season, and of course, everyone getting excited about that summer vacation they have been planning. Here at HGMS, springtime means another time honoured tradition—field trips. There have been several trips already this year for members to attend and from what I hear, each of them has been quite successful. I also understand that there will be more field trips in the coming months that are currently in the planning stages. If you have the time to attend one of the trips, I encourage you to do so. As most of you probably already know, collecting opportunities within the State of Texas for minerals, fossils, and other treasures are rare. If you are a new member and are not receiving the weekly email blast from Jim Kendall concerning field trips, upcoming meetings, or other Society activities, send Jim an email to "kendall\_ja(AT)yahoo.com", replacing the (AT) with @, to get on the list. Also, don't forget that we have a fully equipped shop in our Clubhouse to cut, polish, and clean those new finds into something beautiful. For more information, see our Shop Foreman Neal Immega for proper instruction on how to use the equipment.



## **Upcoming Programs**

*by Sigrid Stewart, 1st Vice President*

**A**lan Cherepon of the Austin Gem & Mineral Society will speak on the Karnes Uranium District and display specimens he has collected. This area in Karnes County, Texas, is well known for uranium mines, but it also hosts an interesting assortment of minerals—many fluorescent—as well as petrified wood and concretions.

## Contents

President's Message .....	1
Upcoming Programs .....	1
Purpose of HGMS .....	3
2016 HGMS Officers.....	3
An Off-Road Field Trip to the Caty Mountains in California to Collect Lapidary Quality Agate. ....	5
Archaeology Section .....	7
Day Light Section .....	8
HGMS Shop Heroes Keeping Equipment Functional .....	9
Juniors Using Shop .....	9
General Meeting Minutes .....	10
Board of Director's Meeting .....	12
Bench Tips .....	16
Household Products That Can Be Used As Rock Cleaners .....	17
The Spell Checker .....	18
The Helix, an Awesome Aquamarine .....	19
Rocks, Minerals, and Fossils in the News--Tully Monster .....	20
New Type of Moon Rock Discovered by Chinese Lunar Lander .....	22
Show Time 2016 .....	26
Calendars .....	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.*

**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 June 2016 issue by Sunday, May 15, 2016.*

*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 & 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://www.hgms.org>.

---

*President's Message continued from page 1*

Springtime also means it is show time in Texas. Recently, we have had gem and jewelry shows in Clear Lake and Intergem at NRG Arena. In a couple weeks on April 22–24, some of the most beautiful gem and mineral specimens in the world will be on display at the Houston Fine Mineral Show, located at the Embassy Suites Hotel on Sage Rd., near the Galleria.

As always, HGMS will have a table to showcase our Society and what we do in the Houston area. Volunteers are welcome to help set up and attend the booth during the Show. Another event on the calendar is our own Trade Show, scheduled for Saturday, April 30. Again, volunteers are welcomed to show up and help in way possible.

Finally, on May 7–8, the Lubbock Gem & Mineral Society is hosting the South Central Federation Mineral Society Show for 2016. I mention this show because in 2017, we will be hosting the SCFMS Show during our Annual Show that November, barring any natural disasters of course! Our 2016 Annual Show is also moving along nicely. If you are a new or seasoned member and have an interest in seeing the “behind the scenes” activities that go into the making of the Annual Show, I encourage you to talk with one of the Show Chairs or attend one of the upcoming Show Committee meetings to find out more.

The last item I want to mention is that the Clubhouse has Internet service once again! A new carrier and new “hotspots” were installed since the last President’s Message, and both are working great. I was at the Clubhouse and was impressed by the speed of the new connection (4G LTE) over that of the previous system. This allowed Nathalie and me to complete more of the Library reorganization effortlessly. The new system should allow any member connecting to our server to access the Internet freely and for us to conduct Society business more efficiently. Many thanks go out to Jim Kendall and Phyllis George for this leap in technology. If you see either of them at the Clubhouse, stop and thank them for their work. It goes to show that nothing is impossible with a little teamwork and ingenuity.

See you next month, and thank you for being a member of HGMS!



Davis Creek Rainbow Obsidian

## **An Off-Road Field Trip to the Caty Mountains in California to Collect Lapidary Quality Agate.**

*by John Anderson, The Miner*

*Member of the Houston Gem & Mineral Society*

I have a friend, Jim Puckett, who lives in Riverside, California. Whenever I go to California, I try to look him up. Jim is an avid rock collector. When he knew I was coming to California, he talked to his friend, Bill Depue. Bill had a trip going to the Caty Mountains in California, and Jim asked if I could go along on this trip. Bill said "Sure." The trip was the next day, so we left early in the morning for Barstow, trying to beat the traffic to Las Vegas, Nevada. It was about a two-hour drive from Riverside. At Barstow, we met at Diamond Pacific Tool Corporation, which is owned by Bill Depue. This company store is a class act in that it has every conceivable item that any lapidary hobbyist would ever want or need.

We met two other people going on this trip, a Mr. Marvin and a Mr. Kent. We were going rock hunting on BLM land, which stands for the Bureau of Land Management (where you can legally hunt rocks in the State of California).

We loaded our tools and a few gunnysacks into one of our two four-wheel drive vehicles to hold the treasures we hoped to find. We drove for about 30 miles on US Highway 15 toward Las Vegas, turned right onto a dirt road, and headed up into the Caty Mountains that loomed ahead. I don't know how I was so lucky to get a ride to a famous rock collecting area in great 4-wheel drive vehicles. Bill must be a magician in knowing where he was going; I found it very confusing. Many ATVs and trucks had driven into that area. I asked Bill how he knew which trail, path, or wash to take. Bill said that he had been there a few times, but I found it a humbling experience. Our trucks easily handled the rough terrain we were traveling, but we had to go slowly for 30 miles or more. It was amazing to watch Bill navigate those washes without throwing me through the windshield. All I can say is, he must be a great gambler for he always picked the correct wash or trail for getting to the Caty Mountains, then into an area known as Baxor Wash, and finally getting to Top Notch Ridge.

We found some of the greatest agates and some that would be considered jasp-agate. The majority of all of the agates that I saw had the most beautiful pastel colors—different shades of pinks and reds that made you say "WOW!" I was limited to carrying 10 pounds of rocks in my luggage on my return trip to Houston, TX but, when Mr. Kent gave me two great specimens, I now had to arrange to bring these specimens home with me. In all six hours of driving in the area of Caty Mountains, we never saw any other vehicles—until we were leaving and only a few miles from the main road, US Highway 15.

My special thanks go to Bill Depue for letting me join his trip, and to Jim Puckett, who made it all possible. Three photos are on the next page.

John Anderson, The Miner



Cady Paisley



Paisley Lace



Pink Tube Agate, Cady Mountains



Bob Moore, center, talking to Marshall Bird, left



Ún´tice culture:  
Pin with Celtic Spiral



**Archaeology Section***by Nancy Engelhardt-Moore*

**A**pril 7, 2016: Bob Moore, Section Chair, called the meeting to order at 7:35 p.m. He noted a good turnout and then reported that he was waiting to hear back if the invited speaker will be available. Bob then asked for a motion to approve the March minutes, which was moved by Marshall Bird and seconded by Veronica Murdoch. The motion was approved unanimously. A brief discussion followed on upcoming talks. Bob introduced the speaker, Dr. Garth Clark, the Archaeology Section Vice-Chair.

**Program:** Garth gave a talk entitled ***"The Celts: A Tracing of Celtic History through Archeology, Linguistics, Coins, and Genetics."*** He first spoke about the definition of "Celt" (pronounced "kelt"). Is it ethnic, linguistic, or cultural? The Celts were people who spoke Celtic languages and had cultural similarities. Based on DNA, "Celts" originated in central Europe—Germany and Austria—around 4,000 years ago and spread through waves of migrations as great hordes up to 300,000 strong overwhelmed local tribes for 400 years!

They built an intricate 3,000 km road system on which the Romans later capitalized. Since they had well-built wheels, they used horses to move around easily. This allowed them to cross the Alps and spread as far east as the Tarim Basin in China. At one point, they even captured Rome and laid siege to the Capitoline Hill, invaded Greece and Macedonia, killing the King, and laid siege at Delphi.

One group of Celts, known as the Galatian tribes, was from north central Asia Minor or Anatolia, Turkey. These people were part of the great migration that spread over an extensive area. In 63 BC, Caesar defeated the Galatians in NW Spain, and Galatia became a client-state of the Roman Empire. The "Celts" were eventually overwhelmed on two sides by the Germans and Romans. Today, their remains are seen in England and Ireland, one of their last strongholds.

Garth talked about the various cultures and the development of Celtic pottery, Greek-like weapons, measurement weights, ingot Torcs (closed rings used to transport wealth), coins, burial customs, and trade. Items they traded included wine, olive oil, glass, amber, salt, tin, furs, and gold.

They reveled in warfare, and kids left families early for military training. Our image of them having braided long hair is correct, but they didn't have beards. They used spiral rings for hair ties that were first thought to be finger rings. Their helmets had flaps, not how we usually depict them. Garth concluded by noting that the Celtic day started at sunset, and their New Year was November 1. Q&A followed the talk, and attendees visited and viewed Celtic items and coins that Garth brought for Show & Tell. The meeting adjourned at 8:45 p.m. Photos taken during the meeting are on page 6.

*Continued on page 8*

**May 5, 2016:** Bob Moore will give a talk on “*The Glories of the Byzantine Empire.*” The Byzantine Empire, or Eastern Roman Empire, lasted from the fall of the Western Roman Empire in the 5<sup>th</sup> century AD until it was conquered by the Ottoman Empire in 1453 AD. During this time, it was the most powerful economic, cultural, and military force in Europe and the Near East. Come see the amazing “glories” left from that time including beautiful churches full of outstanding mosaics, large underground cisterns, impressive defensive walls, ships, and artwork. You will be captivated by many of the impressive Byzantine artifacts. Don’t miss this exceptional presentation!

### Day Light Section

*April 6, 2016*

*by Nancy Fischer*

**T**he left picture of the bracelets—some still under construction—are of the project completed at the April meeting. The bracelets belong to Nancy English, Mamie Lew, Bernard Rich, Xuan Ye, Nancy Fischer, and John Mitscherling. Karen Burns was the instructor, and she made the bracelet on the right. Mary Ann Mitscherling worked on a braided wire bezel.

Bernard Rich brought homemade challah, a braided bread, to complement our alternate project, a braided wire bezel. It was delicious—the bread, not the bezel.

Section members need to save their scrap copper wire and small bits for the May 4th meeting. Neal Immega will teach us how to fuse the copper. Torches will be involved. With luck, a pendant will be the result.

At our June 1st meeting, Karen Burns will demonstrate air chasing.



Photo by Nancy Fischer



Photo by Jeanne Barna



HGMS Shop Heroes Keeping Equipment Functional

Photos by Jeanne Barna  
3/28/2016



Neal Immega and Gary Anderson  
making repairs



John Cooper repairing a saw

Juniors Using Shop  
(Images from the past)  
Photos by Phyllis George



## General Meeting Minutes

March 22, 2016

*by Paul Brandes for Nancy English, HGMS Secretary*

The meeting was called to order by President Paul Brandes at 7:30 p.m. He thanked everyone for coming to the March 22, 2016 General Meeting. The meeting was attended by 18 regular members and one new member.

President Brandes asked the new member to stand and be recognized. The new member is Paula Elder.

**Minutes:** The April 2016 BBG was not published as of this meeting, so the February General Meeting minutes have not been read by the members. The vote to approve those minutes was postponed until the April General meeting.

### President's Announcements:

1. Please keep Nancy English in your prayers after surgery (she's currently home resting).
2. Dues are due! See Beverly; otherwise your membership will lapse--Uncle Neal will bar you from the Shop!
3. President Brandes attended the General Meeting of the Clear Lake Gem and Mineral Society on March 21. Nathalie Brandes will be the presenter at the Clear Lake General Meeting on April 18 at 7:30 p.m.
4. **Trade Show**--April 30, 2016: Volunteers are welcome; see Chase Jennings.
5. **2016 Show:** If you have not already, see Scott Singleton, Sigrid Stewart, or Clyde McMeans concerning volunteering.

### Section Reports

In the interest of time, President Brandes asked the members to look at the BBG, the Web site, or to read the weekly email blast from Jim Kendall for future Section meetings and presentations. President Brandes invited Section Chairs at this time to make any additional special announcements.

### Old Business

Also in the interest of time, President Brandes asked the members to follow the progress of **Old Business items** from the February 2016 Board meeting and the January 2016 General Meeting minutes as published in the March 2016 edition of the BBG.

### New Business

1. **Library News:** The Reorganization of the Library has begun. Please **DO NOT** move books currently on the table. They are there for a reason! The Librarian asks that meetings or other activities not be held in the Library

during this time. Progress will be slow but steady. If you have suggestions or wish to volunteer, see Nathalie Brandes.

2. **Internet:** Currently, the Club does not have access to the Internet. Jim Kendal and Phyllis George are working to get it restored with a new, better, and faster system.
3. **Additional New Business Items from the Floor:**
  - a. A group went to Mexico with Matt Dillon for his wedding. While there, they did some agate collecting.
  - b. The Scout Fair is Saturday, April 16, 2016.
  - c. The Shop is being under-used. On March 21, four people used the Shop. On March 22, one person used the shop.
4. **The next Board of Directors meeting is Tuesday, May 3, 2016, at 7:30 p.m.**
5. **The next General Meeting will be Tuesday, April 26, 2016 at 7:30.** Steve Blyskal will speak on "Minerals of the Southern Illinois Fluorspar District," The Southern Illinois Fluorspar District, along the Ohio River, was America's primary source of fluorspar for over 150 years. It was also the source of some of the finest fluorite specimens ever found in the USA. This talk will briefly describe the geology of these deposits, how it was discovered, and why it was so important during the Industrial Revolution in the late 19<sup>th</sup> and early 20<sup>th</sup> century. The mineral specimens found in the mines will be discussed and illustrated with photographs.

**Show n' Tell:** Steve Blyskal presented garnets.

**Drawing:** Joan Riley won the Snow Flake Obsidian. Mike Summers won the Jasper Agate.

**Adjourn:** Karen Burns moved to adjourn the business meeting, and Joan Riley seconded. The motion passed unanimously, and the meeting was adjourned at 7:51 p.m.

### Refreshment Break

**Refreshments:** Provided by Paul Brandes.

**General Meeting Program:** President Paul Brandes called on Vice President Sigrid Stewart to introduce our speaker for the General meeting. Michael Sommers spoke on the Searles Lake Gem-O-Rama. For over 70 years, the Searles Lake Gem & Mineral Society has hosted the "Gem-O-Rama," supported by Searles Valley Minerals company, who allows collectors the unique opportunity to acquire their own specimens of the rare minerals found in the lake. These minerals are evaporites, and they include one of the rarest minerals on the planet—the famous **Hanksite**. (a sulfate mineral, distinguished as one of only a handful that contain both carbonate and sulfate ion groups)! Come learn about the area and the show, see these minerals in person, and smell the brine.

**Board of Director's Meeting***April 5, 2016**by Nancy English, Secretary*

	President - Paul Brandes	X	Archeology Rep – Garth Clark
X	1st Vice President – Sigrid Stewart		Beading Rep – Diane Sisson
X	2nd Vice President - Beverly Mace	X	Daylight Rep - Mary Ann Mitscherling
	Treasurer - Rodney Linehan	X	Faceting Rep - Gary Tober
X	Secretary - Nancy English	X	Lapidary Rep - Phyllis George
	Former President – Ray Kizer	X	Mineral Rep - Mike Sommers
		X	Paleontology Rep - Mike Dawkins

**Call to Order:** Vice President Sigrid Stewart called the meeting to order at 7:35 p.m. A quorum was present. Two non-voting members attended the meeting: Scott Singleton—Web page Supervisor and Show Committee Chairperson; Chase Jennings, Trade Show Chair.

**Approval of Previous Month's Board Minutes:** Gary Tober moved and Beverly Mace seconded the motion to approve the March 1, 2016 Board Meeting as published in the April 2016 BBG. The motion passed.

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

### **Officer, Committee, and Section Reports**

**Archaeology Section - Thursday April 7 at 7:30 p.m.** is the next meeting. Dr. Garth Clark will present **The Celts: A Tracing of Celtic History through Archeology, Linguistics, Coins, and Genetics**. Garth Clark, Archeology Section Vice-Chair, will speak on "*The Celts: A Tracing of Celtic History through Archeology, Linguistics, Coins, and Genetics*." Who were the Celts? Garth will review the rise of a Celtic culture in central Europe around 4000 years ago and how it spread throughout Europe and into central Turkey through archeology, coins, linguistics, and genetics.

**Beading Section:** The next regular Beading Section meeting will be on **Saturday, April 16, 2016 at 1:30 p.m.** Program to be announced.

**Day Light Section**—The next regular meeting is **Wednesday, April 6 at 1:00 p.m.** There will be two possible projects: **Beaded Bracelet** or **Bezel for Cabochon, made from braided wire**.

**Education:** The Board discussed the purchase of a dry erase board for use in classes. We will authorize Nathalie Brandes to buy the board and possibly a mounting easel for it, keeping the price to under \$100.00.

Those interested in taking classes should contact Carrie at [carriehart2000@yahoo.com](mailto:carriehart2000@yahoo.com) to reserve their class space or to request classes.

**Gemstones and Faceting Section:** The next regular meeting is **Wednesday, April 13, 2016 at 6:30 p.m.** Program to be announced.

**Lapidary and Silversmithing Section:** The next meeting is on **Monday, April 18, 7:30 p.m., Edward Clay will demonstrate stone carving techniques.** The shop will be open from 5:00 p.m. until 7:15 p.m.

**Mineral Section** - The next regular meeting is **Wednesday, April 6 at 7:30 p.m.** The Mineral Section will be hosting its **Annual Auction** to help raise money for the Section. Once again, we invite all HGMS members to bring specimens to the auction. **This is how it works:** all of the proceeds (100%) of at least one (1) specimen of your choice must be donated to the Section. Five (5) additional specimens are allowed for each donor with a portion of those specimens (10%) going to the Section and the rest going to the donor. Setup will begin at 6:30 p.m. with viewing from 7:00 to 7:30. After a short business meeting, bidding will begin and last until the final item is sold.

The **second Mineral Section meeting is Wednesday, April 20, at 7:30 p.m.** **Steve Blyskal** will present a program on **Fluorite Crystals from Southern Illinois.** He will have pictures and specimens. Members are encouraged to bring their own fluorite.

**Paleo Section:** The next meeting is scheduled for **Tuesday, April 19, 2016 at 7:30 p.m.** Program to be announced.

### HGMS PALEO FIELD TRIPS

1. Another **Midlothian** field trip is scheduled for April 23. The trip is already full.
2. In April, Mike Dawkins will announce details for a **Jasper, Texas,** field trip on May 14 to look for fossil wood. Look for details in the weekly email blasts by Jim Kendall.

### Non-HGMS PALEO FIELD TRIPS

The following trips are not sponsored by HGMS. Watch for details from Jim Kendall in his weekly email blasts.

1. **Field Trip to Ladonia, TX to collect Fossils April 10**
2. **April 30 Field Trip to McGregor, TX:** To collect TURRITELLA and attend the Waco Gem & Mineral Show.
3. **May 14** - Vetro Glassblowing: create your own blown-glass art piece, \$45-\$65. [katiripeters@gmail.com](mailto:katiripeters@gmail.com)

**Youth Section:** The next meetings are scheduled for **April 2 and April 16, 2016 from 10:00 a.m. until 12:00 noon.**

**BBG Editor:** Phyllis George reported that the deadline to send articles to her for the May 2016 issue of the BBG is April 15, 2016.

## Old Business

1. **WEB SITE PROGRESS:** Scott Singleton presented requests from our Webmaster, Autumn Breese. These requests are to define expectations for updates in the interim, until programming is finished to allow Sections to make their own changes.

Autumn requested that:

- a. The Board provides a list of all the club email addresses that will receive Section and Committee emails. Scott circulated a spreadsheet put together by Autumn showing which email addresses have been received for the Section email forwards on the Web site. Board members added those that were not on the list. Scott will enter the new addresses onto the spreadsheet and forward it to Autumn, who will incorporate the information onto the Web site so email forwards can be activated.
- b. Each Section designates one person who can update their Section's material, and that area will be password protected. Autumn is working on an update process. Scott says that the Board needs to formulate an update policy. Some policy and timeline proposals are listed below.
- c. In the meantime, all changes and requests should be sent to Webmaster@hgms.org. Autumn will check the Webmaster email once a week and incorporate changes on Monday. All emails sent to the webmaster will be replied to within 10 days.

The Board discussed and prioritized a list of Web site enhancements to increase functionality. This list is in line with what was originally proposed by the Web Committee and agreed to by the Board. The list will be passed to the Web Committee for implementation.

2. **Club House Repairs / upgrades:** Mike Dawkins will discuss the coordination of the new doorbells with those who installed the current one. Then he will proceed to purchase two doorbells.
3. **Security System Status:** Garth Clark has been delayed in researching smoke detectors and mounting the outdoor cameras and smoke detectors.
4. **Dunn SW:** Gary Tober volunteered to be our representative to Dunn Southwest.
5. **Trade Show: April 30, 2016:**
  - a. The booth layout proposed by an HGMS member was rejected by the BOD. It is too late to make changes for the April 30 Trade Show. And on careful examination, it will not make the best use of the space. Some of the design has already been incorporated by Chase Jennings in the garage and outdoors.



- b. Chase has a Shop Manager lined up to supervise the closing of the building after the Trade Show.
  - c. Only three vendors have not been confirmed as members of HGMS. Chase will be contacting them this week. All vendors must be verified as HGMS members prior to the show date. Beverly Mace and Chase Jennings reviewed the member list.
  - d. It was suggested that the food vendor be moved to the neighbor's parking lot in order to reduce the noise in the club and parking lot. Chase will review it.
  - e. Gary Tober moved and Mike Dawkins seconded a motion to put the Trade Show poster on the new Web Site. The motion passed.
6. **Replacement of Wi-Fi in club building:** The two Netgear LTE Gateway 6100Ds arrived March 15. The equipment has been installed. TechSoup provided equipment from Mobile Beacon that can access the nearby Sprint tower. TechSoup makes the affordable high-speed Internet equipment and service available for non-profit organizations. Nancy English moved and Gary Tober seconded a motion to reimburse Phyllis George for her out-of-pocket expenses for this change. The new Wi-Fi works fast and reliably well. Thank you to Phyllis George and to Jim Kendall for their tireless work on this project.

## 7. Scholarships: STATUS

- a. **Update Scholarship Contact list:** Sigrid Stewart will forward the contact information for the colleges to Nancy English. Nancy will create the letters for Paul Brandes' signature.
  - b. **Chase Jennings** will broadcast the Scholarship information and application on Face Book as soon as we provide the information.
  - c. **The application** can be accessed on the old Web Site, on Facebook, and a hard copy will be sent with the letter. The BOD will encourage the Webmaster to add the application to the new Web Site as soon as possible.
8. **Library: Subscription to magazines:** Sections should provide publication names and costs to Nancy English so she can order publications the Sections want available in the Library.

## New Business

- 1. **Volunteers for Fine Mineral Show:** Nancy English has been gathering names of potential volunteers for the Fine Mineral Show on April 22-23-24 at the Embassy Suites on Sage Road in the Galleria. She will publish a schedule and ask for more volunteers in Jim Kendall's blast on Sunday.
- 2. **Tom Wright's Pin Collection** – Neal Immega has received Tom Wright's collection of show pins. In years past, HGMS would issue yearly pins. Neal has 1982 (pin and patch), 1983, 1984, 1986, 1987. He will collect

what he can and put together a board with them. If you have pins, please contact him at [n\\_immega@swbell.net](mailto:n_immega@swbell.net) and let's see what we have. It will be displayed in the lecture hall.

2. **Library News:** Nathalie Brandes, our Librarian, wants to order a few labels and protectors for the books in the Library. Gary Tober moved and Garth Clark seconded a motion to allow Nathalie to place an order for up to \$100 to purchase those supplies.
3. **The next Board of Directors meeting is Tuesday, May 3, 2016, at 7:30 p.m.**
4. **The next General Meeting will be Tuesday, April 26, 2016 at 7:30 p.m.** Steve Blyskal will speak on **"Minerals of the Southern Illinois Fluorspar District."** The Southern Illinois Fluorspar District, along the Ohio River, was America's primary source of fluorspar for over 150 years. It was also the source of some of the finest fluorite specimens ever found in the USA. This talk will briefly describe the geology of these deposits, how it was discovered, and why it was so important during the industrial revolution in the late 19<sup>th</sup> and early 20<sup>th</sup> century. The mineral specimens found in the mines will be discussed and illustrated with photographs and actual specimens that come from collections of members of the HGMS.

**Adjourn:** Gary Tober moved to adjourn the meeting, and Garth Clark seconded. The motion passed unanimously, and the meeting was adjourned at 9:20 p.m.

### Bench Tips

by Brad Smith

*"Bench Tips for Jewelry Making" and "Broom Casting for Creative Jewelry" are available on Amazon*  
*[www.BradSmithJewelry.com](http://www.BradSmithJewelry.com)*

## DRILLING SMALL ITEMS

**S**mall pieces need to be held securely while drilling 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 over the jaws of the pliers if needed to avoid scratches.



## DRILLING A STONE

One of the things my students often ask to do is drill a hole through a piece of gemstone. The usual thought is to get a diamond drill, but I've been disap-

pointed with them. I think the reason is that the tip of the drill is just pivoting in the hole and does not 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 are very reasonable in price. For instance, a 2mm-diameter drill is about \$6.

Chuck up the core drill in a drill press, Dremel, or Foredom and be sure to keep the drilling zone wet to cool the tool and to flush out debris.

Also, if you're drilling a through hole, go very easy on the pressure when the drill is about to cut through. Otherwise, you will usually chip off some of the stone surface around the hole.



### Household Products That Can Be Used As Rock Cleaners

*by Betsy Martin*

Via The Franklin County Rockhounder, 5/2007; via Gem Cutters News, 4/2007;  
via The Collecting Bag, 12/2006. Via *Breccia* 6/2007,  
via The Rockhounder 4/2015

### **S**afety:

Always use plastic containers, rubber or nitrile gloves, eye protection, good ventilation, and great care when handling these products.

1. **Zud** or **Barkeeper's Friend** cleansers (contains oxalic acid) - Warm or hot solutions will remove iron stains and are helpful with clay deposits. These cleaners can be used with a toothbrush on sturdy surfaces.

2. **Toilet Cleaner** (the hydrochloric acid type) dissolves calcite rapidly.

\*\*\* after treating anything with an acid, rinse very carefully and soak in ample fresh or distilled water for a while to leach out any acid remaining in crystal seams and fractures. You can then follow up with a final soak in dilute Windex to neutralize remaining traces of acid.

3. **Lime Away** (dilute hydrochloric acid) dissolves calcite more slowly. Rinse as you would for other acid treatments (see above).

**Get last-minute news about club events by sending a note to Jim Kendall at [kendal\\_ja@yahoo.com](mailto:kendal_ja@yahoo.com)**

4. **Calgon**—Dissolve this powdered water softener in water. Use for clay removal.
5. **Vinegar** (Acetic acid), soda water, colas (carbonic and phosphoric acids) - Will slowly etch out very delicate fossils in limestone. Rinse as you would for other acids (see above)
6. **Iron Out** (iron stain and clay remover) Mix with warm water and use with good ventilation. It will lose strength if stored. Rinse with plain water.
7. **Bleach**— Dilute solutions of bleach can remove organic deposits and disinfect minerals collected in areas used by livestock. Rinse with plain water.
8. **Hydrogen peroxide**— Use to remove manganese stains. Rinse with plain water.
9. **Citric acid**- Use to remove manganese stains. Rinse as above for acids.
10. **Windex** (with ammonia) A good clay deposit remover and final surface cleanup. Works well in ultrasonic cleaners. Rinse with plain water.
11. **Distilled Water**— Use to clean sensitive species and as a final soak after acid treatment.

### Removing Thin Coatings:

On moderately hard minerals—use **toothpaste** (a feldspar abrasive) and a toothbrush.

On hard minerals— use **toothbrush with pumice powder and water**.

On calcite (including bruised places)- quickly dip in vinegar or **Lime Away** and rinse thoroughly. Repeat. Soak in plain water afterward to leach any acid from cracks.

### Cleaning Tools:

Toothpicks, seam ripper, bamboo sticks, sewing needles in a pin vise, old dental tools, old toothbrushes, periodontal brushes, canned air, X-ACTO® knife, single edge razor blades, cheap small stiff bristle brushes.

### The Spell Checker

*via email forwards, Rockin' Around 09/2007,  
via Rockhound Rambling 11–12/2015*

Aye halve a spelling checker,  
It came with my pea see.  
It plainly marks four my revue  
Mistakes I dew knot sea.  
Eye strike a key and type a word  
And weight four it two say  
Weather eye am wrong oar write  
It shows me strait aweigh.

As soon as a mist ache is maid  
It nose bee fore two long  
And eye can put the era rite  
Its rarely ever wrong.  
I've scent this massage threw it,  
And I'm shore your pleased too no  
Its letter prefect in every weigh;  
My checker tolled me sew.

## The Helix, an Awesome Aquamarine

by Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

Picture by Don Shurtz of "The Helix" on display at the

Perot Museum of Nature and Science

from Chips and Chatter 3/2016

The "Helix Aquamarine" is one of the most interesting mineral specimens on display at the Perot Museum of Nature and Science in the Lyda Hill Hall of Gems and Minerals. The Helix was mined in the 1930s in the Marambaia Region, Carai, Jequitinhonha Valley, Minas Gerais, Brazil. The specimen was originally owned by the family of Professor Doctor Hermann Bank of the famous Idar-Oberstein family of gem cutters. It remained in their private collection in its natural state, dirty and unprepared for 80 years. Very few photographs of the specimen were taken until recently. A photograph of the specimen did appear on the cover of Dr. Bank's private book published in 1981, but had never been professionally photographed or cleaned and displayed for a public audience. The specimen is over 15 pounds in weight. It has never been heat-treated; it remains the greenish-blue color for which Aquamarine was named.



Arkenstone of Richardson, Texas helped broker the deal that brought the Helix from Germany to its new owner in Dallas. Arkenstone also cleaned and prepared the specimen for display. The Helix is on loan for display at the Perot Museum. Like all loaned specimens, the loan is for three years. I can only hope that this piece will remain on loan for longer than the nominal three-year period.

The helical structure looks like a continuous spiral crack in the piece. However, it is not a crack, but a trace of the faces of phantom crystals inside the specimen. The exact reason the visible surfaces are spiral (helical) in shape is not known. Some speculate that the piece was rotating during formation; others believe that it is a physical property of crystal formation. The Helix is not the only aquamarine specimen to show a helical structure inside the piece, but it is far-and-away the most spectacular.

---

*Continued on page 20*

When I look at the piece, I can see six cycles of the helix. I often think that I see three cycles and then three additional cycles, but I can't determine if the cycle groups are attached. I would encourage you to make your own examination and see what you think.

**Reference:**

- Beryl variety Aquamarine, <https://www.facebook.com/Arkenstone.iRocks>
- The Earth Story, <http://the-earth-story.com/post/84667485805>

**Rocks, Minerals, and Fossils in the News--Tully Monster**

*After Over 60 Years, Scientists Have Classified These Mysterious Fossils*  
by Shaena Montanari, CONTRIBUTOR, via Rock Talk 03/2016

<http://www.forbes.com/sites/shaenamontanari/2016/03/16/one-of-the-most-perplexing-fossils-ever-has-finally-been-classified/#5c3ebbf56665>



**Life reconstruction of the Tully monster (Image credit: (c) Sean McMahon)**

Some have called it the most vexing fossil ever found. The enigmatic fossils of bizarre creatures have been popping up in Illinois—and only Illinois—since 1958, when they were first discovered by amateur fossil collector Francis Tully. This week, a team of researchers from the Field Museum, Yale University, Argonne National Laboratory, and the American Museum of Natural History have finally figured out what the so-called “Tully monster” really is after more than 60 years. This research is published today in the journal *Nature* lead by paleontologist Victoria E. McCoy.

The mystery of the Tully monster started in 1958—but it really dates back more than 307 million years to the Carboniferous period. They are strange, soft-bodied, tubular creatures that were aquatic and ranged in size from 6-12 inches. Their eyes were on stalks and they possessed a skinny snout that ended in a toothy claw-like appendage. The Tully monster, or *Tullimonstrum gregarium*, is found only in the Mazon Creek region of Illinois, 50 miles from Chicago. Its strange body plan unlike anything found anywhere in the world completely puzzled scientists for decades.

The team of researchers studied over 1200 specimens of Tully monsters, closely examining their morphology. They were able to describe new evidence for anatomical features like a notochord (a cartilaginous backbone), gill pouches, and multiple rows of teeth. In concert, all of this new evidence was used to build a phylogenetic tree where it was determined the Tully monster is actually



a vertebrate and is related to the jawless lamprey. This discovery is remarkable, as up until now even the most basic classification of the Tully monster—the phylum—was completely unknown.

**Lamprey mouth.** There are 38 living species of lamprey alive today. (Photo credit: Drow Male, CC BY-SA 3.0 Wikimedia Commons)

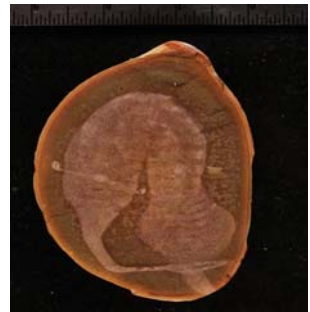
This discovery was made possible by cutting-edge X-ray technology at Argonne and painstaking efforts of Field Museum staff digitizing images of their collections. Scanning electron microscopes (SEM) and synchrotron at Argonne looked for trace elements in the fossils to compare to living invertebrates to look for similarities and analyze the preservation of Tully monsters.



But allowing thousands of images of these specimens to be searchable really made this project possible. “By digitizing our collections, taking photographs of our fossils and placing all of the data into a database, we made it easier for our researchers to search our collections and find specimens with new and sometimes rarely preserved evidence that may be critical for their research,” explained Paul Mayer, The Field Museum’s Fossil Invertebrates Collections Manager.

**A specimen of a Tully monster from The Field Museum** (Image credit: Paul Mayer)

The Tully monster became the Illinois state fossil in 1989, two years after the death of Francis Tully. Solving this mystery and finally showing the Tully monster is actually a vertebrate is an exciting finale to the story of a much beloved fossil in the state of Illinois. Steve Brusatte, a paleontologist from Illinois and author of *Stately Fossils* fondly remembers the Tully monster from his youth: “A small museum in Utica, a town close to where I grew up, had a Tully Monster and I remember being awed by the aura of mystery. So it was a great source of pride. Similar to the pride I had in Michael Jordan and the Chicago Bulls.”



Perhaps one of the best aspects of the Tully monster story is summarized by Mayer: “When I talk to school groups, I used to use the Tully monster as an example of a mystery that paleontologists have been trying to solve ever since it was discovered. Now I’ll have to change my talk and use it as an example that highlights the importance of how amateur paleontologists and researchers from different backgrounds can work together using new technologies and museum collections to solve a mystery.”

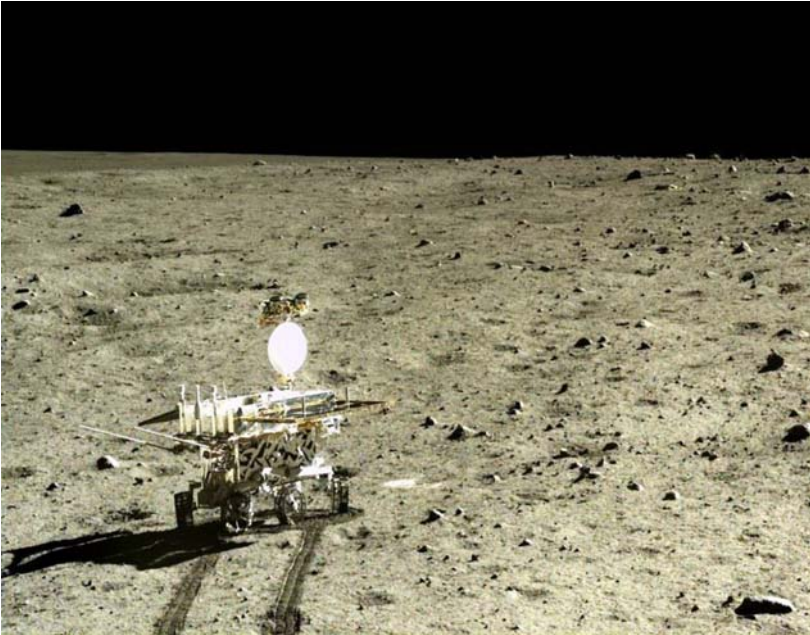
Shaena Montanari is a paleontologist at the University of Edinburgh.

## New Type of Moon Rock Discovered by Chinese Lunar Lander

by Tim Radford

*Courtesy of Guardian News & Media Ltd., via Rock Talk 1/2016*

**T**he Yutu rover, part of the Chang'e-3 unmanned lunar mission, has identified a type of basalt unlike anything collected by previous Soviet or US missions.



**Chinese Lunar Exploration Program (CLEP)/ China National Space Administration (CNSA)**

**China's Yutu rover on the moon.** The rover has identified the new basalt from a comparatively young lava flow.

Chinese scientists have identified a new kind of rock on the moon. An unmanned Chinese lunar lander, launched in 2013, has explored an ancient flow of volcanic lava and identified mineral composition entirely unlike anything collected by the American astronauts between 1969 and 1972, or by the last Soviet lander in 1976.

The news, dispatched from an impact crater in the Mare Imbrium, is another reminder that planetary exploration is no longer the preserve of the Russians, the Americans, or the European Space Agency. Japan, India, and China all have launched lunar orbiters on their own rockets. Britain launched its own satellite, Prospero, on its own rocket, Black Arrow, from its own launch site in Woomera, Australia, in 1971—and then withdrew from the space race.

Since the end of the Apollo program, US scientists have conducted their lunar research mostly from orbiters. Chang'e-3, China's unmanned lunar mission, put down a rover called Yutu or "Jade Rabbit" on a comparatively young lava flow. This rover proceeded to identify a mineralogical mystery on the moon, a basalt with "unique compositional characteristics."

The study, reported in Nature Communications, is expected to enhance readings from satellite instruments, and to throw new light on the origins of Earth's nearest neighbor.

The moon is thought to have formed when a Mars-sized object crashed into planet Earth early in the history of the solar system. The debris from the collision coalesced and cooled, but radioactive elements deep in the interior heated up the rock beneath the crust, and 500 million years later, volcanic lava slurped into impact craters on the moon to form the so-called "seas" or maria.

The Yutu rover's instruments started examining lava that probably flowed about 3 billion years ago. What they found won't keep ordinary citizens wide awake at night, but it is a surprise for planetary scientists. Geochemists can reconstruct a rock flow's history from the telltale mix of minerals in the cooled lava. Basalts sampled by astronaut expeditions or collected by a Soviet Luna probe tended to be distinguished in two ways—either high in titanium, or low.

But the latest find reported from the first soft landing on the Moon in 40 years is both intermediate in titanium content and rich in iron oxide.

"The diversity tells us that the Moon's upper mantle is much less uniform in composition than Earth's. And correlating chemistry with age, we can see how the moon's volcanism changed over time," said Bradley Joliff of the Washington University of St Louis, the only American partner in the Chinese team.

The mix of minerals in magma tells a story. That is because minerals in molten rock characteristically crystallize at different temperatures. So rock on the surface delivers clues to the deep interior of a planet.

"The variable titanium distribution on the lunar surface suggests that the Moon's interior was not homogenized," Professor Joliff said. "We're still trying to figure out how this happened."



## Seattle Times Specimens vs. Tucson

Many of you may have seen the outstanding specimens that were featured in a front page article of the Times on Sunday, February 28<sup>th</sup>.

I immediately got emails from friends remarking on the specimens that were so "monster". Eventually, I developed an email with photos from our latest trip to Tucson earlier in the month. I present these and other photos so that you can relive our experience vicariously.

In my email to friends, I noted that an attempt to create a museum of rocks, fossils, and minerals has been a dream of many northwest rockhounds for decades. What they bumped up against was a resource issue...essentially money. It takes \$\$\$ to own and operate a venue. Even with all-volunteer labor, it really doesn't pencil out unless there are big bucks supporting the endeavor. Thus, many scientifically worthwhile collections have been donated to entities where they will never be seen by the public.

The Seattle Times specimens were stupendous, but check out Tucson's offerings, where the specimens cost thousands of dollars, not millions.

*Susan Gardner, Editor*



Lapis rough was in abundance this year as seen at the Kino show.



At one of our first stops, I saw this carved concretion, which I thought was rather unusual. Concretions were definitely an item at this year's show.

We like the shows "along the freeway". At right, you can lounge in a chair carved from a quartz crystal (note backpack for scale here and elsewhere). Below right is an agate basin... or wading pool? Below left is one of the many vendor stents, this one with large crystal specimens.







The material and carving were perfectly suited to each other...a golden onyx goldfish.

At night, the gorilla standing next to the bad beer sign was the first automated sign twirler I have ever seen!



Bathe in petrified wood, anyone? Below are examples of the many monster geodes from South America. See nearby people for scale.



A single crystal is readied for shipping at left. Below right, Arkansas quartz crystal plates are on display in a permanent showroom as seen in a previous year.



## Show Time 2016

April 30-May 1	Waco, TX	Waco Gem & Mineral Club Extraco Events Center; 4601 Bosque Blvd www.wacogemandmineral.org showchair@wacogemandmineral.org
May 7-8	Lubbock, TX	<b>SCFMS/Lubbock Gem &amp; Mineral Society</b> Lubbock Memorial Civic Center 1501 Mac Davis Lane walt@lubbockgemandmineral.org www.lubbockgemandmineral.org
May 14	Arlington, TX	Arlington Gem&Mineral club, ann. Swap Meet Arlington club house; 1408 Gibbons Rd. jlspink@sbcglobal.net; agemclub.com
May 28-29	Fort Worth, TX	Fort Worth Gem and Mineral Club Amon G. Carter Exhibit Building Will Rogers Memorial Center 3401 W. Lancaster fwgmc@embarqmail.com fortworthgemandmineralclub.org
July 2-3	Grapevine, TX	Arlington Gem & Mineral Club Grapevine Convention Center 1209 S. Main St show@agemclub.org; www.agemclub.org
July 25-30	Houghton, MI	Keweenaw Mineral Days A.E. Seaman Mineral Museum Michigan Technological University 1404 E. Sharon Avenue <a href="http://www.museum.mtu.edu/keweenaw_mineral_days/index.html">http://www.museum.mtu.edu/keweenaw_mineral_days/index.html</a> <a href="http://www.museum.mtu.edu">www.museum.mtu.edu</a>
Jul. 27-Aug. 1	Albany, OR	<b>AFMS/NFMS/Willamette Agate &amp; Min. Soc.</b> Willamette Event Center, 3700 Knox Butte Rd.
August 27-28	Jasper, TX	Pine Country Gem & Mineral Society The Event Center; 6258 Highway 190 West jonetta.nash@yahoo.com www.pinecountry-gms.org
September 10-18	Denver, CO	Multiple shows and locations Eons Expos, Denver Coliseum, 4600 Humboldt St 250 dealers in Denver Coliseum plus 100 tents <a href="http://www.ColiseumShow.com">http://www.ColiseumShow.com</a>
October 8-9	Temple, TX	<a href="#">Tri-City Gem and Mineral Society</a> <a href="#">Mayborn Center; 3303 North 3rd</a> <a href="#">trinity4112@me.com</a>
November 11-13	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 www.hgms.org; showchair@hgms.org



2016		May				2016
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 10-4 Shop Open	2	3 7:30 Board Meeting	4 10-3 Shop Open 1:00-3:00 Day Light Section 7:30--Mineral Section	5 7:30 Archeology Section	6	7 10-5 Shop Open 10-Noon Youth Section
8 10-4 Shop Open	9	10 <b>NO</b> Show Committee	11 10-3 Shop Open 6:30 Gemstones & Faceting Section	12	13	14 10-5 Shop Open
15 10-4 Shop Open	16 7:30 Lapidary Section	17 7:30 Paleo Section	18 10-3 Shop Open 7:30 Mineral Section	19	20	21 10-5 Shop Open 10-Noon Youth Section 1:30 Beading Section
22 10-4 Shop Open	23	24 7:30 General Meeting	25 10-3 Shop Open	26	27	28 10-5 Shop Open
29 10-4 Shop Open	30	31				

2016		June				2016
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 10-3 Shop Open 1:00-3:00 Day Light Section 7:30--Mineral Section	2 7:30 Archeology Section	3	4 10-5 Shop Open 10-Noon Youth Section
5 10-4 Shop Open	6	7 7:30 Board Meeting	8 10-3 Shop Open 6:30 Gemstones & Faceting Section	9	10	11 10-5 Shop Open
12 10-4 Shop Open	13	14 <b>NO</b> Show Committee  <b>Flag Day</b>	15 10-3 Shop Open 7:30 Mineral Section	16	17	18 10-5 Shop Open 10-Noon Youth Section 1:30 Beading Section
19 10-4 Shop Open  <b>Father's Day</b>	20 7:30 Lapidary Section	21 7:30 Paleo Section	22 10-3 Shop Open	23	24	25 10-5 Shop Open
26 10-4 Shop Open	27	28 7:30 General Meeting	29 10-3 Shop Open	30		

# 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 — 2012 - 1st (Large)  
2013 - 1st (Large)  
2014 - 1st (Large)  
2015 - 1st (Large)



## AFMS

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



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

**DATED MATERIAL - PLEASE DO NOT DELAY !**