



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

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

Volume XLVIII—No. 12

December 2017



### **President's Message**

*by Paul Brandes*

**A**nother year, another Show in the books! To start this month's President's Message, I want to first say, "Thank You" to all of the many volunteers who made this year's Gem & Mineral Show a success. I also want to thank our fabulous Show Committee for working out the many issues that appeared shortly before the Show began. I know there are a lot of folks that deserve recognition for their part in the Show. If I fail to mention anyone by name, my apologies, but know that you are not forgotten. In addition to the regular Show activities, there was also the addition of the South Central Federation of Mineral Societies' (SCFMS) activities which included the Breakfast with the Editors and Webmasters, the SCFMS Annual Meeting, and the evening Awards Banquet at which HGMS was well represented by yours truly.



Another big change for this year is that the annual Holiday Party moved to an outside location this year. The Holiday party will be held at the Unitarian Fellowship of Houston church, located at 1504 Wirt Rd. I am hopeful that with the additional room the Fellowship provides, more of

Continued on Page 4

### **Upcoming Program**

*by Sigrid Stewart, 1st Vice President*

**D**ecember 9, 2017: **HGMS Annual Holiday Party.** Due to the crowding during past Holiday Parties, the HGMS Board decided to look for a larger venue. **They decided on the Unitarian Fellowship of Houston Church. It is located north of I-10, and the address is 1504 Wirt Road. It also has a full kitchen.**

As usual, it is a potluck dinner. The Club will provide the turkey, ham, and brisket. Members are asked to bring side dishes and desserts. Setup of the room (using the church's furnishings), will begin at 3:30 p.m. Dinner is at 6 p.m., and the auction will begin at 7:30 p.m. Following the auction, please stay to put the furniture back where it belongs HGMS is obligated to return the room to its original configuration for the church services the next morning.

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*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.**

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### Purpose of HGMS

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

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

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

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

our members can enjoy a great evening among friends. As always, there will also be an auction of items donated over the year for attendee bidding.

The last item I want to mention is that I am planning another Hill Country mineral collecting field trip for sometime this spring. This is just in the preliminary stages at the moment, but more details will be coming in the next few weeks. Of course, I'm always willing to hear suggestions—so if anyone has some, please let me know.

That's all for now. Have a happy and safe holiday season!

### **On the 12th Day of Christmas**

*(author unknown)-*

*2011 SCRIBE CD via The Mountain Gem-12/2010,  
via The Franklin County Rockhouser 12/2015*

#### **....my true love gave to me:**

Twelve tumblers tumbling,

Eleven perfect spear points,

Ten diamond saw blades,

Nine crystal clusters,

Eight agate nodules,

Seven sheets of silver,

Six sapphire star stones,

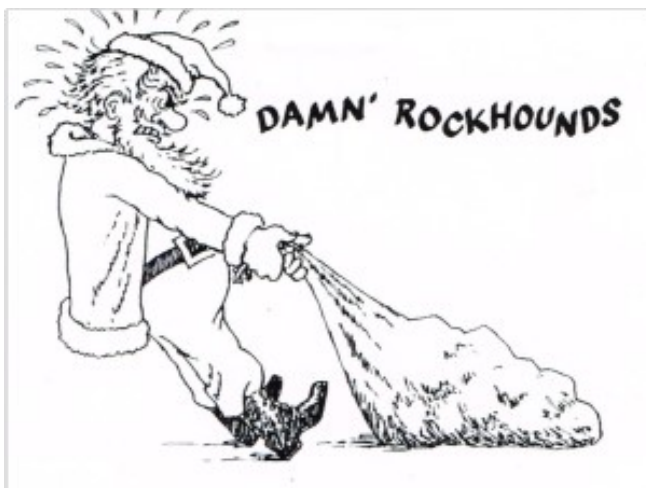
Five golden rings,

Four fluorescent lamps,

Three gem books,

Two trilobites,

And a branch from a petrified tree.



Erston Barnhart *Rock Buster News* 12/1984



## The Unlikely Story of Gold's Creation

by Terrell William "Terry" Proctor, J.D.

Member of Houston Gem & Mineral Society

Most of us know that gold is a very important metal, mineral, and element worldwide. This is for a number of reasons, such as industrial, adornment, economic, security, and western movie plots. Most of us have some knowledge of where gold can be found on Earth, such as mines, alluvial deposits in and along streams, Fort Knox, and jumping someone else's claim. **Note:** Fort Knox holds 4,600 tonnes of gold, and the U.S. Federal Reserve holds 6,200 tonnes [a tonne is the correct name of a metric ton].

Did you know Earth came out on the short end of gold being present compared with much of the rest of the Universe? Sarah Kaplan, writing in *The Washington Post*, on September 27, 2017, stated "Earth should have a bit more gold and silver than it does. These elements are strewn throughout the solar system, but they're relatively rare here. Now scientists say they think they know why: because of our planet's hellish birth."<sup>1</sup> Other scientists think we should have had much more gold than Earth actually has. One writer stated, "During the formation of Earth, molten iron sank to its centre to make the core. This took with it the vast majority of the planet's precious metals—such as gold and platinum. In fact, there are enough precious metals in the core to cover the entire surface of Earth with a four-metre-thick layer."<sup>2</sup>

Others disagree, saying that scientists contend that gold actually is ten times more common in the planet's crust than they would expect it to be if gold arrived on Earth when Earth was molten hot and in the process of formation.<sup>3</sup>

So "Whence Cometh Gold On Earth?" It takes some research to understand the different hypothesis of how Earth came to have gold and whether it is a good quantity or we should have had much more. The Earth first came into being about 4.6 billion years ago, at the start of the "Hadean" period, which lasted until 4 billion years ago. The solar system consisted of our Sun from the start, surrounded by a circling mass of dust and gas around the newborn Sun. The dust and gas accreted to form very small rocks, larger rocks, later middle-sized "planetesimals" and finally some actual planets. During this "Hadean" period, early Earth was a molten mass which slammed into other bodies in the Solar System and absorbed them, increasing the size of Earth.

Like most heavy metals, gold is forged inside stars by a process we know as nuclear fusion. After what is referred to as the "Big Bang" and others call "The Creation," there were only two elements that were formed, hydrogen and helium. After this initial start, by a few hundred million years, stars which had been created were blazing because of these nuclear fires. The nuclear fires drove these lighter elements together, creating slightly heavier elements. The nuclear reactions from this released very large amounts of energy. These early stars commenced to make other elements, including oxygen, nitrogen, and carbon, and the process continued up the line on the Periodic Table [which today lists all known elements, including some created which do not

<sup>1</sup> Sarah Kaplan, reporter for Speaking of Science for The Washington Post, September 27, 2017

<sup>2</sup> Where does all Earth's gold come from? Precious metals the result of meteorite bombardment, rock analysis finds Science News <https://sciencedaily.com/releases/2011/09/110907132044.htm>

<sup>3</sup> Eric Seganek "How Is Gold Formed and Where Does it Come From? <https://www.sbcgold.com>

appear naturally]. As the process moved up toward heavier elements, it reached iron. However, there was still no gold in the Universe. When these early stars burned up all of the light elements, the process of burning the heavier elements began.

As stars burned silicon to make iron, the stars would have a massive explosion or "supernova." The result would be that for a very short few moments, the star would release as much energy as all of the normal stars in that galaxy jointly. The explosion was cataclysmic, and for the first time, gold was created in that explosion. Gold was then ejected from where created into the Universe, together with the other debris created by that explosion.<sup>4</sup>

When Earth cooled somewhat, it is possible there was another impact which may have caused the Earth to melt again, and such impact threw out part of Earth to eventually create the moon. Very high and precision analysis of some of the oldest rocks on Earth have produced evidence that they are the result of meteorites bombarding the Earth. But this was more than 200 million years after Earth was formed.

The Earth was created from the dust and gas accreted from the Universe, now in the solar system, and forming up Earth. After its birth 4.6 billion years ago, the entire surface of the Earth was covered with molten rock and volcanoes. Over many millions of years, most of the iron on Earth sank down from the mantle [Earth's outer layer] all the way to the center to create the iron core of the Earth. "Gold would have mixed with the iron and sunk with it. Matthias Willbold, a geologist at Imperial College London, likens the process to droplets of vinegar collecting at the bottom of a dish of olive oil. "All the gold should be gone" he says.<sup>5</sup>

All gold has not gone to the core of the Earth, as one knows by looking at the left ring finger of almost every married lady in the U.S., if not most of the world. So there has to be a scientific reason why all the gold on Earth is not in the core of the Earth with iron and other heavy metals. There are several theories. The primary theory is that after Earth's core formed, and most all gold wound up in the core, there was a meteor shower which struck Earth [could there have been more than one?]. The meteorites contained some gold which was put back into Earth's mantle and continental crust gold again. There was a huge storm which took place over 3.8 billion years ago [referred to as the "terminal bombardment"]. These meteorites cause the craters which appear on the moon. These meteorites came from an asteroid belt which still exists between Earth and Mars. The idea of the gold-laden-meteorite "veneer" was first proposed following the Apollo moon landings of the 1970s. Scientists examining rock samples from the moon's mantle found much less iridium and gold than they did in samples from the surface of the moon or from the earth's crust and mantle.<sup>6</sup> Iridium-rich meteorites are known as "chondrites." On the moon, these meteorites from the shower lay scattered on the surface. However on the Earth, our planet's activity from plate tectonics, volcanic activity, landslides, flooding, and all the other activities of our "live planet" have buried the bone, i.e. the gold in the mantle over millions or more years.

Once the meteor shower [called the "later veneer hypothesis"] was generally accepted to have occurred, it became the fundamental theory in planetary science. This theory also has helped explain a number of other anomalies making up the Earth's composition. There is a belief that the

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<sup>4</sup> ZME Science newsletter <https://www.zmescience.com/science/how-gold-is-made-science-064654/>

<sup>5</sup> William Kremer BBC World Service <http://www.bbc.com/news/magazine-22904141>

same meteorites delivered the carbon, nitrogen, water, and the amino acids which are vital to all life on Earth.<sup>7</sup>

Other scientists have other theories of how gold wound up on Earth. A team from the University of Maryland sampled 2.8 billion year old rocks, and found these newer rocks had their full complement of elements, known as siderophiles—the iron-loving group of metals that includes gold, but in terms of tungsten isotopes, these rocks turned out to be similar to Willbold's theory. Yet they date after a time proposed for the “late veneer bombardment.”<sup>8</sup> Hence, like many theories, there are always challenges which science later must keep testing and thinking of possible alternatives to the purported solution.

As an added comment, I have panned for gold in Alaska in Gold Creek in Juneau. Even with gloves and rubber gloves—in July—you can have your hands in the water only for about one minute before it becomes painful, and no gold. Attached is a photo of a piece of gold my father, William Owen Proctor, collected while working a jade claim in Alaska in 1976. He is a former President of the Tulsa Rock and Mineral Society.

Now go have some fun and pan for gold somewhere. Hopefully, you know a little more about this wonderful mineral, gold. Throwing in just a few important things about gold—symbol Au—an ounce (28 g) can be beaten out to 187 square feet (about 17 square m) in extremely thin sheets called gold leaf. As of 2009, the U.S. was the third largest producer of gold, behind China and Australia. It is durable to the point of virtual indestructibility, highly malleable, and usually found in nature in a comparatively pure form, and it does not rust nor corrode.



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<sup>6</sup> ibid

<sup>7</sup> ibid

<sup>8</sup> ibid

**Still Am***by Edward Clay**Member of the  
Houston Gem & Mineral Society*

Walk a path of creativity.  
See beauty and respond.  
Yes, it takes years to master skills.

It takes heart and patience,  
It takes listening  
to the world around,  
also the soul within.

Seems oft times  
a lonely one  
for me.

As I have followed this path  
more than 40 years,  
The rewards day to day are great.

As I have created much beauty,  
though my life has seemed a lonely one,  
Still I do not give up.

I continue to create,  
continue to walk the path.  
Hoping might someone mend  
my aloneness..

As I still am creating beauty.



## Archaeology Section

by Nancy L. Engelhardt-Moore

**N**ovember 2, 2017: Bob Moore (Chair) called the meeting to order at 7:37 p.m. There were 19 attendees. First, I announced that we had HGMS Show discount tickets available. Bob then asked if anyone was interested in being nominated for one of the 2018 officer positions, but no one volunteered. So, Bob proposed a new position of Media Secretary to act as an assistant to the Secretary. Anthony Lucci moved the motion, and it was seconded by Lisa Schwartz. There was no discussion. Bob then asked the attendees to vote, and all were in favor. The new position was approved unanimously. Bob then briefly promoted his December 7 talk (see below) and said that he was following up on new leads for 2018 speakers. Next, he introduced the evening's guest speaker, Dr. Gail Larsen Peterkin (Master Docent who works on Anthropology Collections at the Houston Museum of Natural Science). Q&A followed the talk, and attendees discussed the Show & Tell items. The meeting adjourned at 9:35 p.m. **Note:** please remember to check the HGMS Facebook Group page to learn more about upcoming programs and events.

**Program:** Gail's excellent presentation summarized traditional archaeological interpretations of the Middle-Upper Palaeolithic transition and introduced recent research, which has influenced the traditional archaeological theoretical framework. She began by saying that stone tools have now been found in Lomekwi, Kenya dating back to 3.3 million years! This moves this technology back 700,000 years, which predates *Homo sapiens*! In Oldoway, Ethiopia during the Lower Palaeolithic Acheulean (1.76-500,000 Ma), *Homo erectus* and *H. ergaster* made advances in hand axes, cleavers, scarpers, and segmented chopping tools. *Homo heidelbergensis* used wooden spears as far back as ~400,000 years in Germany. And, it now has been confirmed in Morocco that *H. sapiens* go back to ~300,000 years.

Next, Gail reviewed the cranial differences between Neanderthals and Modern Man based on recent genetic studies. She noted that Neanderthals had a more robust skull, a weak to no chin, big nose, and a brow ridge. Gail reported that a new Neanderthal site dated at ~200,000 years found in 2014 at Tourville-la-Rivière, shows evidence of thrown spears.

Then she noted that new genetic studies show the percent of Neanderthal DNA is 1.8%–2.6% in Eurasians, but Asians have a higher percentage. She also noted that 20 traits have been identified from Neanderthal DNA, including red hair, skin color variation light to dark, ability to tan, sleep pattern—night owls, long-term depression, schizophrenia, addiction to smoking, immunity to Eurasian pathogens, high LDL cholesterol, lower risk of malaria, but an increased risk of Type 2 diabetes, Crohn's disease, lupus, and biliary cirrhosis. Selected individuals from various sites were chosen for the genome sequencing studies.

Gail then talked about how Western Asia—Turkey—was a crossroads. She noted that interbreeding occurred in this area, but Neanderthal DNA was low. This was due to the fact that the area had a constant influx and acted as a way station with a basal Eurasian population.

She addressed the epigenomic difference between Neanderthal and *Homo sapiens*. This area of study looks at what genes are turned off and how cells use DNA. Studies show that Neanderthals and *H. sapiens* have 99.84% genetic similarity. Recent genetic studies have

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

compared Modern Man, Neanderthals, and Denisovans. These studies showed that gene transpositions reveal a hierarchy of regulatory controls, but, what accounts for the difference?

Gail then discussed the potential controls on Neanderthal growth, diet, and society. Studies show that Neanderthals matured at the modern rate, so no difference. As to diet, individuals ate what was available. This was based on fragments found wedged in teeth. Looking at behavior, Neanderthals definitely used natural medications such as molds for penicillin and salicylic acid (aspirin) from Poplars. Evidence shows that they also cared for the elderly and sick. Amazingly, it has been determined from teeth that Neanderthals and *H. sapiens* were swapping saliva (spit).

Gail continued by talking about extraordinary Neanderthal discoveries in Shanidar Cave in Iraq. She noted that one individual had many injuries, but lived into his 40s. He probably had hearing loss due to growths in his left ear canal. She mentioned Mousterian technology, which is primarily associated with Neanderthals and the making of flint tools. Gail focused on Levallois technology, which refers to a stone knapping core technique used for thousands of years. She showed beautiful examples of tools and scrapers. Some scrapers had five faces, interesting styles, but no obvious function. In the Middle Palaeolithic, 200,000 years ago, Neanderthals used Birch bark pitch as glue to bind axes to handles. About 50,000 years ago, they used manganese dioxide to lower the combustion temperature of wood for fires. Gail pointed out an example of their construction ingenuity where they arranged 400 broken stalagmites into stone circles in Bruniquel Cave in southwest France. The circles are about 175,000 years old!

Then she talked briefly about Neanderthal jewelry—their use of ochre dates back to ~42,000 years. Gail spoke about their abstract cave art and their use of x-hatching, red dots, and hand stencils observed in Gorham's Cave, Gibraltar that dates to ~39,000 years ago. As to music, a bone flute known as the Divje Babe Flute created from a cave bear femur has been attributed to Neanderthals and dates back to ~55,000 years (see photo). Found in 1995 near Cerkno, Slovenia, one recent study speculates that the holes were formed by animals.

Gail then addressed the possible reasons for the demise of the Neanderthals, which include interspecific violence, illness, competitive replacement, interbreeding, and subsequent hybridization, climate change, and natural disasters. She said that cooling is not a factor, but migration of *H. sapiens* from Africa probably resulted in gradual replacement by population swamping. She talked about the 2010 discovery of a new kind of human—the Denisovans based on DNA from a girl's finger bone found in the Denisova Cave, Siberia, Russia. Dated at ~40,000 years, this adds another member to the types of humans. She noted that they may also have interbred with Neanderthals and modern humans! Gail finished by talking about various protected caves and their archaeological significance. She pointed out that the "Lascaux IV," the "International Centre of Cave Art" in Montignac, France is now open, and it displays exact replicas of the original cave art from the Lascaux site that is no longer open to the public.

### Upcoming Programs:

**December 7, 2017:** The Section will be having a Holiday Party (Potluck) and Bob Moore (Chair) will give a presentation entitled "**Splendid Roman Treasure Hoards.**" Everyone knows about Roman craftsmanship through their marble statues, bronze utensils and weapons, glassware, and amazing architecture. This talk will focus on rare Roman silver treasures and continue the theme of the importance of archaeological hoards. Bob will first talk about the amazing treasure hoard from Augusta Raurica in Switzerland found in 1961. Then, he will cover the older Berthouville Treasure hoard from Normandy, France that was accidentally found in 1830. Learn about spectacular rare artifacts and watch a video showing how the Romans crafted a magnificent silver

cup. You will be dazzled by Roman treasures. So, don't miss this night of learning, food, and fun!

**January 4, 2018:** No program due to the proximity of the New Year's Holiday..



**Bob Moore with Gail Larsen Peterkin on Right.**



**Peruvian Moche**



**Left: Wooden replica of Divje Babe flute made from a cave bear femur (~55,000 years).**

**Right: Acheulean flint hand tool from Nile Valley, Egypt (300,000-150,000 years) brought by the Moores**

## Judging Results from HGMS Entries Submitted to 2017 SCFMS and AFMS Editors' Contest

*by Phyllis George*  
*HGMS Newsletter Editor*

The AFMS (American Federation of Mineralogical Societies) announced the results of their Bulletin Editors' Contest during the Breakfast with the Editors and Webmasters in Ventura, California on June 11, 2017. The SCFMS (South Central Federation of Mineral Societies)—our regional federation—announced the results of their contest during the HGMS Show, November 11, 2017. The HGMS entries are listed below along with their category and ranking by EACH of the two organizations. I think HGMS did quite well, especially at the SCFMS level. As for the AFMS, remember—that is at the NATIONAL level, so anyone who reaches that level for judging is in the top three in his/her category regionally and is among the best of the best nation-wide.

| Results of the 2017 SCFMS and AFMS Editors and Authors Contests |           |                                   |   |             |
|---|-----------|-----------------------------------|---|-------------|
| SCFMS Rank  | AFMS Rank | Name                              | Title   | Month, 2016 |
| Large Bulletin  |           |                                   |   |             |
| 1   | 3         | Phyllis George                    | The Backbender's Gazette                                      | December    |
| Advanced Adult Article  |           |                                   |   |             |
| 2   | 5         | Scott Singleton                   | Field Trip to the Miocene Fleming Formation                   | July        |
| 3   | Winner    | Neal Immega                       | A Surprise – Fluorescent Jewelry – Sodalite/Hackmanite        | January     |
| 1   | Winner    | Terrell Proctor, J.D.             | New Mineral Was a Blast!!                                     | December    |
| 4   | —         | John Anderson                     | Hazards of Mining   | November    |
| Original Adult Article  |           |                                   |   |             |
| 5   | —         | Karen M. Burns                    | You've Polished the Rock, Now What?                           | March       |
| 10  | —         | Chase Jennings                    | Luminescence in Fossils                                       | December    |
| Adult Poetry  |           |                                   |   |             |
| 1   | 1         | Edward Clay                       | Value   | August      |
| 2   | 10        | Terrell Wm. "Terry" Proctor, J.D. | Rockhounding – The Perfect Hobby                              | November    |
| Feature   |           |                                   |   |             |
| 1   | 5         | Stephen Blyskal                   | Mineral Section Sponsors Mineral/Rock ID Workshop             | August      |
| 5   | —         | Nancy Engelhardt-Moore            | Archaeology Section Minutes—February 4                        | March       |
| 7   | —         | Nancy Fischer                     | MOHS Scale Field Testing Class at the Day Light Section       | December    |
| Honorable Mention   | —         | Michael Sommers                   | Why You Should Have Muscovite Mica in Your Mineral Collection | July        |



## 2017 AFMS Web Site Contest Results

*by Dan Imel, AFMS Chair*

I am pleased to announce the winners of the 2016 AFMS Web Site contest. Results and score sheets have been e-mailed to all participants.

### 1st Place—Timothy Smeggi

Jacksonville Gem & Mineral Society (SFMS)

<[jaxgemandmineral.org](http://jaxgemandmineral.org)>

### 2nd Place —Phyllis George

Houston Gem & Mineral Society (SCFMS)

<[www.hgms.org](http://www.hgms.org)>

### 3rd Place—Kendra Johns

Santa Rosa Mineral & Gem Society (CFMS)

<[www.SRMGS.org](http://www.SRMGS.org)>

### 4th Place —Holly Warsham

Gem & Mineral Soc. of the VA Peninsula (EFMLS)

<[www.gmsvp.org](http://www.gmsvp.org)>

### 5th Place—Carolyn Weinberger

Chesapeake Gem & Mineral Society (EFMLS)

<[chesapeakegemandmineral.org](http://chesapeakegemandmineral.org)>

### 6th Place—Terry Wilson

Ventura Gem & Mineral Society (CFMS)

<[www.vgms.org](http://www.vgms.org)>

### 7th Place—Jason Schulz

Topeka Gem & Mineral Society (RMFMS)

<[www.topekagms.org/](http://www.topekagms.org/)>

### 8th Place—Gordon Galligher

Paleontological Society of Austin (SCFMS)

<[www.austinpaleo.org/](http://www.austinpaleo.org/)>

### 9th Place—Mark Hohn & Keith Morgan

Cascade Mineralogical Society (NFMS)

<[www.cascademineralsociety.org](http://www.cascademineralsociety.org)>

### 10th Place—Marlen Sibley

Wyoming State Mineral & Gem Society (RMFMS)

<[www.wymineralandgemsociety.org](http://www.wymineralandgemsociety.org)>

### 11th Place—Julia Hrechka

Micromineralogists of the National Capital Area

<[dcminals.org](http://dcminals.org)> (EFMLS)

### 12th Place—Karen Cameron

Central Oregon Rock Collectors (NFMS)

<[corockcollectors.com](http://corockcollectors.com)>

**Editor's Note:** The HGMS Web site that was judged is the old site. The new site went live in 2017. The new site cannot compete in future contests as the club paid for the new site to be created.

## 2017 SCFMS Web Site Contest Results

*by Don Shurtz, SCFMS Chair*

The results for the 2017 SCFMS Web Site were:

**1st Place**—Austin Paleological Society, Gordon C. Galligher webmaster

**2nd Place**—Houston Gem & Mineral Society, Phyllis George webmaster

**3rd Place:** East Texas Gem & Mineral Society, Lynn Metcalf webmaster

**Honorable Mention:** ARK-LA-TEX Gem & Mineral Society, Lauren R. Brown webmaster

The top two finishers in the 2017 SCFMS Web Site Contest were entered into the 2017 AFMS Web Site Contest.. The results of that contest are shown above.

## HGMS Entries in the 2018 SCFMS Bulletin Editors' and Authors' Contest

*by Phyllis George*  
*HGMS Newsletter Editor*

**R**ockhound newsletter editors throughout the U.S. have scoured through their 2017 newsletter issues, selecting articles and newsletters to submit to their regional 2018 Bulletin Editors and Authors Contest. Due to an extremely early due date for all entries (December 5, 2017), I could only submit entries from the January through November BBGs. Articles in the December issue will be included with next year's entries for the 2019 contest.

The entries from HGMS are listed below along with their category. The top three SCFMS winners in each category will be forwarded to the AFMS (American Federation of Mineralogical Societies) judges.

| HGMS Entries in the 2018 SCFMS Editors and Authors Contest |  |                 |
|--|--|-----------------|
| Name   | Title  | Month, 2017     |
| <b>Large Bulletin</b>                                      |  |                 |
| Phyllis George   | The Backbender's Gazette   | April & October |
| <b>Advanced Adult Article</b>                              |  |                 |
| Nathalie Brandes   | There Once Was a Goat Name Kåre--Over a Millennium of mining at Falu Gruve, Sweden | February        |
| Paul Brandes   | Rocking Out in Michigan's Upper Peninsula  | October         |
| Albert J. Robb III   | Relic Cretaceous Fossils from the Texas Panhandle                                  | March           |
| <b>Adult Article</b>                                       |  |                 |
| Nancy L. Engelhardt-Moore                                  | Archaeology Section--January & February Meetings                                   | March           |
| <b>Adult Poetry</b>  |  |                 |
| Steve Blyskal and Sigrid Stewart                           | Harvey Comes to Houston  | November        |
| Terrell William Proctor, J.D.                              | When Is a Rock Not a Rock  | November        |
| <b>Feature</b>   |  |                 |
| Neal Immega  | Hard Stone Drilling in Fort Worth  | October         |
|  |  |                 |

## General Meeting Minutes

October 24, 2017

by Nancy English, HGMS Secretary

**V**ice President **Sigrid Stewart** called the meeting to order at 7:30 p.m. She thanked everyone for coming to the General Meeting. Thirty members attended. Three attendees were new members: Quentin Boyer, Kenneth Klare, and Laura Klare.

**Minutes:** The minutes of the August 22, 2017 General Meeting had not been published as of the September 26 General Meeting. Therefore, approval of the minutes was postponed until the October 24, 2017 General Meeting. Vice President Stewart asked for a motion to approve the August 22 General Meeting minutes. Karen Burns moved, Joan Riley seconded, and the motion passed. Vice President Stewart then asked for a motion to approve the minutes of the September 26, General Meeting. Karen Burns moved, Joan Riley seconded, and the motion passed.

### Vice President's Announcements:

**Annual Show Dinner and Auction** was held October 14. Only fourteen people attended the dinner. Ten bidders spent \$229.00 dollars. Some interesting pieces were bought for a song. We suspect that the advertising was not as extensive as last year. The floods from Harvey have displaced many members, and our beloved Astros were playing that day.

### Section/Committee Reports

In the interest of time, Vice President Stewart asked members to look for reports of Section news in the BBG, on the Web site ([HGMS.org](http://HGMS.org)), or by reading the weekly email blast from Jim Kendall for future Section meetings and presentations. If you are not on Jim Kendall's e-mail list, please contact him at [kendallja@att.net](mailto:kendallja@att.net).

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

**Neal Immega** pointed to the new trays and buckets and told everyone to help themselves to the fossils donated by Diane Sisson. Thank you, Diane.

### Old Business

**Web site progress:** **Sigrid Stewart** reported that the new Web site is running, and emails are being forwarded to the correct recipients. If anyone finds an error or wants any additions made to the site, please contact one of the Web site committee members: Sigrid Stewart, Phyllis George, or Scott Singleton.

**Show Committee:** Sigrid Stewart reported

**Energy Day at Sam Houston Park:** Scott Singleton, Sigrid Stewart, and Steve Blyskal represented HGMS at the Annual Energy Day event. The event recorded that 30,000 people attended. HGMS handed out petrified wood, HGMS Annual Show flyers, HGMS business cards, and HGMS Club flyers.

**Postcard Labeling Party October 14:** Thank you, Beverly, for all the work you did to prepare the cards and labels so that the 19 volunteers who started at 10:00 a.m. could finish by noon. A free thank-you lunch of pizza and salad was served. As of this meeting, the postcards were mailed.

**T-shirts** are being designed for the Show. Polo shirts will be made for the Show Committee.

**Volunteers** can sign up on the Web site under Annual Show, Volunteering for the Show. We have plenty of opportunities.

**SCFMS events** are available to all the club members. Tickets for the breakfast are \$15.00 and for the dinner are \$20.00. Any club member may also attend the annual business meeting to observe, but they cannot vote. Each club has only one vote, and Paul Brandes is the voting Delegate from our club.

**Wednesday, November 8:** all equipment, boxes, and other Show paraphernalia must be labeled and in the garage by 3:00 p.m. for the movers to load it at 5:00.

**Info Booth Donations:** We would like to try something different this year to get higher-end donations for the Info Booth. For items with a minimum of at least \$20 dollars, HGMS would keep 50% and remit 50% to the donor. We will use a different color bid sheet, and you will put your name and minimum on the bid sheet. If the minimum is not met, the item will not be sold. If you would like to participate, please bring your items to the Club before the Show. We will have a box in the office. Payment will be made after the show! The Info Booth gets too busy to take care of it on Show weekend.

**HGMS Holiday Party, December 9, 2017:** Just a reminder, the Christmas-Holiday Dinner and Auction will be held at the Unitarian Fellowship of Houston, 1504 Wirt Rd. at Westview, north of I-10. We will be able to set up the tables and auction in the sanctuary at 3:30 p.m. There is a full kitchen and plenty of space for setting up the buffet. Volunteers are needed for setup and takedown. Please contact Nancy English, [nancyjodi@aol.com](mailto:nancyjodi@aol.com), or 832-722-5441. A posting about the party was added to the chalk board.

In the interest of time, Vice President Stewart asked members to look for other Old Business in the BOD Meeting Minutes in the monthly BBG.

### **New Business**

**Nominating Committee:** Phyllis George spoke for the nominating committee: Randy Carlson, Karen Burns, Paula Smith, Phyllis George, and Michael Sommers. She presented the slate of officers for 2018. They are: President, Paul Brandes; Vice President, Sigrid Stewart; Second Vice President, Beverly Mace; Treasurer, Liane Linehan; and Secretary, Nancy English. Nominations were opened to the floor. No names were added.

It was noted that Beverly Mace has held the Second Vice President position for twenty-three years. Thank you, Beverly for your continuing commitment and the many tasks you handle.

**The next Board of Directors meeting is Tuesday November 7, 2017 at 7:30 p.m.**

**The Next General Meeting is November 28, 2017, 7:30 p.m.:** Sarah Metsa will present Jewelry Design through Advertising.

**Show 'n Tell:** Steve Blyskal brought shrink wood and snake wood. Nicole Ayoub showed smoky quartz with peridot.

**Drawing:** Ron Rodgers won the geode.

**Adjourn:** Karen Burns moved to adjourn the business meeting, and Ray Kizer seconded. The motion passed unanimously, and the business portion of the meeting adjourned at 8:05 p.m.

**Refreshments:** provided by Nancy English. Neal Immega will provide refreshments for the November 21 meeting.

**Vice President Sigrid Stewart introduced** Steve Blyskal and herself to present a travelogue, geology of the area, and mineral collection from their trip to Colorado. **Colorado's Highway of Legends: from the K-T Boundary to the Spanish Peaks, and Beyond**—with lots of pictures and rocks, of course.

## Board of Directors' Meeting

*November 7, 2017 Minutes*

*by Nancy English*

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

**P**resident Paul Brandes called the meeting to order at 7:30 p.m. A quorum was present. Non-voting member Chase Jennings, head of Publicity, attended.

### President's Comments:

October was a busy month for the President. Paul and Nathalie went to Seattle, Washington for the Annual Meeting of the Geological Society of America. Then Paul traveled north of Atlanta, Georgia to meet with the Board of Directors of the Tellus Science Museum.

On Saturday October 21, Steve Blyskal, Sigrid Stewart, and Scott Singleton represented HGMS at the annual 2017 Energy Day Houston event. The event is centered on connecting industry leaders to the workforce of tomorrow. The event is the largest annual free family festival highlighting science, technology, engineering, and mathematics (STEM). Exhibitors saw 30,000 attendees throughout the day, a new record. Steve, Sigrid, and Scott promoted HGMS, the Annual Show, and gave away petrified wood to participants.

**Approval of Previous Month's Board Minutes:** Phyllis George moved to approve the minutes of the October 2017 Board Meeting. Mike Sommers seconded the motion, and it passed.

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

### Officer, Committee, and Section Reports

**Archaeology Section: November 2, 2017, 7:30 p.m.** Gail Larsen Peterkin, Master Docent with HMNS will present **New Innovations from the Upper Palaeolithic: Late Old Stone Age**. December 7, meeting program to be announced.

**Beading Section:** The next meeting will be at 1:30 p.m. on Saturday, November 18, 2017. Attendees will make a Persian Light Bracelet. The December 9, meeting will conclude in time to

go to the Unitarian Church on Wirt Road to decorate for HGMS's first off-site Christmas-Holiday Party.

**Day Light Section:** On November 1, members made trivets. December 6, 2017, 1:00 will be the Holiday party potluck for the Day Light Section. Watch the weekly e-blast for details.

**Education Committee:** No committee yet, but Sharon Halton has offered to respond to Cabochon class seekers to work out Sunday classes.

**Gemstones and Faceting Section:** No December meeting. The next meeting will be from 6:30 p.m. to 8:30 p.m. on Wednesday, January 15, 2018. The program will be announced. [The theft of the faceting machine was discussed. A review of the surveillance video will be conducted.](#)

**Lapidary and Silversmithing Section:** The next meeting will be at 7:30 p.m. on Monday, November 20, 2017. Attendees will finish Viking Knit as a wire wrap border on a cabochon. Bring your new treasures—purchased during our annual show earlier this month—for Show 'n Tell so we can all “ooh” and “ah.” Ideas for next year's programs will be discussed. No December meeting.

**Library:** Because of her extremely busy schedule, Nathalie Brandes has decided that she can no longer work on the Library by herself. In the near future, she will have a meeting to teach interested volunteers her organization plan for the Library. Afterward, she will come to the Clubhouse periodically to check on the progress and assist if needed.

**Mineral Section:** The next meeting in 2017 will be at 7:30 p.m. on November 15, 2017 to discuss the Show, and the December 6, 2017 program will be announced. There will be no meeting on December 20.

**Paleo Section:** The next meeting will be at 7:30 p.m. on Tuesday, November 21, 2017. Program: to be announced.

**Security Report:** Garth Clark is continuing to enhance and update the system.

**Shop Report:** The super grinder will get a bearing replacement soon. One of the trim saws will get new setscrews with its bearing replacement. The Shop will be open November 8, Wednesday, during Show Loadout. The Shop is NOT OPEN during The Show. Come to the Show and volunteer instead.

**Youth Section:** on November 18, 2017, 10:00 a.m., the Show will be reviewed. December 2 will be the Holiday Party. December 16, 2017, NO MEETING! Merry Christmas, Happy Hanukkah, and Happy New Year!

**BBG Editor and Web site committee member:** The deadline to send in articles and other pertinent information for inclusion in the December 2017 BBG is November 15, 2017.

### Old Business

**New Web Site:** The committee continues to work on the requested corrections and additions to the Web Site. Phyllis George added the updated Bylaws to the new Web site prior to the Show.

**Show Committee:** Sigrid Stewart reported:

T shirts have been ordered.

The Postcard Labeling Party was held on Saturday morning, 10:00 a.m., October 14, 2017. Nineteen people finished the cards by noon. Pizza and salad were enjoyed by all.

Show Auction was held at 6:00 p.m. October 14, 2017. Only thirteen people came to the dinner and auction. We made \$229.00. Thank you to those who participated and enjoyed the event. Good food as always. Thank you to Fred Brueckner for a dynamic updated Auction Spreadsheet. The poor turnout was attributed to scanty advertising, the Astros were playing the Yankees in game two of the Pennant Race (they won 2–1), Hurricane Harvey hangovers, and many usual attendees had worked that morning on the Postcard Labeling.

Volunteers are still needed on all three days of the show in several key positions. Please encourage members to volunteer by going online to HGMS.org, or by contacting Nancy English directly: nancyjodi@aol.com.

The **Volunteer Appreciation Party** is scheduled for November 18, 2017, 6:00 to 10:00 at Nancy English's home. Volunteers may bring their own beer and wine. HGMS is an all-volunteer organization. Any member who volunteers throughout the year is welcome to attend. That includes Section Leaders, Shop Foremen, Board of Directors.

SCFMS events may be attended by all the club members. Tickets for the breakfast cost \$15.00, and tickets for the dinner are \$20.00. Any club member may also attend the Annual Business Meeting to observe, but they cannot vote. Each club has only one vote, and Paul Brandes is the voting Delegate from our club. As of the Board Meeting, the deadline for reserving a seat had passed.

**Past Presidents Plaque:** The Past Presidents plaque needs to be updated. Beverly Mace asked Monarch Trophy if they could create new name plates based on the existing tags. They can for \$7.50 each. She will tackle the project after the first of the year. Thanks, Beverly.

**Preservation of Documents:** no report, no volunteers yet,

**Creating "How-To" videos:** How-To Video Meeting: Sigrid Stewart said the committee will start again after the show.

**The Club needs a new projector system.** Paul Brandes researched projectors that may qualify for HGMS needs. He will make a full report at the December Board meeting.

**Winter Christmas and Holiday party, dinner, and auction—December 9, 2017:** The Unitarian Church has been secured for the 2017 HGMS Holiday party. This is a potluck dinner. HGMS will provide turkey, brisket, and ham. Setup will begin at 3:30 p.m. Dinner will be served at 6:00, and the Auction will start at 7:30. Members are asked to bring side dishes and desserts. Members may bring their own beer and wine. (No hard liquor, please.)

**The Nominating Committee:** All current officers except Rodney Linehan have agreed to continue serving: President, Paul Brandes; Vice President, Sigrid Stewart; Second Vice President, Beverly Mace; and Secretary, Nancy English. Rodney's daughter, Liane Linehan, has accepted the nomination for Treasurer.

### New Business

**New Lapidary Equipment.** Debbie Kirkpatrick and Margo Bedman sent a letter to the BOD requesting a new Neycraft casting unit. They explained the dangers of using the current Vigor equipment. Fred Brueckner offered his nearly new Neycraft to the Club, pending Debbie and Margo's approval of his equipment. Sigrid Stewart moved that the BOD authorize the purchase of a new Neycraft if the donation does not work out. Jeanne Barna seconded it. The motion passed.

**Stationery:** The BOD agreed that the Stationery template should be made available online for people to download and use. There is no need to buy stationery.

**Next Board of Directors meeting:** Tuesday, December 5, 2017, 7:30 p.m.

**The January BOD meeting originally scheduled for January 2, 2018 is rescheduled for January 9, 2018.**

**The next General Meeting is November 28, 2017, 7:30 p.m.:** Sarah Metsa will present a talk titled "Jewelry Design through Advertising; Getting It Created and Sold." New officers for 2018 will be elected.

The **December General Meeting** is being replaced by the Christmas and Holiday Party on December 9. The January General meeting is on January 23, 2018.

**Adjourn:** Nancy English moved, and Mike Dawkins seconded the motion to adjourn the meeting. The motion passed, and the meeting was adjourned at 9:05 p.m.

## Bench Tips

by Brad Smith

[www.BradSmithJewelry.com](http://www.BradSmithJewelry.com)

### MARKING YOUR TOOLS

It makes sense to mark your tools if you ever lend them to friends or take them out to classes or workshops. Question is, how to mark them permanently. For metal tools, I use a very small ball bur running fast in the Dremel or Foredom to "engrave" my initials. Other times, I'll form the initials with a number of hits with a center punch.

But for hammer handles and other wooden tools, the country boy in me came back and thought "Why not make a branding iron?" If you'd like to try one, all you need is a little

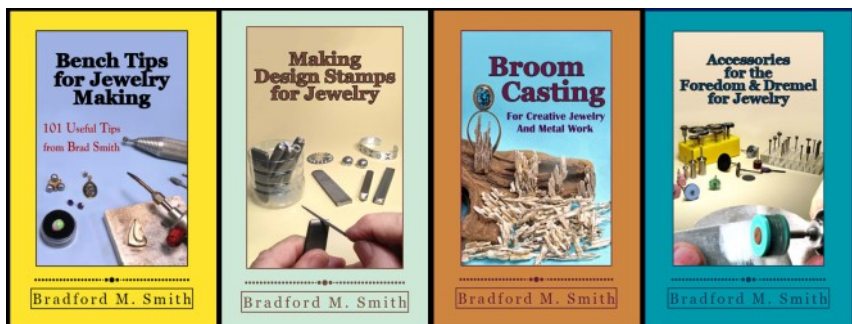


scrap copper or nickel about 22–24 gauge, a piece of heavy brass or copper for a base, about 6 inches of metal rod, and a piece of wood for the handle.

I formed my initials from a couple 4 mm-wide strips of sheet nickel. The "S" was one piece, but the "B" was three pieces soldered together with hard solder. (Remember to form the letters



backwards.) I then soldered the letters with medium solder onto a piece of 1/8 inch thick brass bar to act as a heat sink. Finally, I soldered a piece of 1/8 inch round rod on the back of the brass bar as a shaft to join to a wooden handle.



With the holidays soon upon us, we are all making our lists. If you need a present for someone who does jewelry, consider a book that teaches new skills. See a selection at

[Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

## How to Achieve Great-Looking Pyrite and Galena Specimens

by Bridget Joubert and Jim Marler

CENLA Rock Hounds

from SCFMS Newsletter 09-10/2016

**A**t a past rock show (Clearlake show, Pasadena, TX), we stopped by the Fender's mineral specimen booth to chat about their very fine minerals. Jim asked him how he got such beautiful pyrite and galena specimens. He said it was all in the cleaning he did prior to displaying. Here is what he said:

**Galena:** Soak the specimen in warm "Iron-Out™" to remove surface iron and lead oxides. This may take an all-day soaking if very "dirty." Rinse well, and scrub lightly with a bristle brush—NOT a wire brush—it scratches! Spray well with "Scrubbing Bubbles™" (non-bleach type) and give it a good scrubbing with the brush. Rinse well, and let the specimen air-dry completely (a fan helps speed this up) before putting it away. By the way, are you wearing kitchen dish gloves? Some people are sensitive to the aggressive chemicals in these cleaners, so put on those gloves and safety glasses!

**Pyrite:** One of the problems with many Pyrite (FeS) specimens is that they may be in a mixture with Marcasite. Marcasite (HFeS<sub>2</sub>) is an unstable "Pyrite" and will slowly deteriorate as it is stored, especially in the damp air of Louisiana. If you find your nice pyrite specimen sitting on a pile of sulfur-smelling grey ash, it is a mixture specimen! The Marcasite slowly converted to sulfuric acid and iron, eating away at the whole specimen—cardboard box and all! To clean up specimens with Marcasite, use that wire brush that was forbidden above! Get rid of all the visible Marcasite with a good soap scrubbing. As always, be sure to wear safety goggles when scrubbing any specimen, fine particles will fly all about and love to land in eyes! Rinse well and let dry for a while. Okay, now spray the specimen with "Scrubbing Bubbles™" and use the brush with vigor. The pyrite part will brighten up very nicely. For specimens that have pyrite on another mineral (i.e. dogtooth calcite), adjust your scrubbing to prevent damage to the other mineral. Always dry completely before storage.

**Chalcopyrite:** This iron sulfide mineral containing copper is often misidentified as pyrite. Look carefully at the “pyrite” crystals and see if there are multi-colors showing, besides the plain “gold” of pyrite. If so, this is probably chalcopyrite (peacock ore). Again, spray the specimen with “Scrubbing Bubbles™” and brush-scrub it. Though it will not be as bright as pyrite, it will shine up quite a bit, making your specimen come alive!

**Other minerals:** so far, our experience with cleaning other minerals has been that “Scrubbing Bubbles™” works on all minerals, but not as dramatically as it does on Pyrite and Galena. What it has done, however, is show us the presence of pyrite, galena, chalcopyrite, and other crystals where we did not see them before due to oxidation and/or dirt. Yes, plain ole soap will clean minerals, but the “Bubbles” seems to put that shine on them that other cleaning agents do not!

No, we do not have a financial interest in Johnson’s Company and their “Scrubbing Bubbles™”, but we wish we did since we have gone through CANS of it, and it works so well on our specimens!

### Found in the News

*by Jim Brace-Thompson*

*from Rockhound Rambling, 3/17, via The Tumbler 9/2017*

#### A “Lost Continent” Lost No More!

Seeking a “lost continent,” but oh, so bored with that fable of Atlantis? Then seek no more! Per the February 2 issue of USA Today, geoscientists now believe they have discovered the remains of a lost continent—dubbed “Mauritia”—beneath the Indian Ocean around the island nation of Mauritius. Mauritius is an island composed largely of volcanic rocks that are only a few million years old; yet scientists have recently discovered zircon crystals there that they’ve dated all the way back to 3 billion years! They now believe the submerged area around Mauritius was once part of Madagascar and India that sank beneath the ocean some 84 million years ago as a supercontinent broke up, and present-day Madagascar and India began a slow but steady migration away from east Africa.

#### The “Pink Star” Diamond Sets a Record - for the Second Time!

*by Jim Brace-Thompson*

*from Rockhound Rambling, 4/17, via The Tumbler 7/2017*

The world’s largest “fancy vivid pink” diamond—dubbed the “Pink Star” and clocking in at 59.60 carats—went on auction at Sotheby’s in Hong Kong on April 4. How big is 59.60 carats? Picture a human eyeball. Pretty big! By comparison, the fabled blue Hope Diamond is a mere 45.52 carats. The Gemological Institute of America says it is the largest internally flawless pink diamond they’ve ever graded. Mined by DeBeers in South Africa in 1999, the rough stone clocked in at 132.5 carats, and it took nearly two years to cut and facet. Prior to the auction, speculation was that it would fetch no less than \$60 million, which would make it the most expensive diamond ever auctioned. How did it actually do? Henry Cheng Kar-Shun, chairman of the Hong Kong jewelry firm Chow Tai Fook, phoned in the winning bid of \$71.2 million. It’s now called the “CTF Pink Star” in honor of the company’s founder.

**Side note:** this diamond now holds the distinction of being the most expensive diamond ever auctioned—twice! It was actually auctioned off once before, in 2013, for \$83 million. There was just one problem: the buyer defaulted on the deal. Is this how legends of cursed diamonds begin?

via The Golden Frog, 9/16; from Space.com, via The Tumbler 7/2017

New analysis of the dagger buried with King Tut confirms that the weapon was made from an iron meteorite. They used X-ray fluorescence spectrometry to study the dagger found on Tut's mummified body by Howard Carter in 1925. Daniela Comelli of Milan Polytechnic's department of physics and her colleagues have even identified the most likely meteorite used to forge the dagger. "We took into consideration all meteorites found within an area of 2,000 km in radius centered in the Red Sea, and we ended up with 20 iron meteorites," Comelli told Space.com. "Only one, named Kharga, turned out to have nickel and cobalt contents which are possibly consistent with the composition of the blade."

### Missouri—The Cave State

*by Sharon Marburger  
from Pick and Shovel 11/2017*

I was recently sent a news article by a club member regarding caves in Missouri. It brought to mind a family vacation taken when I was 8 years old. The family drove from southern California to Illinois; the objective was to visit distant relatives. I remember one stop we made in Missouri; it was at Meramec Caverns. That experience left a deep and lasting impression in my young mind. I have been to several caves and caverns since then, but none live up to that memory of Meramec.

Here we are, a stone's throw from Missouri. Did you know that Missouri has over 6,000 caves? My curiosity was piqued by the news article. Where can I find information on caves? A quick Google search took me to the Missouri Caves Association's Web site—[missouricaves.com](http://missouricaves.com). Wow! Below I excerpt what I found.

- **Bluff Dwellers Cavern:** Noel, MO. It was discovered by Arthur Browning, owner of the property, and by two surveyors, Bob Ford and Bryan Gilmore, in 1925. There is a network of subterranean corridors channeling the layers of rock like a subway system. Two natural openings were found that had been hidden by hillside talus and slabs of rock weathered from the bluff face over several thousand years. The cavern was opened to the public for tours in 1927.
- **Bridal Cave:** Camdenton, MO. Rated as one of the most scenic caves in America, guided tours last approximately one hour. Travel through room after room of incredible mineral deposits, giant columns, delicate soda straws, and massive draperies. This cavern has more onyx formations than any other known cave or cavern.
- **Cameron Cave:** Hannibal, MO. Discovered in February 1925 by Arch Cameron while checking on his cattle. It contains a complex system of tunnels. With the exception of some safety regulations, it remains the same as when it was discovered.
- **Cathedral Cave:** Leasburg, MO. This cave is 15,639 feet long, has a few side passages, and the portion known as "Upstream Cathedral." It is hollowed in Gasconade dolomite, which was laid down approximately 440 million years ago.

The cave consists of two distinct sections: a larger passage and a much longer cave stream passage. This is a lantern tour that lasts approximately two hours, and it covers one and two-thirds miles round trip.

- **Current River Cavern:** Van Buren, MO. This cavern was previously known as “Big Spring Onyx Cavern.” It contains a wide variety of natural cave formations, a year-round stream, and a small waterfall that flows from a side passage after heavy rains. There are a number of activities in the area, including cave tours, zip lines, a museum and nature center, gem panning, a gift shop, and a quarry dig (where you can take home real fossils, geodes, and crystals).
- **Fantastic Caverns:** Springfield, MO. This beautiful cave is toured in jeep-drawn trams, the tour lasting about 55 minutes. This allows you to experience the magnitude, the stillness, and the splendor of the cave while preserving its natural features. Since it is a riding tour, anyone can participate.
- **Fisher Cave:** Sullivan, MO. This spectacular natural wonder offers seasonal, naturalist-led tours. Huge rooms filled with calcite deposits ranging from intricate helictites to massive columns 30 feet tall also contain well-preserved bear claw marks and cave wildlife.
- **Jacob's Cave:** Versailles, MO. This is Lake of the Ozarks' largest and most scenic cave. The breathtakingly beautiful fully guided walk-through tour is a mile long and on fully lit, paved walkways that are handicap accessible. Formations include soda straws, stalactites, columns, and helictites. There is also evidence of six ice ages and three earthquakes in the cave.
- **Marvel Cave:** Branson, MO. This is a wet limestone cave, complete with formations that are still alive and growing! Travel 300 feet below the surface to enter the Cathedral Room, which is the largest cave entrance room in the United States. The very strenuous tour lasts approximately 60 minutes, and nearly 600 stairs must be climbed. Not recommended for visitors with health issues or disabilities.
- **Meramec Caverns:** Sullivan, MO. Colorful and complex mineral formations are preserved in the spectacular sights of this cavern. Guided tours by trained rangers are conducted along well-lighted walkways that are accessible to the disabled. Meramec Caverns is the largest commercial cave in the state of Missouri.
- **Onondaga Cave:** Leasburg, MO. This cave has towering stalagmites, dripping stalactites, and active flowstones. Guided walking tours of just under a mile take about 1¼ hours. There is plenty to see and do if you prefer to stay above-ground.
- **Smallin Cave:** Ozark, MO. This was the first documented cave in the Ozarks and is historically significant. The town of Ozark was a centralized location of union activity during the civil war and there is strong evidence that Smallin Cave was used for war-related activities. The tour lasts an hour, and covers about one-half mile of walkways and inclines. Special seasonal tours are offered for varying prices. Enjoy the cave and

this historic Civil War Site.

- **Talking Rocks Cavern:** Branson West, MO. This is a must see cave with a beautiful landscape of glistening crystals from Mother Nature. There are hiking trails and activities to do above ground, such as gemstone mining where you can take your treasures home.

It sounds like there is a cave in Missouri for anyone who wishes to explore. Take some time to enjoy nature underground. You will be thrilled!

A view inside of Talking Rocks Cavern. VERY impressive. Click on link:

<http://www.talkingrockscavern.com/Gallery>



### Show Time 2017–2018

Dec. 9-10 Leesville, LA DeRidder Gem and Mineral Society  
West LA. Forestry Assoc. Bldg.; 276 H. M. Stevens Blvd  
[deridder.rockngem@gmail.com](mailto:deridder.rockngem@gmail.com); Web site: [rockngemswla.com](http://rockngemswla.com)

### Show Time—2018

Jan. 20-21 Fredericksburg, TX Fredericksburg Rockhounds  
Pioneer Pavillion, Lady Bird Johnson Park, Hwy. 16 South  
[gedeonjim!@gmail.com](mailto:gedeonjim!@gmail.com)

Jan. 26-28 Tyler, TX East Texas Gem & Mineral Society  
Tyler Rose Garden Center

Jan. 27-Feb. 10 Tucson, AZ MANY, many different shows running simultaneously  
[www.mzexpos.com](http://www.mzexpos.com) is one site

Feb. 2-5 Tucson, AZ Fine Mineral Show  
[www.FineMineralShow.com](http://www.FineMineralShow.com)

Feb. 24-25 Pasadena, TX Clear Lake Gem & Mineral Society  
Pasadena Convention Center

Feb 24-25 Plainview, TX Hi Plains Gem & Mineral Society Show  
Ollie Liner Center, 2000 S. Columbia

Mar 3-4 Robstown, TX Gulf Coast Gem & Mineral Society  
Richard M. Borchard Regional Fairgrounds

April 14-15 Abilene, TX Central Texas Gem & Mineral Society  
Abilene Convention Center, N 6th & Pine  
[kmcdaniel23@suddenlink.net](mailto:kmcdaniel23@suddenlink.net); [www.new.calichetimes.com](http://www.new.calichetimes.com)

April 27-29 The Woodlands, TX Texas Fine Mineral Show  
Holiday Inn and Suites

May 5-6 Lubbock, TX Lubbock Gem & Mineral Society **hosting SCFMS Federation**  
Lubbock Memorial Civic Center; 1501 Mac Davis Lane  
[walt@lubbockgemandmineral.org](mailto:walt@lubbockgemandmineral.org); [www.lubbockgemandmineral.org](http://www.lubbockgemandmineral.org)

| 2017  |                                      | December  |  |   |     |   | 2017 |
|---|--------------------------------------|---|--|---|-----|---|------|
| Sun   | Mon                                  | Tue   | Wed  | Thu   | Fri | Sat   |      |
|   |                                      |   |  |   | 1   | 2 10-4<br>Shop Open<br>10-Noon<br>Youth Section                                   |      |
| 3 10-4<br>Shop Open                           | 4                                    | 5 11-3<br>Shop Open<br>7:30<br>Board Meeting          | 6 10-3<br>Shop Open<br>1:00-3:00<br>Day Light Section<br>7:30<br>Mineral Section | 7 7:30<br>Archaeology<br>Section<br>Pearl Harbor<br>Day | 8   | 9 10-4<br>Shop Open<br>1:30 Beading Section<br>HGMS<br>Christmas/Holiday<br>Party |      |
| 10 10-4<br>Shop Open                          | 11                                   | 12 11-3<br>Shop Open<br><br>Hanukkah                  | 13 10-3<br>Shop Open<br>NO<br>Gemstone &<br>Faceting Section                     | 14  | 15  | 16 10-4<br>Shop Open<br>10-Noon<br>NO Youth Section                               |      |
| 17 10-4<br>Shop Open                          | 18 7:30<br>NO<br>Lapidary<br>Section | 19 10-3<br>Shop Open<br>NO<br>Paleo Section           | 20 10-3<br>Shop Open<br>7:30<br>NO Mineral<br>Section                            | 21<br>First Day of<br>Winter                            | 22  | 23 NO<br>Shop Open  |      |
| 24<br>Christmas<br>Eve<br>NO<br>Shop<br>Open  | 25<br>Christmas<br>Day               | 26 10-3<br>Shop Open<br>7:30<br>NO General<br>Meeting | 27 10-3<br>Shop Open   | 28  | 29  | 30 10-4<br>Shop Open  |      |
| New<br>Year's<br>Eve<br>NO<br>Shop<br>Open 31 |                                      |   |  |   |     |   |      |

| 2018              |   | January                                |   |                          |     |  | 2018 |
|-------------------|---|--|---|--------------------------|-----|--|------|
| Sun               | Mon   | Tue                                    | Wed   | Thu                      | Fri | Sat  |      |
|                   | 1 New Year's Eve                                | 2 10-3 Shop Open                       | 3 10-3 Shop Open 1:00-3:00 Day Light Section 7:30 Mineral Section | 4 NO Archaeology Section | 5   | 6 10-4 Shop Open 10-Noon Youth Section                       |      |
| 7 10-4 Shop Open  | 8   | 9 10-3 Shop Open 7:30 Board Meeting    | 10 10-3 Shop Open 6:30 Gemstone & Faceting Section                | 11                       | 12  | 13 10-4 Shop Open  |      |
| 14 10-4 Shop Open | 15 7:30 Lapidary Section Martin Luther King Day | 16 10-3 Shop Open 7:30 Paleo Section   | 17 10-3 Shop Open 7:30 Mineral Section                            | 18                       | 19  | 20 10-4 Shop Open 10-Noon Youth Section 1:30 Beading Section |      |
| 21 10-4 Shop Open | 22  | 23 10-3 Shop Open 7:30 General Meeting | 24 10-3 Shop Open   | 25                       | 26  | 27 10-4 Shop Open  |      |
| 28 10-4 Shop Open | 29  | 30 10-3 Shop Open                      | 31 10-3 Shop Open   |                          |     |  |      |



Merry Christmas  
Happy Hanukkah  
Happy Holidays  
Happy New Year  
To Everyone!  
From HGMS



# The BACKBENDER'S GAZETTE

The Newsletter of the  
Houston Gem & Mineral Society

10805 Brooklet  
Houston, Texas 77099  
(281) 530-0942



## SCFMS

1998 - 1st (Large)  
2000 - 1st (Large)  
2003 - 1st (Large)  
2005 - 1st (Large)  
2006-2016 - 1st (Large)  
2017 - 1st (Large)

## AFMS

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



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