

THE HOUND'S HOWL

AIKEN GEM, MINERAL and FOSSIL SOCIETY
AIKEN, SOUTH CAROLINA



VOLUME 57, No. 3

MARCH 2019

Editor's Message

A few days after the Show and am getting my thoughts together after viewing all the excitement and enthusiasm brought by our visitors and members as well.

The Casino entrance never looked better with new signs showing two admission sections and still room for the grand prize cabinet. Traffic flowed freely even on a very busy Saturday. A new grab bag banner set off the table and did its job as all 1000 were sold by mid Sunday. The exhibits were excellent and diverse with a number of junior members participating and USC-Aiken Department of Biology and Geology putting together a display of each curriculum that was both attractive and informative. Those who demonstrated their lapidary art had a very workable setup on the stage and visitors appreciated the diversity of talent. Our dealers, of course, make the greatest impact as the lighting enhanced the gems, jewelry, minerals, fossils, and carvings of our natural world.

Months of preparation by committee chairs go into our annual extravaganza, and its success culminates with the volunteer hours contributed during the four days. All should say, "A job well done!"

Barbara



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March 15 Program

How Portland Cement is Made



We welcome Bruce Walker from ARGOS USA, who will tell us about the manufacture of this versatile building material and its economic importance

Argos Ready Mix recently purchased a facility on Willow Run Road in Aiken.

April 12 Program

Wirewrap Artistry with Herman Kunis

Herman's engineering background has supported his lifestyle but his artistic side, jewelry craft, has taken him to Federation lapidary classes, the Columbia County Artists' Guild, and a teacher of making jewelry. He has presented programs to both Aiken and Augusta clubs and demonstrated at many of our Shows. He has been an AGMFS member for close to 20 years, and we look forward to his time with us to learn more about wirewrapping and how he makes such beautiful designs. ▣

Platinum and the YD Boundary



Members at the February meeting welcomed Dr. Christopher Moore from the Savannah River Archaeological Research Program and listened intently as he took us back 12,800 years to the Younger Dryas period when the Northern Hemisphere experienced an abrupt change in climate from gradual warming to near-glacial conditions. Scientists believe that this led to the extinction of some large mammals and disappearance of the Clovis people, a Paleo-Indian culture noted for its stone tools capable of hunting megafauna.



▶ Many theories have been proposed by scientists accounting for this abrupt change in climate but have been rejected because of insufficient evidence.

The Younger Dryas impact hypothesis is reinforced by the presence of a platinum anomaly that was initially found in Greenland ice cores and dated at the time of the YD boundary (12,800 B.P.). Since platinum is very rare in the Earth's crust and abundant in comets and asteroids this was a vital reinforcement of the impact hypothesis.

Chris continued with his research to determine the geographic extent of the anomaly in North America and have it serve as a Pt datum for dating archaeological and paleontological data between sequences. Through reassay and inductively coupled plasma mass spectrometry element analyses were carried out on various separate archaeological sediments. The Pt anomaly dating to the YD onset was discovered across North America and further reinforced the theory that an extraterrestrial source impacted the Earth and caused this extinction event.

Our thanks to Chris for taking the time from his busy schedule to bring this program to us and answer the numerous questions from the audience. One of these centered on where the probable impact site is located. A few months before, news was learned of a 19-mile impact crater discovered under Greenland's Hiawatha glacier. Chris's comment was that more data is needed by getting a core sample of the bedrock.

References: "Widespread platinum anomaly documented at the Younger Dryas onset in North American sedimentary sequences" by Christopher R. Moore, et.al. *Scientific Reports* 7, Article number: 44031 (2017)📄

(Learn more about "Why is asteroid mining such an exciting proposition?"

<http://www.astronomysource.com/tag/platinum-from-asteroids/>)📄



New Members

Beth Harpham **Georgann Crawford**
Aiken Aiken

MILESTONES

- 3 – James Gee
- 3 – Barbara Schmidt
- 8 – Linda Kolmar
- 11 – Ted Dziekanowski
- 13 – Sue Shrader
- 14 – Mark Pitts
- 18 – Vickie Newell
- 20 – Gary Hert
- 25 – Dennis Scherer
- 31 – David Dunlap



Happy Anniversary!

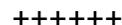
2 - Donald and Claire Horne



Get Well

As many saw Chris Glass at the Show on Friday and Sunday, we can rest assured that she is recuperating rapidly and are thankful for a miraculous recovery.

We wish a speedy recover to Patti Bennett's mother after surgery this past week.



DUES are NOW OVERDUE



If you have not yet renewed your membership for 2019, this is your last *Hound's Howl*.

We're sorry to see you leave us. Hopefully you will continue in the hobby and search the Club website from time to time. At least stop in and visit at the Show.📄

General Meeting Minutes

The Aiken GMFS met on February 8, 2019 in Room 200 of the USC-Aiken Science and Engineering Building. Twenty Seven people signed in. President Walt Kubilius called the meeting to order at 7:00 pm and greeted members and guests Hill Hucks and Jeremiah Shearer. Shalyn Najjar introduced herself as the recipient of the club's geology scholarship to USC Aiken. Walt asked for a motion to accept the minutes as published in the *Hound's Howl*. John Kolmar made the motion; it was seconded by Jim Sproull and carried by the membership.

Treasurer's Report given by Kathleen Wallis.

Vice President's Report by Debbie Baer. The March 15 speaker will be Bruce Walker from Argos Cement. He will speak about how Portland cement is made. In April Herman Kunis will speak on wire wrapping. Christian Cicimurri from the USC McKissick Museum will speak in May. Her topic will be "New Projects." The Silent Auction will be in June.

Field Trip Report by John Kolmar. February 16, 2019 there is a DMC trip to Girard, GA sponsored by the Athens Rock and Gem Club. February 23 will be the Prosbtt Farm in Maiden, North Carolina to collect corundum. March 16 will be a trip to the Kemp Mine in North Augusta. ▶

► We will look through the spoil piles from the sand mine. Mud can be a problem at this site so a rain make-up day will be March 30, 2019. April 20 we will go to Hagood Mill in Pickens County to see the petroglyphs. It is a free location but it will cost \$5.00 per car for parking. Saturday May, 11 will be a field trip to McCormick Gold Mine.

Show Committee Report by Kathleen Wallis.

The show is March 8, 9 and 10, 2019. There will be no 50-cent coupons for the 2019 show. There will be two entry lines with one for exact change. Volunteers are needed for the set-up, dinner and break-down. A sign-up sheet to work in three-hour shifts for the front desk and grab bags table was passed around.

There was **no old business or new business.**

Show and Tell: Debbie Baer shared pieces of a nautilus fossil that she had received from her Aunt. Amethyst from Jackson Crossroads was brought by Herb Martin and Steve Rosier shared green Savannah River agate.

Additional Remarks: Jim Cobb commented on the success of the Field Trip to Charleston.

And a reminder the Meeting will be on March 15.

The business meeting was adjourned at 7:20.

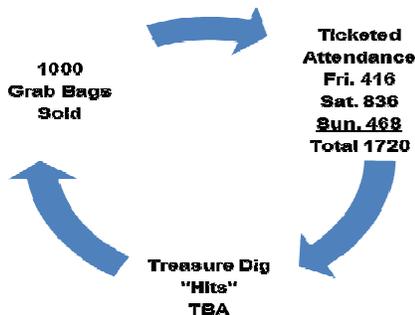
Refreshments were provided by John Kolmar and Jim Gee. Shalyn Najjar brought doughnuts.

Program: Dr. Chris Moore presented his research on a Platinum anomaly dated at the time of the YD Boundary that supports an extraterrestrial impact theory.

Submitted by Sharon Sterrett, Secretary

2019 Show News

A busy time at the front desks – yes, there were two stations with one for exact change. It eased the flow through the foyer and helped with the Grand Prize raffle slips. Attendance was our second best year after last year's count of 2082.



It is a work in progress as far as getting more statistics and the name of the Grand Prize Winner. We do know the winner of the Relay for Life Benefit American Cancer society concession: Maurine Resch,

a long-time member of both Aiken and Augusta Clubs and a most worthy winner of a beautiful amethyst geode.

A "Show Special Issue" will be published at the end of the week with photos.

February Show and Tell



We were treated to some unusual and familiar but beautiful specimens that were shared.

Debbie brought fossils she wished to have identified. Fortunately, Walt was present and knew they were internal molds of chambered nautilus.



In this photo, to the left is green Savannah River agate brought by Steve Rosier and the large amethyst from Jackson's Crossroad brought by Herb Martin.☐

Photos by Sharon Sterrett

Graves Mountain 2019 Swap & Dig
April 26-28
8am – 6pm

The caretaker Clarence Norman Jr., has announced plans to hold a three-day dig and rock swap on the Mountain during April and October. All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four-wheeled vehicles available to transport those participants who have trouble walking long distances. Everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks:Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events.

Contact: Clarence Norman Jr. (Junior) - 706-359-1544 (his business) or 706-401-3173 (his cell) for more info.

For directions, Safety guidelines, photos and articles visit: www.gamineral.org.

Graves Mountain code of conduct!

- Park your vehicle in the designated area(at the end of the paved access road but not much beyond the woods to the right of this road).
- NO child under the age of 12 years old is to be allowed on the mountain because of all the dangers involved. **ALL CHILDREN WILL BE ALLOWED DURING THE "Rock Swap and Digs" IF EACH CHILD IS UNDER STRICT ADULT SUPERVISION!**
- ALL pets must be kept under control and on a leash.
- The caretaker, Junior Norman, has final and absolute say as to where you may safely work.
- Ladders or power tools of any kind will not be allowed. **(HAND TOOLS ONLY!)**
- **STAY AWAY FROM ALL HIGH WALLS!!**
- **NO RAPELLING OFF OF ANYTHING!**
- **NO ONE** IS ALLOWED TO DRIVE THEIR VEHICLE ON ANY PART OF GRAVES MOUNTAIN BEYOND THE PARKING AREA!
(The caretaker must accompany anyone driving beyond the parking area!)
- EVERYONE NEEDS TO BE OFF THE MOUNTAIN BY DUSK. (Absolutely no one is allowed on Graves Mountain after dark.)

Please protect our ability to field collect at Graves Mountain!

Report violations to: Clarence Norman Jr.,
3333 CE Norman Rd. Lincolnton, GA 30817-3110

ScienceDaily

Scientists go to extremes to reveal make-up of Earth's core, March 12, 2019

Experiments conducted at extreme conditions are giving scientists new insights into the chemical make-up of the Earth's core and reveal that our planet's metal center - more than 1,800 miles below the surface -- also contains silicon, an element commonly found in stony meteorites.

The findings support an existing theory that suggests Earth's formation around 4.5 billion years ago was driven by extensive interactions between stony and iron-rich meteorites inside a cloud of dust and gas. This huge cloud of material also formed the Sun.

The chemical composition of the Earth's core is still poorly understood, despite more than 60 years of research, scientists say.

Previous studies had suggested the core is composed of an alloy of iron and nickel, though other elements are thought to be present.

University of Edinburgh. "Scientists go to extremes to reveal make-up of Earth's core." ScienceDaily. ScienceDaily, 12 March 2019.

<www.sciencedaily.com/releases/2019/03/190312123650.htm>.

Bench Tips by Brad Smith

Brad Smith's books are at <facebook.com/BenchTips/> or on Amazon.com



MAKING FILIGREE WIRE

Making wire for filigree is quite simple. Take a double strand of 24-26 gauge silver wire, twist it tightly, and then flatten it a bit. While the basics are straightforward, here's a few tips that will quickly make you an expert with filigree.

Filigree looks best when the wire has a very tight twist. The way I do this is to start with dead soft wire and twist it until it breaks. It always seems to break on one end or the other.

I like to use a screw gun, although a Foredom also works well. You'll need a small hook in the spindle, either a cup hook from the hardware store or a nail that has been bent into the shape.

Be sure to keep a little tension on the wires as you twist. Then to get a real tight twist, I anneal the wire and twist it a second time until it breaks.



The final step in prepping the filigree wire is to flatten it slightly with a planishing hammer or rolling mill. The amount of flattening is a personal preference. I like to reduce the diameter about 25%. The wire will be quite stiff at this point, so it's best to anneal it again before starting to make the filigree shapes.



City of Aiken Earth Day 2019
Saturday, April 20
8:30am-1:00pm
Newberry Street & The Alley

Collecting in Tennessee

By Fred Haynes, Wayne Co.GMC

In mid-November, 2013 Wayne County Gem and Mineral Club member Linda Schmidtgall and her husband Les made one last collecting trip before winter. And they were smart: they pointed their fossil hauling Chevy pickup south and travelled to north central Tennessee to hook up with the Knoxville Gem and Mineral Society and the Georgia Mineral Society on their annual fall crinoid and coral "harvest". Fossil



hunting along the shorelines of the Tennessee and Kentucky lakes is best when the water level is lowest in late fall and crinoid fossil remnants can be collected by the bucket full.

Stem sections, or cemented crinoidal hash locally referred to as crinoidal plates, can be collected along the shoreline or just below the water line. All are fully silicified into grey or light bluish chalcedonic chert.

The crinoidal debris around Dale Hollow Lake is from the Fort Payne Formation of Middle Mississippian age. A number of large stemmed crinoids thrived in the seas that covered the Tennessee-Kentucky region in the Upper Mississippian Epoch some 320 million years ago. Krivicich (2011) reported that the most common genus from three sites on Dale Hollow Lake is *Agaricocrinus*. Without the calyx, species identification is not possible. *Actinocrinites* is another common genus.

Crinoids are marine animals from the Class Crinoidea of the Phylum Echinodermata. Most prehistoric crinoids attached themselves to a substrate with a flexible, circular, segmented stem. Above the stem food filtering arms extend from a cup-shaped body (or calyx). The stem length and calyx size are species specific, but also vary based on the environment. The stems grow as needed to access planktonic nourishment. The broken and segmented stems were comprised of calcite and therefore commonly preserved in the rock record. The softer tissues of the calyx and arms require rapid soft sediment burial to be preserved and are seldom found

intact. Although the 30 or so collectors with Linda found stem sections in abundance, there were only 10 identifiable calyces found and Linda found two of them! One shows the pentagonal character of *Agaricocrinus* (see below). The other may be *Actinocrinites*.



At a second spot, colonized corals were conveniently located in outcrop exposure near Byrdstown, Tn. Silicified and somewhat iron stained,



these small coral colonies grew with bryozoans in carbonate mounds offshore from the Appalachian Highlands that were rising to the south and east in Mississippian times.

A colonized coral from Byrdstown, TN.

Individual corals are 0.5-0.8 inches in diameter.

Because of their uniformity, pieces of crinoids stems have been threaded onto necklaces for over 1000 years. In England, they are often referred to as St. Cuthbert's beads (or Cuddy's) because of their historic importance in medieval Northumberland. Their use in rosaries can be traced back to the 12th century, but at that time their origin was assigned to snakes or "devil's toes". Naturalist Martin Lister came closer to the truth when he labeled them as "petrified plants" in 1673.

Side-bar: The process of silicification

The formation of chert layers and nodules and the silicification of fossils such as crinoids within limestones is an interesting process. Silica released from the weathering of silicate rocks is transported in solution where it fills the pores of the limestone and fossils. As the water evaporates with burial, a siliceous gel is formed and with further dehydration, opal (SiO₂·xH₂O) will begin to encase and replace the carbonate mineralogy of the limestone. With continued access to silica-laden waters, nodule growth or fossil replacement can proceed to completion. The transformation of carbonates to chalcedony/chert occurs via dissolution and reprecipitation processes that are controlled by time and temperature as well as access to silica-laden groundwaters.

From: Wayne Co. GMC News, January 2014

AGMFS Officers and Committees 2018

President: Walt Kubilius

(803) 643-3281/president@aikengmfs.org

Vice President: Debbie Baer

(803) 295-7897 / vicepresident@aikengmfs.org

Secretary: Sharon Sterrett

(803) 649-0174 / secretary@aikengmfs.org

Treasurer: Kathleen Wallis

(803) 643-3281/ treasurer@aikengmfs.org

Editor: Barbara Fenstermacher

(803) 649-0959 / houndshowl@gmail.com

Federation Liaison: Barbara Fenstermacher

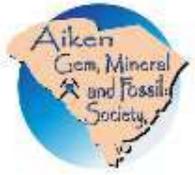
Field Trip Committee/ DMC Liaison: John Kolmar, Jim Gee, Debbie Baer and Herb Martin

(803) 642-3767 (John) / lkolmar@gmail.com

Webmistress: Patti Bennett webmaster@aikengmfs.org

USCA Liaison: Walt Kubilius

Librarian/Bag'nTag Coordinator: Jerry Lipsky



The Hound's Howl
Aiken Gem, Mineral and Fossil Society
P.O. Box 267
Aiken SC 29802-0267

FIRST CLASS MAIL

March 2019

Program: Portland Cement –
How It's Made and Economic Importance

Meeting date: March 15 at 7:00 p.m.
USC-Aiken Science Building, Room 200



The **Aiken Gem, Mineral and Fossil Society** operates as a non-profit, educational organization affiliated with the American Federation of Mineralogical Societies, Inc. (AFMS), the Eastern Federation of Mineralogical and Lapidary Societies, Inc. (EFMLS), and the Southeast Federation of Mineralogical Societies, Inc. (SFMS).

The purpose of the Society is to stimulate interest in collection of gem and mineral materials and fossils and to impart knowledge of lapidary work, mineralogy, paleontology, collecting and classification of minerals and fossils, and the application in the art so greater pleasure may be derived from these activities.

The Society meets at 7:00 p.m., second Friday of the month, in Room 200 of the USC-Aiken Science Building located in the University complex on University Parkway in Aiken. There are informal meetings in July and August. The annual dues, payable by December 31, are \$20 for a family membership, \$15 for a single adult membership and \$2 for a junior/student member.

The *Hound's Howl* is published ten times a year by the Aiken Gem, Mineral and Fossil Society. An annual subscription is an additional \$10.00 for posted delivery. Otherwise it is sent via email delivery. Unless otherwise noted, permission is granted to reprint material from this bulletin for non-profit usage provided the sense or meaning of the material is not changed and proper credit is given to our club and the article's author or photographer. Material written by the editor may not have a by-line.

The Society's web page, www.aikengmfs.org offers more information about the history of the club, our annual Gem, Mineral and Fossil Show, education links and community projects. See photos of our field trips and events on our **Facebook** page.