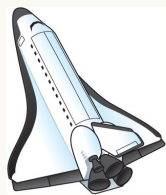


ROCKET CITY ROCKS & GEMS



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

Volume 52 No. 08

"We'll go to the Moon for a Rock"

August 2020

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August Meeting Cancelled -One of these Days!

The restoration of the activity centers in the new Gem & Mineral Education Center is nearing completion. We are planning for an Open House in September

Metals, RCJ, Lapidary, Pups, GeoSciences



Saws in Place

08/15

www.huntsvillegms.org/ - www.facebook.com/HuntsvilleGMS -



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Hello HGMS Membership!

I hope this finds you well. I am and your leadership and volunteers are doing great! Much progress has been made at the new Huntsville Gem and Mineral Education Center! It is really coming together. We have lots of room and we can spread out and still be very productive! I believe all of the electrical is done, and almost all of the plumbing! We are working hard on this year's show to make it the best ever. We have committees and subcommittees to get everything lined up. We are in communication with our vendors and planning workdays for the flume, the kid's area and other areas that need planning. And speaking of the Kid's Area, it is going to be awesome. Look for details in this newsletter on how you too can contribute to this year's show!

Stay tuned, or better yet, get involved! We would love to have you in the middle of it with us!

Your humble Prez, Mike Harrison

We are sad to report the loss of HGMS member Joseph Mastromonico.

Joseph was born in Manhattan, NY in 1938 and died in March 2020. He attended University of Buffalo and after graduation entered the U.S. Air Force. He served in the military for over 20 years, including two tours of duty in Vietnam. He moved to Huntsville in 1987, received a PhD and worked for several local DOD firms. He is survived by his wife, Kathleen Leonard and his three children - Timothy Mastromonico, Kara Coffey, and Marc Mastromonico.

After retirement, Joseph was a regular patron in the Senior Center Woodworking and Lapidary Shops. He was active in the poetry writing group of Huntsville Literary Society and was also an avid gardener.



Dixie Mineral Council Field Trips

The Southeast Federation of Mineralogical Societies, Inc



**The Friendly Federation - Founded in 1976 to serve
DMC Program of the SFMS Field Trip Committee
Copyright © All rights reserved.**

The Dixie Mineral Council has cancelled this year's field trip schedule, rolling all trips to next year, with confirmation by the various SFMS Clubs who were scheduled for this year. That includes HGMS which was to have sponsored a trip to the Hogg Mine in August. Settling all of this out will be a thankless task for Lori Carter, but bless her heart, she will have it all worked out as soon as member Clubs provide their updates.

THE FALL SHOW IS FAST APPROACHING

The fall show is almost upon us and we need your help! October will be here before we know it. There have already been several meetings and behind the scenes planning conducted while everyone is enjoying their summer. This year we will feature a large **Kid's Area** and we need members to pitch in the help with this adventure. In this area we will build crystalline shapes, dig for fossils, classify rock types, conduct a Moh's hardness test, have a scavenger hunt, and do some fossil rubbings. This will be adjacent to the Flume, and the Fluorescent Room will be shifted into the area.

I'm asking everyone to please help out and volunteer for the Show. I know things are uncertain right now but if you could commit to at least one shift it would really be appreciated. **I'm especially asking the younger population to help this year since they will be the main beneficiaries.**

We have several areas that need help:

Ticket booth - chaired by Nannette Schwartz nannette.schwartz.1@bc.edu

Information booth - chaired by Joe Bonin sixjsonef@yahoo.com

Flume - chaired by Gene Powers genepowersgddm@gmail.com

Demonstrations - chaired by Shelley Curran and Kathy Bowman

Kids Area - chaired by Judy Odsmunson artzjjjc@aol.com

Fossil/mineral dig - chaired by James Yack jamesgyack@gmail.com

Volunteer dinner - chaired by Caryl Nixon

Please contact me Theresa Chivers at 256-837-6819 or by email wolfsong929@gmail.com or any of the chairs listed if you would like to volunteer. **We can't hold this show without volunteers so please help.** If we all help with a shift or two then no one is really burdened with too much.

Thank you so much for your help!

The Huntsville Gem & Mineral Society's **Annual Gem, Jewelry & Mineral Show**

October 9-10, 2020 - 10 AM to 6 PM

October 11, 2020 - 10 AM to 5 PM

featuring

Extravaganza Kids' Area!

**Build Crystals, Classify Rocks, Dig for Fossils, Pan for Gems,
Scavenger Hunt, Fluorescent Room, Pictures with T-Rex, and More!**

Plus Our Regular Vendors!

Wide Array of Gemstones, Fine Gold & Silver Jewelry, Beads, Displays,

Lapidary Supplies, Demonstrations, Hourly Door Prizes, Raffle!



Free Parking

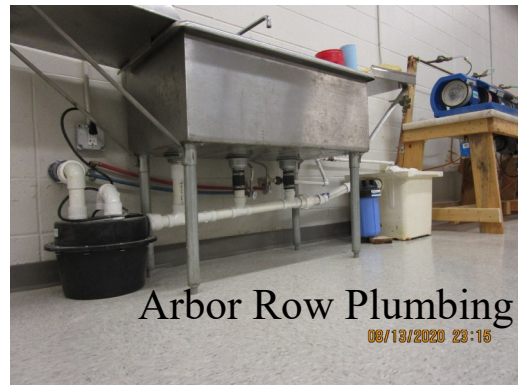
Jaycee Community Building
2180 Airport Road SW
Huntsville, AL 35802

Admission

\$3 Donation at the door!
Children under 5 free!
\$1 Students!
\$5 Weekend Pass (3 Days)!

Progress at the new Gem & Mineral Education Center

Work crews have been regularly gathering at the Center to complete the saw and arbor benches, work tables for Metals and Rocket City Jewelers, and shelves for the storage rooms. There is still work left to finish before the Center opens next month, but we should be ready soon for an OPEN HOUSE.



Rocket City Jewelers (RCJ) News *By Leslie Malakowsky*



We're continuing to hold our weekly online meetings every **Wednesday, at 6:30p.m.** Every RCJ member is invited (and encouraged) to participate! We use this time to stay in touch with each other. Formal classes are suspended until we meet again, but many of us are working on projects at home. You're welcome to share what you're working on during the meeting or just sit back and visit!

We're working on the finishing touches to our room at the new **HGMS Education Center at 7901 Bailey Cove Road SE, Huntsville!** Many thanks to Judy & Jerry Osmundson, and Theresa & Mike Chivers who installed the work benches. Mike is working on the plumbing in the kitchen area. Judy and Theresa donated a beautiful Fall flower arrangement.

Stay healthy everyone! Happy jewelry making!

Volunteers: Group Leader - Leslie Malakowsky
Instructors Judy Osmundson, Theresa Chivers, Myra Soroczak
Kit Manager Sherrie Bonin
Treasurer Clara Goode
Facebook open
Security Judy Osmundson

RCJ is open to **every member** of the HGMS. (Gentlemen, too!) If you love making jewelry, please join us! All skill levels are welcome! Please note that when you'd like to take a class but you don't regularly attend RCJ, **you must contact us one week prior to the class** so we can make a kit for you.

Remember our core values: to share what we know, learn new skills, and have fun! Please let me know what you are able to teach and what you would like to learn.

Metal Smithing/Silver Group by Kathy Bowman & Shelley Curran

THERE WERE NO SCHEDULED PROJECT CLASS IN JUNE DUE TO THE COVID 19 CLOSINGS. AT THIS POINT WE DON'T KNOW HOW THE QUARANTINE SITUATION WILL BE UNTIL JULY. HOPEFULLY WE WILL HAVE A BETTER IDEA SOON OF WHEN WE WILL RESUME OUR NORMALLY SCHEDULED MONDAY & THURSDAY WORK SESSIONS.



Certification Classes: If you would like to be certified so you can take our classes, please send your name and contact information (name, email address, and phone number) to HGMS@wilddivystudio.com. We will contact you and set up a day for you to come. Those who sign up will be notified when the next class will be scheduled.

Class Instructors:	Kathy Bowman & Shelley Curran
Toolbox Sign-outs	CG Lester
Inventory Manager	Opening
Store Manager	Opening
Kit Manager	Shelley Curran
Webpage & Social Media Management	Kathy Bowman

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



Graphite specimen

Mineral of the Month – Graphite *By Leslie A. Malakowsky*

If you work in retail, you know when it's back-to-school because people start buying pencils. Pencils are an essential tool of American life, but they don't contain lead! Pencil cores consist of a non-toxic mineral called graphite. The common name "pencil lead" persists today because of the historic association of the pencil with the lead stylus that ancient Romans used.

Carbon is one of the non-metallic *native elements* (elements that occur not combined with other elements and in distinct crystal structures in nature). Graphite is the naturally-occurring crystalline form of carbon. It's the most stable form of carbon under standard temperatures and pressures. It's one of the *softest* known solids, and it's one of the best industrial lubricants because the rings of atoms in its hexagonal structure easily slide over each other. Yet, under high temperatures and pressures, its atomic structure changes to a rigid cubic, and it converts to diamond, one of the *hardest* known solids.

Graphite is a metamorphic mineral that can be iron-black to steel-gray in color, with a "greasy" or submetallic luster, and a black streak. Graphite occurs as flakes in metamorphic rocks rich in carbon. It also occurs in large deposits as tabular crystals or masses in igneous rocks (veins and pegmatites), and in meteorites! The minerals associated with graphite include quartz, calcite, micas, and tourmaline. In meteorites, graphite occurs with troilite (a rare iron sulfide mineral) and silicate minerals. In *iron* meteorites, graphite crystals are called *cliftonite*, which is one of 12 minerals known to predate our Solar System! Graphite may be the second or third oldest mineral in the universe!

Although Aztecs used graphite as a marker hundreds of years earlier, Europeans didn't discover graphite until the beginning of the 15th century. It was originally known as *plumbago*, or, more commonly, *black lead*, because it was thought to be the lead ore galena. (Hence "plumbers" fix our water pipes today.) People found that black lead was ideal for writing and drawing when they wrapped string around it as a sort of handle. The mineral wasn't inserted into hollowed-out wooden sticks until much later, but the idea was born! In 1789, German geologist Abraham Gottlob Werner renamed the mineral to *graphite*, derived from the Greek word "graphein", meaning "to write".

The modern pencil was invented in 1795 by French chemist Nicholas-Jacques Conté. He formed sticks of powdered graphite and clay, kiln-fired them at 1900°F, and encased them in wood. He discovered that by varying the amounts of graphite and clay, he could control the intensity of the marks left on paper. That was the beginning of today's system of grading pencils by numbers and letters. In 1821, American Charles Dunbar (author Henry David Thoreau's brother-in-law) discovered a graphite deposit in New England and founded a pencil factory there. Eventually, his factory came to be known as one of the finest pencil manufacturers in the United States.

Graphite is mined all over the world. In the United States, it's found in many states including Alabama with many mines in Clay County. Graphite is a good conductor of heat and electricity, so it's useful in electronic products such as electrodes, batteries, and solar panels. In the jewelry industry, graphite is a popular substance for making molds for casting metal pieces.

References: <https://en.wikipedia.org>, <https://www.mindat.org>, <https://www.brainpickings.org/>

HUNTSVILLE MAIN PUBLIC LIBRARY WINDOW DISPLAY

Again this year we have placed an exhibit of the craft things we do in the entryway window of the Main Public Library. Included are beautiful jewelry articles from the Rocket City Jewelry Group and the Metals Group. Many examples of colorful minerals and fascinating fossils are on display. Our HGMS affiliation is prominently included with information as to how to find and join us. If you haven't been to the library lately, drop by and check out our prominent advertisement





Pebble Pups

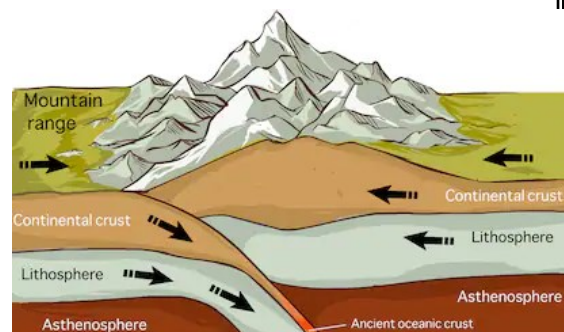
Gem & Mineral Education Center

Current plans are to re-start the Pebble Pups programs in October, following the Fall Show, and allowing the virus problem to settle out further.

We will meet in the new Craft Center at the old Grissom High facility at 6:00 on June 28. Bring your friends.

For more information, contact

or Bill Friday bill.friday@earthlink.net 256-527-8227



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GeoSciences

Like all the rest of the world, particularly Senior Center activities through August are cancelled.

But we should be back in business for a GeoSciences meeting in September

Tom Burleson of the Von Braun Astronomical Society has offered to present a program on Meteorites, elaboration to be provided later, but he was encouraged to dig deep and take his time.



Brad's Bench Tips

"Bench Tips for Jewelry Making" and "Broom Casting for Creative Jewelry" are available on Amazon www.BradSmithJewelry.com. For those who enjoy these bench tips, I'm happy to announce a second volume is now available on Amazon. "More Bench Tips" includes 86 additional ways to save time, avoid frustration or improve quality at the bench. These new tips cover problems in fabrication, stone setting, casting, soldering and polishing.

Browse through a couple of the new ones at <https://amazon.com/dp/B07D4B45JJ/>. These are just a few of the many tips in the new book, "More Bench Tips for Jewelry Making". See a sample chapter at <https://amzn.to/2KCygh4>



STRAIGHTENING WIRE

Have you ever pulled out some silver wire only to find that it's all bent up? The easiest way I've found to straighten it out is to stretch it a bit.

Simply put one end in the vise and grab the other end with a pair of serrated tip pliers. Then pull just enough to feel the wire stretch like a rubber band. This works best on smaller wire diameters, up to about 16 ga.

Be careful if you are trying to pull hard on a thick wire. Brace yourself in case the wire breaks or pulls out of the pliers.



DO BEZELS SHRINK?

The engineer in me says there's no reason a bezel should shrink when I solder it onto a base plate, but I sometimes find that the stone won't quite fit into the bezel that was perfect just before soldering.

If that ever happens to you, here's a fix that usually works for those times when there's just a minor problem. I file or sand the stone down a little around its base. For soft cabs like turquoise, lapis, jet or Howelite, you can use a sanding stick. Harder cabs like jasper or agates will require a diamond file. In a pinch, a ruby nail file from the drugstore will work.

There are two important things to remember when doing this. First, you can only make a minor adjustment to the stone's size. All filing or sanding has to be hidden by the bezel because it takes the polish off the stone.

Secondly, remember to round off all sharp edges on the bottom of the stone. A sharp edge here might sit on a little extra solder that's in the bottom joint of your bezel. Just a little bump here can put enough stress the stone to risk breakage when you burnish the bezel down over the stone.

Annual Auction is now spread out over the entire year. We were unable to have it on our planned March 21st date, and couldn't crowd it in between the move to the new building and the Fall Show without risking not having enough workers, or enough bidders, or without interfering with the Show a couple of months later. So each meeting will feature a silent auction, with the offerings featured both in the newsletter and on our website, where you may view ahead, and then at the meeting make your offers. Each month will feature a range of value of the specimens, ranging from slabs to ornate stone carvings and jewelry. The remaining items will be held over to next year's March Auction in the Jaycees Building.

Hertzsprung-Russell Diagram

The [Hertzsprung-Russell diagram](#) (HR diagram) is one of the most important tools in the study of [stellar evolution](#). Developed independently in the early 1900s by Ejnar Hertzsprung and Henry Norris Russell, it plots the temperature of [stars](#) against their [luminosity](#) (the theoretical HR diagram), or the colour of stars (or [spectral type](#)) against their [absolute magnitude](#) (the observational HR diagram, also known as a colour-magnitude diagram). Depending on its initial [mass](#), every [star](#) goes through specific evolutionary stages dictated by its internal structure and how it produces energy. Each of these stages corresponds to a change in the temperature and luminosity of the star, which can be seen to move to different regions on the HR diagram as it evolves. This reveals the true power of the HR diagram – [astronomers](#) can know a star's internal structure and evolutionary stage simply by determining its position in the diagram.

This Hertzsprung-Russell diagram shows a group of stars in various stages of their evolution. By far the most prominent feature is the main sequence, which runs from the upper left (hot, luminous stars) to the bottom right (cool, faint stars) of the diagram. The giant branch is also well populated and there are many white dwarfs. Also plotted are the Morgan-Keenan luminosity classes that distinguish between stars of the same temperature but different luminosity.

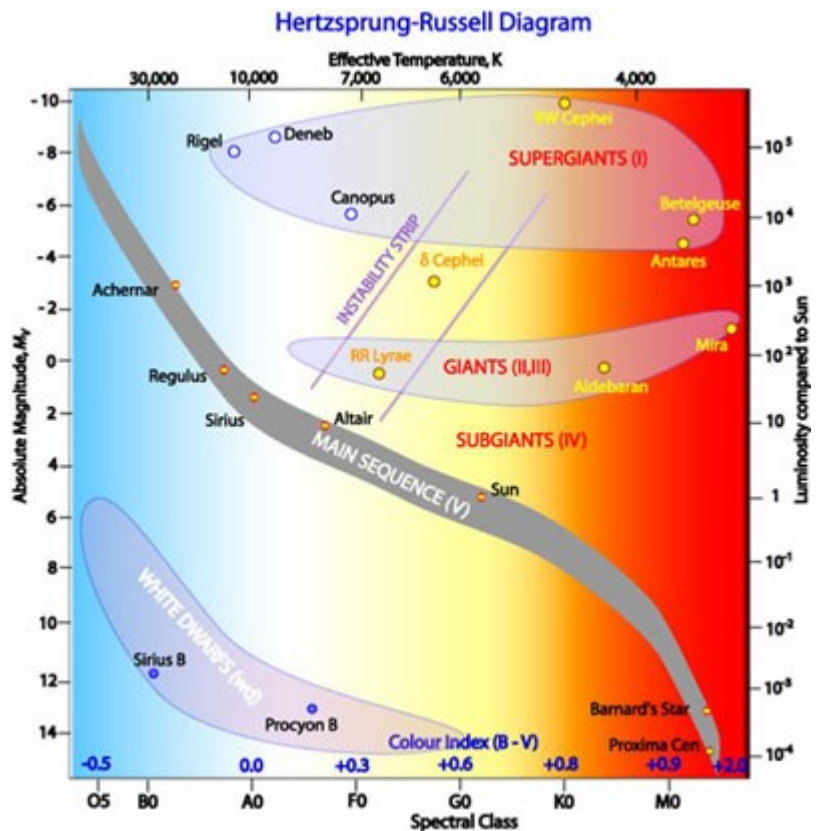
There are 3 main regions (or evolutionary stages) of the HR diagram:

The **main sequence** stretching from the upper left (hot, luminous stars) to the bottom right (cool, faint stars) dominates the HR diagram. It is here that stars spend about 90% of their lives burning [hydrogen](#) into [helium](#) in their cores. Main sequence stars have a [Morgan-Keenan luminosity class](#) labelled V.

red giant and **supergiant** stars (luminosity classes I through III) occupy the region above the main sequence. They have low surface temperatures and high [luminosities](#) which, according to the Stefan-Boltzmann law, means they also have large radii. Stars enter this evolutionary stage once they have exhausted the hydrogen fuel in their cores and have started to burn helium and other heavier elements.

white dwarf stars (luminosity class D) are the final evolutionary stage of low to intermediate mass stars, and are found in the bottom left of the HR diagram. These stars are very hot but have low luminosities due to their small size.

The [Sun](#) is found on the main sequence with a luminosity of 1 and a temperature of around 5,400 [Kelvin](#). Astronomers generally use the HR diagram to either summarise the evolution of stars, or to investigate the properties of a collection of stars. In particular, by plotting a HR diagram for either a globular or open cluster of stars, astronomers can estimate the age of the cluster from where stars appear to turnoff the main sequence (see the entry on main sequence for how this works).



The Hertzsprung-Russell diagram the various stages of stellar evolution. By far the most prominent feature is the main sequence (grey), which runs from the

August Birthdays

2 Lawrence Nelms	22 Brenda Reynolds
4 Brooks Glover	24 Karen Allen
6 Devona Hawkins	25 Debora Neis
10 Peggy Johnson	27 Carol J. Lee
14 Kate Leonard	28 Evan O'Dell
18 Will Bryan	30 Tish Hall
18 Karen Ryan	31 Lauren McCullough
19 Jimi Sitko	



August
Peridot

Anniversaries

1 Clara & Mike Goode	25 Jim & Ola Ann Lee
3 Brian & Karen Allen	28 Anita Bynum
4 Florence Mims	28 Jerry Osmundson
9 Lowell & Betty Zoller	31 Becky Rollston
18 Julia & Steven Priest	

September Birthdays

1 Wayne Hastings	14 Larry Augsburger
3 Lola Flippo	14 J. P. McCullough
3 Gerdy Wyatt	14 Sheila Tesh
3 Laurel Rico	15 Spencer Myrick
4 Valerie Tripp	16 Charlie Willhoite
6 Ivey Cook	18 Billie Couch
7 Mike Harrison	18 Bobby Couch
8 David Lehner	18 Samantha Lindberg
10 Marie Aldridge	19 Mitzi Cartee
12 Rodney Lane	20 Xavier Walley
13 Mark Falkenberg	21 Laura Carroll
	23 Heidi Causey



September
Sapphire

Anniversaries

1 Frank & Shelley Curran
26 Debbie Deering
26 Bill & Rita Friday
29 Mike & Theresa Chivers
Bruce & Allison Kowalczyk

The Lapidary Lab will be closed until further notice

Huntsville Gem & Mineral Education Center Schedule

To use lapidary equipment, you must be certified unless a licensed instructor is present
currently: Bill Friday, Isabel Leon y Leon & Michael Cape

Until the lapidary equipment is reassembled and operational, it is not practical to post a schedule. Current plans are to maintain the open lab for all qualified members ages 18+ on Tuesday and Wednesday evenings.

Daytime access for qualified members is still being worked out as we finalize the building opening times and secure access protocol.

The biggest change from previous scheduling at the Senior Center is that now qualified members ages 18+ will be able to use the equipment during the daytime.

2020 HUNTSVILLE GEM & MINERAL SOCIETY OFFICERS

President- Mike Harrison - william.m.harrison@boeing.com
 Vice President- Isabel Leon y Leon- isabel.leonyleon@gmail.com
 Recording Secretary: Ruth Kemper- bob_kemper@yahoo.com
 Treasurer: Clara Goode, 256-883-9194 - claragoode1@comcast.net
 Newsletter Editor: Bill Friday - 256-527-8227 - bill.friday@earthlink.net
 Directors at Large:
 Gene Powers - genepowersgddm@gmail.com
 Michael Soroczak- soroczak@yahoo.com
 Les Bartel - lester.bartel@gmail.com
 Ex Officio - bill.friday@earthlink.net

2020 COMMITTEE CHAIRS

Membership: Bill Friday— 256-527-8227 bill.friday@earthlink.net 2508 Excalibur Dr. Huntsville AL 35803	Property: Michael Cape macape@knology.net
Publicity: Bob Kemper bob_kemper@yahoo.com	Program Chair—Mike Harrison william.m.harrison@boeing.com
Webpage: Leslie Malakowsky, lmalakowsky@gmail.com	Show Chair: Tony Smith, 256-603-3095. tsmith@erc-incorporated.com
Auction Chair: Shelley Curran curranshelley1@gmail.com	Show Vendor Chair: Lowell Zoller, 256-534-8803 Lzol@comcast.net
Field Trips: Open	Show Volunteer Chair: Theresa Chivers, 256-837-6819 wolfson929@gmail.com
Rocket City Jewelers: Leslie Malakowsky 256) 755-0479 lmalakowsky@gmail.com	Show Publicity Chair - Tony Smith tsmith@erc-incorporated.com
Hospitality: Caryl Nixon 256-426-5061 caryl.nixon@outlook.com	Show Treasurer: Clara Goode, 256-883-9194 clarag1964@gmail.com
Mineral ID: Michael Soroczak soroczak@yahoo.com (William Holland offers a class for this)	

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 of the members and the general public in these areas. This purpose is accomplished through programs, shows, lectures to school children and organizations, and exchange of rocks, minerals, artifacts, and newsletters.

DUES: Annual dues are \$15.00 per person, \$20.00 per family, and are due on January 1st of each year

Membership Applications may be found at our webpage www.Huntsvillegms.org, at meetings, or the lab

MEETING PLACE: Huntsville/Madison County Senior Center, 2200 Drake Ave, Huntsville, AL at 6:30pm.

DATE: Fourth Tuesday of the month except for March Auction, June picnic, Christmas Dinner and major holidays.

**The Society is affiliated with the American Federation of Mineralogical Societies ,
the Southeast Federation of Mineralogical Societies, and the Dixie Mineral Council**

Federation Newsletters:

SFMS: www.amfed.org/sfms/lodestar_newsletter.html

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

DMC: http://www.amfed.org/sfms/_dmc/dmc.htm



2020-21 CALENDAR

- 22 Sep '20 - Regular HGMS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 9-11 Oct '20 HGMS Fall Show,
Jaycees Bldg, 2180 Airport Rd, Huntsville AL
- 27 Oct '20 - Regular HG&MS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 24 Nov '20 - Regular HG&MS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 8 Dec '20 - Annual HGMS Christmas Dinner - place to be determined
- 26 Jan '21 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 23 Feb '21 Regular HGMS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm
- 27 Mar '21 - Annual HGMS Fundraising Auction
Jaycees Bldg, 2180 Airport Rd, Huntsville AL
- 27 Apr '21 - Regular HGMS Meeting, Huntsville Gem & Mineral Education Center
7901 Bailey Cove Rd SE, Huntsville, AL 6:00pm

<p>Deadline for Next Newsletter September 13, 2020</p>
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Dated Material
Do not Delay

August 2020

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