

***THE MOUNTAIN GEM***  
**OCTOBER 2017**  
**Official Bulletin**  
**Of**  
**Gem & Mineral Society of Franklin, North Carolina**

A schedule of our monthly meetings is on the back cover of *The Mountain Gem* as well as on the Society's webpage. Meetings are held at the Robert C. Carpenter Community Building, Highway 441 South, Franklin, N.C. Visitors are always welcome.

Forms for membership can be obtained by attending a meeting of the Society.

Dues are \$20 for first family member with \$10 for each additional member. Members under 18 years of age dues are \$5. Membership is from September to September. Non-member subscriptions to *The Mountain Gem* are \$25 per year.

Membership privileges include emailed copies of the newsletter and attending Dixie Mineral Council Field Trips. If requested, hard copy editions of *The Mountain Gem* will be mailed via USPS for an additional \$25 per year.

The objectives of this society shall be to effect a close association of those persons who are interested in the study of gems, rocks and minerals and the arts and sciences related to them. We are a working organization that operates and maintains the Franklin Gem and Mineral Museum.

The Society and Museum are self-supporting on a 100% volunteer basis.

School tours are always available. Temporary contact for tours is Diane Aiello. Call her at 828-371-2436 or 828-524-3307.

**Gem and Mineral Society of Franklin, North Carolina, is a 501 (c)(3) organization and donations may be tax deductible.**

**Please remember us when planning your estate.**



**Franklin Gem and Mineral  
Museum**

25 Phillips Street  
Franklin, NC 28734

Phone: 828-369-7831

In the Old Jail House

FREE ADMISSION

May 1 – October 31

Monday Thru Saturday: 12:00 PM – 4:00 PM

November 1 – April 30

Saturdays: 12:00 PM – 4:00 PM

Open Year Round For Tours

And Special Requests

[www.fgmm.org](http://www.fgmm.org)

**Society email: [franklingemsociety@gmail.com](mailto:franklingemsociety@gmail.com)**

**Editor: [editor.themountaingem@gmail.com](mailto:editor.themountaingem@gmail.com)**

**Gem and Mineral Society of Franklin,  
North Carolina, is a founding member  
of the Southeast Federation of Mineralogical Societies.**

## 2017- 2018 Officers And Board Of Directors

President	Al Pribble	369-2548
Past President	Tom Sterrett	349-3374
Vice President	Arlon Eldridge	369-5271
Secretary	Susan L Fritz	524-4936
Treasurer	Lake Holland	369-5421
Assistant Treasurer	Marie Tsacrios	369-5791
Director (2017)	Cy Amrich	356-7816
Director (2017)	Diane Mason	706- 379-1718
Director (2018)	Mike Gillen	678-772-6375
Director (2018)	Tom Parker	342-3619

## Museum Managers

Museum Manager	Tom Marsh	369-8915
Museum Ass't. Mgr.	OPEN	
Curator Emeritus	Fred Plesner	349-4224
Curator	Ralph Crawford	524-3279
Gift Shop	Ellen Williams	349-9416
Ass't. Gift Shop	Anamay Rossomando	349-2807 or 727-367-9196
Museum Workshop	John Hayes	524-8062
Ass't. Workshop Mgr.	Cy Amrich	356-7816

## Committee Chairmen

Budget & Finance	Lake Holland	369-5421
	Marie Tsacrios	369-5791
Calendar Chairman	OPEN	
Door Prizes	Arlon Eldridge	369-5271
Education	OPEN	
Field Trips	Marsha Harmon	369-7262
Field Trips Ass't.	Lake Holland	369-5421
Gemboree	Norm Holbert	634-0350
Gemboree Ass't.	Kathy Young	941-387-4397
Historian	Ron Rossomando	727-367-9196 or 349-2807
Librarian	OPEN	
Membership	Ellen Crawford	524-3279
Publications	Ellen Crawford	524-3279
Publicity	George Fritz	524-4936
Programs	Sande Lolli	631-1911
Refreshments	Joyce Jacques	342-2543
Scholarships	Arlon Eldridge	369-5271



American Federation

Bulletin Awards

1994 (7<sup>th</sup>), 1995 (2<sup>nd</sup>),

1996 (2<sup>nd</sup>), 1997 (5<sup>th</sup>),

1998 (5<sup>th</sup>), 1999 (3<sup>rd</sup>),

2000 (5<sup>th</sup>), 2004 (7<sup>th</sup>),

2005 (2<sup>nd</sup>) 2006 (10<sup>th</sup>)

2008 (5<sup>th</sup>) 2010(3<sup>rd</sup>)

2014 (3<sup>rd</sup>)



Southeast Federation

Bulletin Awards

1976, 77, 78, 79, 92, 94, 95

1996-99 (1<sup>st</sup>)

2003 2<sup>nd</sup> New Editor

2004 (2<sup>nd</sup>), 2005 (2<sup>nd</sup>)

2006 (1<sup>st</sup>), 2008 (2<sup>nd</sup>),

2010(1<sup>st</sup>) 2014 (1<sup>st</sup>)

American Federation (AFMS): [www.amfed.org](http://www.amfed.org)

Southeast Federation (SFMS): [www.amfed.org/sfms](http://www.amfed.org/sfms)

Franklin Gem Museum and Society:

[www.fgmm.org](http://www.fgmm.org)

[www.facebook.com/franklingems](https://www.facebook.com/franklingems)

**October Meeting**

Date: October 26, 2017

Day: Thursday

Time: 6:30 PM

Place: **Masonic Lodge at 50 Church Street**

Program: **Rich Williams and Judy Bilbry, will speak on the Art of Scrimshaw**

**November Birthdays and Anniversaries**

- 2 - Charlene Galbrecht
- 4 - Pete Rizzo
- 7 - Ron Bischoff
- 7 - Will Seaman
- 8 - Janet Hayles
- 10 - Diana Jurss
- 17 - Virginia Bennis
- 22 - Diane Aiello
- 25 - Stephen & Sherlene Dillon



**Al Pribble, President**

Well, here I am again folks, like the old Gene Autry song – Back in The Saddle Again. I want to welcome the new Board members, Tom Parker and Mike Gillen and thank Jane Morgan and Norm Holbert for the work they have done and I am sure will continue to do. There are so many who deserve thanks that it is hard to cover everyone without slighting someone, but to all on the Board thanks for doing a great job in keeping the Society running smoothly.

Even though we lost out on the income from the Shows this year we managed to pay our bills plus some thanks to Tom and Elena not to mention the Solar Eclipse. I hope we can build the Shows back up because we can't depend on another Eclipse Day happening anytime soon. Don't forget that PumpkinFest is October 21 and we will need extra people to handle the crowds.

I want to thank Ellen Crawford, Gary & Charlene Galbrecht and Tom Parker for the tremendous help in taking a share of the Scheduling job this summer. October has been especially tough for Tom and thanks to those who have picked up the load when we needed people. Our mission is still education and the Museum is our classroom, so unless we keep it open we are not fulfilling our Mission.

Ellen Williams has volunteered to relieve Elena Marsh as Gift Shop Manager, and for a time Ellen Crawford will assist her. Because of the confusion between the two Ellen's (Crawford & Williams) John Hayes gave Williams the nickname 'Marian The Librarian', so now there is a need for a new 'Marian (or Marion) The Librarian' to fill that slot. If you are interested please let me or Tom Marsh know. Diane Aiello has told the Board that she must resign as Education Chairman but will still be available to work during Museum tours. I hate to say it but the Old Guard is slowing down and it is time for a new group of leaders to step up. Our Society has a long and honorable history so I am calling on all the newer members to join in and carry it on for the next 46+ years.

Our club has been growing the last few years and I am sure it is due in no small part to our members telling others about the fun to be had as Rock Hounds. Marsha has organized some great field trips and I see more coming so ask your friends or whoever to come join us as we work together to make Macon County a fun place to live.

For now – Rock On!

Al Pribble



***Newsletter DEADLINE is early  
Due to Thanksgiving  
Thursday, November 2nd***

**The Gem & Mineral Society Of Franklin, North Carolina, Inc.**  
**Minutes – September 28, 2017 – General Meeting**

The meeting was called to order by President, Tom Sterrett at 6:40 p.m. on Thursday, September 28, 2017, at the Franklin Masonic Lodge. He welcomed special guests Mayor Bob Scott and County Commissioner Ronnie Beale.

Membership – Ellen Crawford reported 56 members and 6 guests present.

Minutes – Tom Sterrett asked if there were any corrections or additions to the August minutes and there were none. Marsha Harmon moved that the minutes be accepted as printed and Paul Thomas seconded the motion. Voted and carried.

President – Tom Sterrett again thanked Mayor Scott and Commissioner Beale for their attendance and Mr. Beale's willingness to install our new officers and Board members for the upcoming year. He thanked everyone who volunteered at the museum and those who volunteered for other projects and events.

Vice President – Arlon Eldridge stated that the mini-grant has been delivered. For our scholarship recipient, Sean Price, we will have a formal presentation next month.

Treasurer – Lake Holland reported the month of August was another good month.

Workshop Manager – John Hayes introduced Virginia Bennis who helped teach the recent faceting class. Virginia presented Ellen Williams with a Certificate of Completion. Ellen's stones are on the table in the back of the room for all to enjoy. John Hayes also talked about the gold panning field trip. He indicated that the sand will be taken to the museum where it can be panned. For those interested, John has a sign-up sheet.

Gift Shop – Elena Marsh reported a great September and again reiterated that August was a good month due to the eclipse and those who came North to flee the hurricane. She thanked everyone who has hosted.

Education – Diane Aiello stated there are two upcoming tours: On October 03 there will be 97 children divided into two groups and on October 17 there will be 21 children. There are sign-up sheets for hosts or see Diane if you can assist. Diane is resigning her position as Education Chairperson and is hoping that someone will volunteer for this interesting and rewarding position.

Publications – Ellen Crawford stated that the deadline for newsletter Tuesday, October 10.

Field Trips – Marsha Harmon reported on two upcoming trips: October 1<sup>st</sup> to Summerville and October 6, 7 & 8 to Graves Mountain.

Programs – Next month's program features Rich Williams who does scrimshaw.



**Meeting Minutes** cont'd from Page 4

**OLD BUSINESS:**

Credit Cards – Mike Gillen has volunteered to be our liaison person. The Board is looking at various vendors and hopes to have a decision made by January.

**NEW BUSINESS:**

Installation of Officers – County Commissioner Ronnie Beale presided over the installation of our new officers and Board members:

- President – Al Pribble
- Vice President – Arlon Eldridge
- Treasurer – Lake Holland
- Assistant Treasurer – Marie Tsacrios
- Secretary – Susan Fritz
- Board Member – Tom Parker
- Board Member – Mike Gillen
- Board Member—Diane Mason
- Board Member—Cy Amrich

There being no further business, a motion was made by Norman Holbert to adjourn and was seconded by Marsha Harmon. The meeting was adjourned at 7 p.m. after which everyone enjoyed a delicious meal. Thank you to everyone who brought side dishes and desserts.

Respectfully submitted,  
*Susan L. Fritz, Secretary*



## Field Trip News

Marsha Harmon - Field Trip Coordinator  
Lake Holland - Assistant



The October 6<sup>th</sup> thru 8<sup>th</sup> trip to Graves Mountain produced Kyanite, Lazulite, Iridescent Hematite, Fuchsite and Rutile. This remains a wonderful place to hunt 18 listed minerals (mostly not found in Franklin), for free and meet hundreds of rockhounds from the southeastern US. The weather was hot without shade but 3 pit mines connected with golf cart rides, portlet's, wash up stations, burgers and dogs to buy with sides and cold drinks and tables of local material to buy or swap for. This all happens again in April 2018. I suggest that you make your reservations early as the Lincolnton, GA area has few accommodations and they get snapped up quickly. It can be done as a day trip but from Franklin it is a 3-hour trip, one way. Thank you to Junior who allows this to happen twice a year on Graves Mountain.

Other opportunities to rockhound out in nature:

October 28<sup>th</sup>, Rockmart, GA. A DMC trip hosted by Cobb County Gem and Mineral Society, Inc. Hunting for beautiful Jasper on a cattle ranch. The multi-colored jasper is plentiful, easy to find and make excellent cabochons.

There is field work being done by Curators and Field Trip folks to assess the potential feasibility of accepting the mineral rights on a property being offered to the club, for educational trips. This is all pending additional research. A work in progress, at this time...

Call Marsha Harmon 828 369-7262 if you have questions. Information always available on the back board of the Museum as well as signup sheets. It is expected that all members, pay it back to the club by participation in the club.

## Museum

Tom Marsh - Museum Manager

The areas both on the side of the museum and the wildlife garden behind the fence have been trimmed back, weeded and will be mulched soon, if not when you get this newsletter.

My thanks to Vickie Knisley and Elena for helping me on a Sunday morning a few weeks ago. With their help, the task was completed quickly.

Tom



## Gift Shop

Elena Marsh - Gift Shop Manager



It seems that the fall tourist season is already in full swing. Most days, the hosts are super busy with guests coming in to visit our museum and assisting them in purchasing items from the gift shop for themselves, friends at home or even for Christmas presents.

Please check out the great new books available in the Gift Shop – I have managed to find new and interesting books for children and have highlighted them in the NC Room of the museum.

By the time you get this newsletter, Pumpkinfest will be over. Thanks to each and every member who was so generous of their time and efforts in making this busy day so successful. With an outdoor table featuring jewelry and specimens, cutting geodes, monitoring the sandbox with the children, and assisting in the museum, it takes a lot to get thru the day.

The museum and club are partially dependent on the sales in the gift shop. Smooth transition from one person to others will make things continue to move forward. I am always available for any questions or to show anyone what some of the duties are for the position.

We have had another great year thanks to everyone - see you in the museum soon! Elena

Editor's Note: The new Gift Shop Manager will be Ellen Williams.



“My Bucket’s Got A Hole in It”

John Hayes

## Synthetic Ruby Making, Part 1 of 2

Al Pribble - President

Have you ever had someone ask about how the synthetic ruby boule in the North Carolina Room was made? I have, and although I had a vague idea I didn't know enough to explain it in any detail. So, I decided to give some information you can use the next time someone asks. Since it is rather long I will break it into two parts. Whenever I mention 'ruby' or 'sapphire' think 'corundum' because that is the basic mineral in rubies and sapphires.

### Background

Diamonds, rubies, sapphires, and emeralds are known as precious gems. Next to the diamond, the ruby (and sapphire) is the hardest gemstone; it is also resistant to acids and other harmful substances. Because large, gem-quality rubies are very rare, the value of a fine natural ruby may be quadruple that of a similar-quality diamond.

Rubies and sapphires are both composed of corundum, which is the crystalline form of aluminum oxide. They differ only in small amounts of color-producing minerals. Chromium gives rubies their characteristic red color, with higher concentrations producing darker shades. Aluminum oxide crystals not containing chromium are called sapphires; they come in many hues including blue, yellow, green, pink, purple, and colorless. The Mincie Mine in Macon County produced some beautiful bronze colored sapphires, one of which resides in our North Carolina Room.

In addition to their use in jewelry, rubies serve a broad range of utilitarian purposes. For example, because of their hardness, they make long-lasting thread guides for textile machines. Ruby is even harder than steel, so it is an excellent bearing material for metal shafts in devices like watches, compasses, and electric meters. Rubies have exceptional wave transmitting properties from short (ultraviolet) wavelengths through the visible light spectrum to long (infrared) wavelengths.

In 1704 Nicolas Fatio de Duillier, Peter Debaufre, and Jacob Debaufre, received an English patent for the use of natural gem stones such as diamonds, rubies, sapphires and garnets as bearings in watches. The coefficient of friction for these materials is about 1/3 that of steel-on-steel bearings.

In 1902, a process to make synthetic corundum was invented by Auguste Verneuil, making jeweled bearings much cheaper. Today high-quality crystals of synthetic rubies are manufactured in various sizes and shapes to meet the many industrial uses. Without the exception of minor amounts of impurities present in natural stones, synthetic gems have the same chemical, physical, and optical properties as their natural counterparts. Although some are used as gemstones, about 75% of modern synthetic ruby production is used for industrial purposes.

### History

Natural rubies have been mined for 8,000 years or more. In many cultures, the gems have been prized not only for their beauty but also for supernatural powers; it was commonly believed that the ruby's red color came from fire trapped inside the stone. Ancient Hindus believed that rubies could make water boil, and early Greeks thought the crystals could melt wax. In other cultures (e.g., Burmese and Native American), the ruby was thought to protect a wearer because of its blood-like color.

Because it was so highly prized, the ruby was the first gemstone to be made artificially. Documented attempts to make rubies date to the experiments of Marc A. Gaudin, a French chemist who produced some synthetic rubies beginning in 1837. They were not of any value as gems, however, because they became opaque as they cooled. After 30 years of experimenting he gave up, admitting defeat in the published notes of his final ruby experiments.

Cont'd. from Page 8

Around 1885, some rubies sold as gemstones were discovered to be manmade (their unusually low price prompted the buyer to have them carefully examined). The method by which these so-called Geneva rubies were made remained a mystery until about 1970, when an analysis of surviving samples showed that they were formed by melting powdered aluminum oxide and a smaller amount of chromium oxide in an array of torches, and letting the molten material solidify.

Actually, the Geneva rubies may have come from an early developmental stage of what is now known as the "flame fusion" method. In 1877, the French chemist Edmond Frémy and a student assistant described how they heated 44.1-66.15 lb (20-30 kg) of a solution of aluminum oxide dissolved in lead oxide in a porcelain vat for 20 days. As the solvent evaporated and chemical reactions took place among the solution, the vessel, and furnace gases, a large number of very small ruby crystals formed on the basin's wall. The rubies were so small and the production costs so high that the crystals could not realistically be used in jewelry.

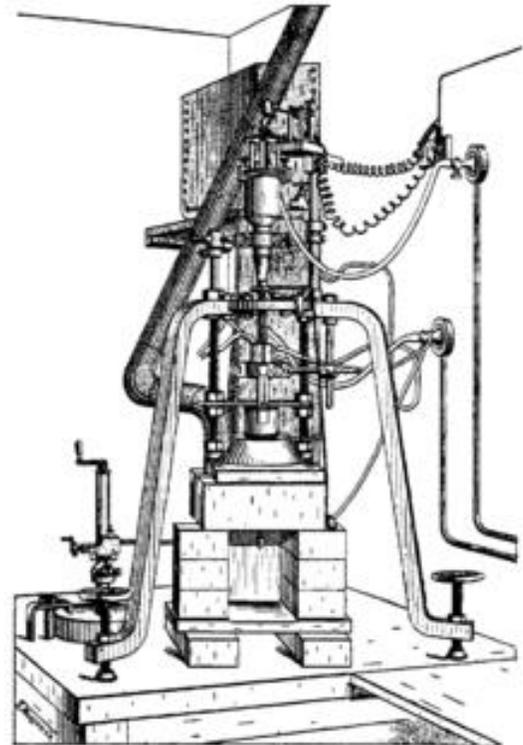
Later, Auguste Verneuil, another of Frémy's students, developed a somewhat different process that eventually became successful. By 1891 he was producing rubies by flame fusion, although he did not publish a description of his technique until 1902. His assistant exhibited the synthetic rubies in 1900 at the Paris World's Fair, where they were quite popular. His process took only two hours to grow crystals weighing 12-15 carats (2.5-3 g); the stones were roughly spherical, up to 0.25 in (6 mm) in diameter.

By the time Verneuil died at the age of 57 in 1913, the process he had invented was being used to manufacture 10 million carats (2,000 kg, or 4,400 lb) of rubies annually.

In 1918, J. Czochralski developed a different method for synthesizing rubies. Known as crystal pulling, this technique is fast, inexpensive, and effective in producing flawless stones. In fact, when cut as gems the stones are so clear that they look like glass imitations. Consequently, this technique is now used primarily for manufacturing industrial-use rubies. During World War II, it was impossible to get rubies from traditional sources in France and Switzerland.

Because these stones were vitally important for use as bearings in military as well as civilian instruments, efforts were made to improve manufacturing techniques. One such improvement, developed by the Linde Division of Union Carbide Corporation, modified Verneuil's flame fusion process to grow thin rods of ruby crystals up to 30 in (750 mm) long. Such rods can easily be sliced into disks to produce large quantities of bearings. A process developed by Bell Telephone Company in 1958 employed high temperatures and pressures to grow rubies on seeds that had been produced by flame fusion. Refinements of this technique became known as the hydrothermal method. Carroll Chatham, a San Francisco gem manufacturer who developed and used a hydrothermal process, also developed the first commercially successful application of the flux process of ruby manufacture. This technique, first used in 1959, essentially creates roiling magma in a furnace and grows very natural-looking gems in a period of nearly a year.

Next Month a look at the actual process of manufacturing a synthetic ruby/sapphire.



A sketch of an early furnace used by Verneuil

September 28, 2017 General Meeting and Installation of Officers Banquet



Photos by George Fritz and Ralph Crawford



## From the Southeast Federation of Mineral Societies

### Gem and Mineral Shows

#### November 17, 18 & 19, Marietta, GA

32nd Annual Show & Sale; Cobb County Gem & Mineral Society; Friday & Saturday 10 AM to 6 PM and Sunday 10 AM to 5 PM; FREE; Cobb County Civic Center; 548 S Marietta Pkwy SE, Marietta, GA; website: <http://www.cobbcountymineral.org/>

#### November 17, 18 & 19, Columbia, SC

50<sup>th</sup> Annual Show; The Columbia, SC Gem & Mineral Society, Jamil Temple; 206 Jamil Rd.; Fri & Sat 10 to 6 and Sun 12 to 5; \$5 Admission; Sue Shrader [ashrader@mindspring.com](mailto:ashrader@mindspring.com); [www.cgams.org](http://www.cgams.org)

### Other Events

#### March 18 to December 16, Franklin, NC

SEBA 3rd Saturday; BlueGrass Jam Session; Historic Cowee School; Noon to 3 PM; FREE

#### Franklin, NC, Cowee Community

T. M. Rickman General Store; 259 Cowee Creek Road; Saturdays; 10 AM to 4 PM

#### October 21, Downtown Franklin, NC

21st Annual PumpkinFest; 9 AM; pumpkin roll; arts & crafts; food and more

#### October 20, 21 & 22, Knoxville, TN

SFMS Annual Meeting; sponsored by Knoxville Gem & Mineral Society; Kerbela Shriners Temple, 315 Mimosa Ave

#### October 24 & 25, Asheville, NC

G&L W Trade Show; US Cellular Center; Tuesday 10 AM to 6 PM and Wednesday 10 AM to 3 PM

#### November 11, Downtown Franklin

Veteran's Day Parade and Ceremony; 10:30 AM

#### November 25 and December 5, Downtown Franklin

Winter Wonderland; 5 PM to 8 PM

**Membership renewals are past due.** Please pay Ellen Crawford or Diane Mason at a meeting or mail a check to the museum.

**Remember,** pay your dues so that you will continue to receive *The Mountain Gem* Newsletter.



*THE MOUNTAIN GEM*

*Ellen Crawford, Editor*

*Editor.themountaingem@gmail.com*

25 Phillips Street  
Franklin, NC 28734



**First Class Mail**



Month	Board Meeting	General Meeting
January 2017		
February		
March		
April		
May		
June		
July		
August		
<b>September</b>		
October	24	** 26
November	14	16
December	12	16 End of Year Party Saturday

**\*\* General Meeting at Masonic Lodge  
50 Church Street, Franklin, NC**

**Monthly General Meetings:** 6:30 PM the last Thursday of the month in the West Large Meeting Room of the Robert C. Carpenter Community Building; 1288 Georgia Road Hwy 441 South

**Meeting changes will be posted in the monthly newsletter.**

**Board Meetings:** 6:30 PM  
At the Franklin Gem & Mineral Museum  
All Board Meetings are open to the members

*If you wish to submit something before the Board, contact the President prior to meeting.*