ROCKET CITY ROCKS & GEMS







The Monthly News Bulletin of the Huntsville Gem & Mineral Society, Huntsville, Alabama

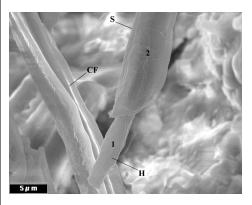
Volume 56 No. 2 "We'll go to the Moon for a Rock" February 2024

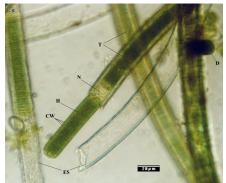
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HGMS February 28 Membership Meeting 6:00pm Dr. Richard Hoover will present a program on Cosmic Distribution of Biospheres

This presentation will demonstrate the spectacular beauty the microworld and planets, nebulae, and galaxies of the Cosmos; exotic rocks and microfossils of meteorites and the wonders and mysteries of the origin of life and the Cosmic Distribution on Biospheres.





Cyanobacteria

Orgueil Meteorite

Living on Earth

Web Page - www.huntsvillegms.org/ email - hsvgems@gmail.com









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Happy February to one and all! If you missed the January meeting, you missed a great one. Don't miss this month's meeting. It too will be an awesome time of learning and entertainment. I also wanted to let you know the board of directors have been bust planning a great year for you in 2024. We are also having an "Inside Yard Sale" instead in March instead of the traditional Auction. Things that you have always wanted (but may not have known) will be on a "Buy It Now" table for prices you cannot turn down! And lastly, I want to let you know

that I will be attending the Southeast Federation of Mineral Societies' annual Rockhound Roundup in Live Oak, Florida this year on March 1-3 to represent you and talk about what a great club you have with your continued support and participation. You all make me proud to represent you and I just want to say a really big "Thank You!"

Your humble President, Mike Harrison

February 8th 2024 Board meeting minutes

The show budget was reviewed and revised. All major changes were voted on and approved. These are reflected in the new budget.

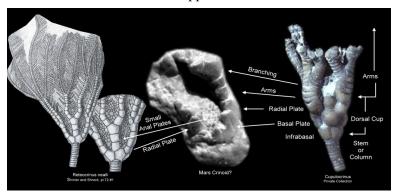
The Board voted and approved a committee to build a new fluorescent display.

The Board voted to put our reserve funds into a CD to collect a better interest rate.

The board voted to have Teresa Chivers added to the debit card and have Brian Burgess removed from the checking acct, leaving Clara Goode, who is the current card holder, still active on the account.

Bio for Dr. Richard Hoover

In 1997, Prof. Dr. Richard B. Hoover established the Astrobiology Program at NASA/MSFC to study microbial extremophiles and microfossils in carbonaceous meteorites. He led scientific expeditions to some to North Siberia, Alaska, Canada, Iceland, Austria, South Africa, Patagonia and Antarctica. With Dr. Elena V. Pikuta, he has described one new family, five new genera and fifteen new species of bacteria from samples collected during these expeditions. In recognition of his scientific discoveries from these Expeditions, Dr. Hoover has been elected Fellow National of the Explorers Club. Using the NASA/MSFC Scanning Electron Microscope, Dr. Hoover and Academician Rozanov discovered well-preserved fossilized remains of extraterrestrial cyanobacteria, diatoms, and other microorganisms in the Orgueil (CI1), Murchison (CM2) and Polonnaruwa (C-Ung) meteorites from France, Australia and Sri Lanka. Prof. Dr. Hoover has authored/edited over 50 Books and 400 scientific papers in Conference Proceedings and peerreviewed journals and lectured on every continent on Earth. His research has been featured films: Blue Planet Red; (Wonders of the Solar System by BBC; NASA's Unexplained Files; Ancient Aliens; NSF; NBC/LX; Japan TV and The History Channel. Dr. Hoover was made Honorary Life Member of the Planetary Studies Foundation (2003) for discovery of meteorite microfossils and for development of x-ray optics and scientific expeditions he was awarded the Degree and Title Doctor of Science, h. c.; Professor of the Russian Academy of Sciences (2021), Professor Doctor of Ilia State University in Tbilisi, Georgia and elected Fellow of The World Academy of Art and Science (WAAS), which was founded by Albert Einstein and J. Robert Oppenheimer



Crinoids Earth

Mars

Earth

Cosmic Distribution of Biospheres

Prof. Dr. Richard B. Hoover, D.Sc., h.c. (RAS)

Diatom Arangement Asteroid Ryugu JWST Stellar Nursery in Carina







Does life exist only on Earth or is it widely distributed throughout the Universe? All known forms of life require liquid water, a source of energy and a small group of the 118 elements known. Water, the most abundant compound in the Universe, has unique properties such that all deep oceans of planets and moons of the Universe are alike. Space Missions have discovered water ice in deep craters at the lunar poles and liquid water oceans beneath the crusts of virtually every icy moon and planet of the Solar System. The James Webb Space Telescope (JWST) has produced spectacular images of star nurseries in Carina and discovered Dimethylsulfide (DMS) on an Exoplanet and giant spiral galaxies in the Cosmic Dark Ages, which challenge the validity of the Big Bang Theory. Only four chemical elements - Carbon (C), Hydrogen (H), Oxygen (O) and Nitrogen (N) - comprise over 98% of all living cells. CHON particles are formed by nuclear fusion processes in hot stars; spewed from supernovae and delivered to the early Earth along with water, organics and perhaps even life itself. Expeditions to the most hostile environments of Earth have revealed that life thrives everywhere - from deep sea volcanic vents and deep hot crustal rocks to polar glaciers and Siberian permafrost. Crinoids crawl over rocks in the deepest trenches of the oceans and ice worms coat themselves with antifreeze proteins to melt ice and eat the frozen algae trapped within. Diatoms build beautiful shells of opaline silica. They are the most abundant plants of the oceans and polar regions and produce over 50% of the oxygen we breath by photosynthesis. They can live in total darkness in polar ice and deep beneath the ocean surface by altering their photosynthetic machinery to obtain energy by consuming hydrogen and organic molecules. Astronomical studies have shown the silica of diatom shells closely matches the infrared spectra of interstellar dust toward the Trapezium Nebula and the center of our galaxy. Complex biomolecules such DMS, chlorophyll and luciferase that are made only by living organisms have been found in previously unidentified spectral lines of comets. Pristine samples of the asteroid Ryugu returned by the Hyabusa 2 spacecraft have been found to contain low-density boulders, DMS, L-amino acids and DNA nucleobases. Complex biomolecules and indigenous fossil of spectacular diatoms and bizarre biological forms have been found in the Polonnaruwa and Orgueil meteorites. Neutron Activation Analysis at the Joint Institute of Nuclear Research in Dubna, Russia revealed radiogenic Heat Producing Elements (HPE's) in the exotic low-density meteorites he collected in Polonnaruwa, Sri Lanka. These HPE's (K, U, Th), which are the major source of heat in crustal granites of the Earth, Moon, Mars and Pluto provide support for the "Wet Panspermia" Hypothesis that provide a mechanism for the interstellar or intergalactic transfer of intact biospheres. This heavily illustrated presentation will demonstrate the spectacular beauty the microworld and planets, nebulae, and galaxies of the Cosmos; exotic rocks and microfossils of meteorites and the wonders and mysteries of the origin of life and the Cosmic Distribution on Biospheres.

WILLIAM HOLLAND SCHOOL OF LAPIDARY ARTS



We are thrilled to announce our new "Master Classes" at William Holland. Our Master Level Instructors have a national following, published works & are known throughout their medium as a top contributor.

These classes will have a higher tuition than a normal class at WH & will vary with each instructor. Master Classes will also have prerequisites to enroll.

Our first Master Class this year will be taught by nationally acclaimed, award winning jewelry artist, **Jayne Redman.**



"DIES 3 WAYS" with Jayne Redman Date: 10/20/24 - 10/25/24 Description:

"This is not your everyday die-forming workshop! Put an inventive and non-conventional spin on three ways of die-forming to reproduce your designs quickly and accurately. Silhouette dies allow you to make rounded relief forms in metal. Press from both sides of the die to make mirror images for beads or hollow forms. Use thermal reactive plastic for quick contour inserts. Non-conforming dies carved from cast acrylic add contour and detail to your forms. Combine a silhouette die and a non-conforming die into a hybrid die for both contour and larger relief areas. Make conforming intensifiers with thermal plastic. Design and create blanking dies to instantly cut out the exact shapes you form, or incorporate your shape within a larger outline. This class will have 12 spots available"

- Prerequisites: Previous experience with sawing, filing and using a flex shaft. basic jewelry skills like sawing, drilling and soldering.
 - Tuition & Lodging + Meals: \$750 Class Fee: \$150

CLICK HERE TO LEARN MORE ABOUT THIS MASTER CLASS & GET REGISTERED TODAY!

ROCK SALE/INDOOR GARAGE SALE MARCH 23rd, 9:30-2:00 Sandra Moon Complex, 7901 Bailey Cove Rd., Huntsville, Al. 35802

This year instead of our annual March auction we're holding an indoor sale here at the Ed Center. We'll have most of Friday, 9:00-8:00, to set up and price, then Saturday for the actual sale, 9:30-2:00.

I'll need help both days. On Friday we'll need tables set up and items brought out and placed. On Saturday we'll need people to man the tables, work check out and generally help customers and keep an eye on things. We will also put away the leftovers when we're done. Sign up at the meeting or contact Shelley, info in newsletter under auction chair.

Members are cordially invited to donate nice items to be included in the sale - rocks, minerals, jewelry, machines, anything you think might readily sell.

Please spread the word about this event. This is in lieu of our annual Auction. All funds raised support Club activities. Ample free parking and handicap accessible Cash preferred but cards accepted

Selling: rough rock, slabs, fossils, specimens, collectibles, used lapidary equipment, beads, jewelry, books and a whole lot more! Come find your Treasure!





Rocket City Jewelers (RCJ) News

February 2024

RCJ is open to all HGMS members 16 and older. All skill levels are welcome! No certification is required, but experience using jewelry tools is a plus. We offer one class a month with 4 opportunities to finish the project. **Note:** The last session of the Twisted Metal Earrings class is February 28th from 2-5p. The March Ginko Bead Bracelet class is closed. **Attention chainmaillers:** If you don't already have the book, <u>Chain Maille Jewelry Workshop</u> by Karen Karon, PLEASE PURCHASE. It's available online or possibly in local bookstores. It's \$24.99 on Amazon and \$15.99 on Kindle!



To sign up for a class, please email Theresa at <u>rocketcityjewelers@gmail.com</u> a month before class. Include your name, contact info, and the class(es) you want.

2nd Quarter 2024 Classes:

April

May

June







April: Wrapped Crystal Pendant

Important: Please sign up soon to allow time for ordering and shipping the crystals.

Apr 3 and 17: 6-9p, class and make up. Apr 10 and 24: 2-5p, class and make up.

May: Necklace with Two-Tone Triple-Point Byzantine Focal

This necklace is easily customizable!! We'll discuss options in class for ring sizes and color patterns. You'll need to purchase your own rings. Your ring sizes and quantities will depend on your choices.

May 1 and 15: 6-9p, class and make up.

May 8 and 22: 2-5p, class and make up.

May 29 (5th Wed): 2 - 5p, finish it.

June: Upside-Down Wrapped Cab

This is a Pinterest-inspired woven cab wrap. The teardrop-shaped Malachite cab is wrapped in copper wire.

Jun 5 and 19: 6 - 9p, class and make up. **Jun 12 and 26:** 2 - 5p, class and make up.

Metal Smithing/Silver Group by Kathy Bowman & Shelley Curran

KEUM-BOO

Session 1: Monday, March 4, 2024

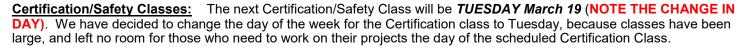
Session 2: Thursday, March 7, 2024 NOTE CHANGE IN DATES

Keum boo is the ancient art of adding pure gold to fine silver. This technique allows the maker to add very small amounts of gold for a big impact. The gold is fused to the fine silver with a eutectic bond. This is not plating or overlay but a permanent chemical bond between the metals. The silver is heated and then the gold foil is burnished down at a temperature of about 800-900 degrees.

In this class we'll be using fine (.999) silver sheet and 23.5 karat gold foil. Sterling can be used but must be depletion gilded seven to ten times. Gold leaf will not work as it's too thin.

Seating will be limited due to material availability so sign up early so materials can be ordered. Kit cost will be determined closer to class and materials at market price but should be somewhere around \$25.00. Any questions ask Shelley.

The signup sheet will be available on Monday and Thursday night classes and at the monthly HGMS meeting. You can also sign up for this class by sending email to HGMS@wildivystudio.com.



To get on the list for the March class, please send your name and contact information (name, email address, and cell phone number (for text messages) to Certifications@wildivystudio.com to get on the list for the class. Seats will be filled in the order I receive them. If you end up on the wait list, you will be added to the next scheduled class. Certification classes are scheduled approximately every other month.

CERTIFICATION CLASS INFORMATION – PLEASE READ CAREFULLY:

After Certification Class dates are set, email notices with information about the class(es) will be sent to everyone who is currently on the request list about a week before the scheduled date. You must reply to that email to be scheduled for the class or to request a future class. One reminder email will be sent to those who do not respond to the first email. If there is no reply after the 2nd email, your name will be removed from Certification Requests list. If you are still interested in Certification, you will have to send in your information again to get on the current list.

<u>Facebook Users:</u> The Metalsmithing class has our own page in Facebook groups. You can see info on classes, examples of project classes and other general information. Members of the group can post their finished class projects. Our class page is HGMS Metalsmithing Group. The link: https://www.facebook.com/groups/438777169648170

Volunteer Positions *

Class Instructors:

Kathy Bowman
Shelley Curran
Tools/Equipment Inventory
Open

Store Manager

Kit Manager

Webpage & Social Media Management

Spen

Shelley Curran

Kathy Bowman

*Note: We are all volunteers, so the schedule is subject to change.









Pebble Pups - Thursday January 25, 6:30 - at the Education Center

For those who did not make it, the January meeting was a blast! We talked about Garnets, January's birthstone, petrified wood of Alabama and beyond, and the wonderful world of sea shell collecting! And we have a great lineup for this coming Thursday, the 22nd. Bob Kemper will

be demonstrating how to separate pebbles and sand by weight (how to separate gold from the slurry), Bill Friday will be taking the Pups on a tour of the Lapidary Lab, how to be safe and how to use the equipment, and our February birthstone wil also be covered! We will also give out some awards and discuss how to earn awards! We may even have a field trip coming up real soon! Come and find out the wonderful things we have in store and come away with geological knowledge that will dazzle your friends and family!

Your Pup's Leadership Team,

Mike, Angela, Dee, Theresa, Scott, and Bill







Lapidary Arts



Rocks & Minerals



Mineral of the Month – Amethyst By Leslie A. Malakowsky

Amethyst is a variety of quartz (SiO₂), and it shares many of the same properties as quartz. Amethyst is transparent to semi-transparent and ranges in color from pink, light lavender, pale violet, purple, to deep purple. Color variations are due to iron (Fe³⁺) and other metals and trace elements. Depending on the light source, natural amethyst may exhibit reddish violet and bluish violet hues in addition to its primary color. This phenomenon, called *dichroism*, causes visible light to split into different colors. One way to distinguish amethyst from other minerals is that it does not fluoresce under either short-wave or long-wave UV light.



Amethyst is found all over the world in volcanic rocks and in druzy (a coating of fine crystals) cavities in granitic (coarse-grained igneous) rocks. The most significant sources in the United States are in Arizona and Georgia. But the best quality amethyst is mined in Brazil, Siberia, Sri Lanka, and Uruguay. The highest grade, called "Deep Siberian" or "Deep Russian", has the darkest purple color (up to 80%) of any amethyst and may have up to 20% blue or red hues. The name amethyst was derived from the Greek word *amethystos* meaning "not drunken" (a combination of *a*-, meaning "not" + *methustos*, meaning "intoxicated").

This mineral has been used as a gemstone for over 2000 years. Ancient Greeks wore amethyst jewelry and drank from amethyst wine goblets believing they would prevent intoxication. Ancient Egyptians made amethyst intaglios (gemstones carved with images or inscriptions on only one face). Medieval European soldiers wore amethyst amulets (good luck charms) in battle believing they would heal them and keep them level-headed. In Great Britain, Ango-Saxons often buried their dead with amethyst beads. In the Middle Ages, amethyst was considered a symbol of royalty and used to decorate British regalia.

Today amethyst is used to make a variety of jewelry items and decorative objects. Faceted stones are popular in traditional and modern jewelry designs. An even color is more desirable in fine jewelry and depends on the gem cutter's skill. Faceted stones are often used in clergical rings alluding to the Apostles as being "not drunk" at Pentecost (a Christian holiday that takes place on the 50th day after Easter Sunday). Crystals, beads, cabochons, and tumbled stones are popular for jewelry in which a natural look is more desirable. Tibetans believe amethyst is sacred to the Buddha, so they make prayer beads from it. Amethyst geodes, cathedral geodes or *vugs* (irregular shaped geodes), and crystal clusters make great display pieces.



Amethyst was once considered a precious gemstone (along with diamond, sapphire, ruby, and emerald). But when large deposits of amethyst were discovered in Brazil and other locations, it lost most of its value and is now considered a semiprecious stone. That's good for folks who prefer amethyst because it's much less expensive than precious gemstones. Collectors look for depth of color with red or blue flashes. "Deep" crystals are exceptionally rare and their value depends on demand. Amethyst can be artificially darkened by irradiation, so buyer beware. And amethyst is often heated to resemble the color of citrine. Natural citrine is dichroic, but heat-treated amethyst posing as citrine is not. Amethyst is sometimes partially heated to create ametrine (featured in the April 2023 newsletter), so always buy from a trusted source. Amethyst is sensitive to heat and light, so be careful to store it properly. And use caution when cleaning amethyst jewelry with ultrasonic or steam cleaners.

Fun facts: *Amethyst is February's birthstone. *Amethyst is South Carolina's official state gemstone. *Prasiolite (a green variety of quartz) is sometimes called "green amethyst". *The largest amethyst mine in North America is located in Ontario, Canada. *The largest amethyst geode, the "Empress of Uruguay", was found in 2007. It's 10 feet, 9 inches tall and weighs 2.5 tons!

References: wikipedia.org, geology.com

The Huntsville Gem & Mineral Education, 7901 Bailey Cove Rd. SE, Huntsville AL 35802

Metal Smithing/Silver Instructors: Shelley Curran, Kathy Bowman, Jan Edmunds

Lapidary: Bill Friday, James Yack, Anthony Zwilling, Les Bartel

Rocket City Jewelers: Judy Osmundson, Theresa Chivers, Leslie Malakowsky

Pebble Pups: Dee Dee Morton, Mike Harrison, Angela Mendoza, Bill Friday, Theresa Chivers

Monday Metal Smithing/Silver 5:00pm - 9:00pm

Lapidary 1st Monday each month 9:45am-2:00pm

Lapidary 6:00pm - 9:00pm

Tuesday Lapidary 9:00am - 2:00pm

HGMS Meetings 6:00pm - 8:30pm 4thTuesdays

Wednesday Lapidary 6:00pm - 9:00pm

Rocket City Jewelers 1st & 3rd Weeks - 6:00pm - 9:00pm Rocket City Jewelers 2nd, 4th, 5th Weeks - 2:00pm - 5:00pm

Thursday Metal Smithing/Silver 5:00pm - 9:00pm

Pebble Pups 6:30pm 4th Thursdays

Friday Lapidary 6:00pm - 9:00pm

Saturday Metal Smithing 9:00am - 3:00pm irregular 1st Saturday of the Month



January Garnet





February Amethyst

2024 HUNTSVILLE GEM & MINERAL SOCIETY EXECUTIVE BOARD

President - Mike Harrison -Vice President - Shelley Curran -

Secretary: James Yack -Treasurer: Clara Goode -Editor: Bill Friday -

Past President: Anthony Zwilling -

Directors:

Gene Powers -Les Bartel -Theresa Chivers -Doug Blakeslee -

2024 COMMITTEE CHAIRS

Property: Bill Friday Show Chair: Tony Smith,

Program Chair—Shelley Curran Show Vendor Chair: Lowell Zoller

Webpage: Leslie Malakowsky, Assistant Vendor Chair: Jan Edmunds

Auction Chair: Shelley Curran Show Publicity Chair - Tony Smith

Membership: Theresa Chivers Show Treasurer: Clara Goode,

Field Trips: Bill Friday Mineral ID: Lowell Zoller

Hospitality: Mike Harrison Facility Administrator: Bill Friday

Pebble Pups: Dee Dee Morton Publicity: Open

PURPOSE OF THE SOCIETY: The Huntsville Gem & Mineral Society is a non-profit educational organization for people interested in mineralogy, geology, paleontology, and related lapidary arts. Its primary purpose is the education and enjoyment of the members and the general public in these areas. This purpose is accomplished through programs and activities, shows, lectures to school children and organizations, and exchange of rocks, minerals, artifacts, and newsletters.

DUES: Annual dues are \$20.00 per person, \$25.00 per family, and are due on January 1st of each year

Membership Applications may be found at our webpage www.Huntsvillegms.org or at the HGMS Education Center during a meeting or at one of our activity periods: 7901 Bailey Cove Rd SE, Huntsville, AL 35802 Meetings: 4thTuesday of the month except for March Auction, June picnic, Christmas Dinner and major holidays.

 $\label{lem:control_control_control} The \ Society \ is \ affiliated \ with \ the \ American \ Federation \ of \ Mineralogical \ Societies \ ,$

the Southeast Federation of Mineralogical Societies, and the Dixie Mineral Council Federation Newsletters: DMC: http://www.amfed.org/sfms/dmc/dmc.htm

SFMS: https://www.southeastfed.org/newsletter - new, under construction

AFMS: www.amfed.org/news/default.htm

2024 CALENDAR

- 27 Feb '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 23 Mar '24 HGMS Rock Auction Fund Raiser

Details as available - Please Donate items

- 23 Apr '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 28 May '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 22 Jun '24 Annual HGMS Picnic Monte Sano State Park Monte Sano Starte Parrk, Huntsville
- 25 June '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 23 July '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 27 Aug '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 24 Sep '24 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center 7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 11-13 Oct '24 Annual Fall Gem Jewelry and Mineral Show

Jaycees Building 2180 Airport Rd, Huntsville AL

22 Oct '24 - Regular HGMS Meeting, Huntsville Gem & Mineral Education Center

7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm



Deadline for Next Newsletter March 16, 2024

Shed Matellal Matellal Vision Delay

February 2024

Rocket City Rocks & Gems Bill Friday, Editor 2508 Excalibur Dr. Huntsville, AL 35803