

# ***THE MOUNTAIN GEM***

**AUGUST 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 by contacting our Education Chairman, Diane Aiello 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.**



### **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.**

## 2016 - 2017 Officers And Board Of Directors

President	Tom Sterrett	349-3774
Past President	Al Pribble	369-2548
Vice President	Arlon Eldridge	369-5271
Secretary	Susan L Fritz	524-4936
Treasurer	Lake Holland	369-5421
Assistant Treasurer	Marie Tsacrios	369-5791
Director (2016)	Norm Holbert	634-0350
Director (2016)	Jane Morgan	342-8703
Director (2017)	Cy Amrich	356-7816
Director (2017)	Diane Mason	706-379-1718

## 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	Elena Marsh	369-8915
Ass't. Gift Shop	Anamay Rossomando	349-2807 or 727-367-9196
Museum Workshop	John Hayes (Temp)	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 (Al Pribble - Temp)	
Door Prizes	Arlon Eldridge	369-5271
Education	Diane Aiello	371-2436
Field Trips	Marsha Harmon	369-7262
Field Trips Ass't.	Lake Holland	369-5421
Gemboree	Norm Holbert	634-0350
Gemboree Ass't.	Fred Plesner	349-4224
Historian	Ron Rossomando	727-367-9196 or 349-2807
Librarian	Ellen Williams	349-9416
Membership	Ellen Crawford	524-3279
Publications	Ellen Crawford	524-3279
Publicity	George Fritz	524-4936
Programs	OPEN (Al Pribble - Temp)	
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)

**August Meeting**

Date: August 31, 2017

Day: Thursday

Time: 6:30 PM

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

Program: **Kim Cochran, an exciting speaker.  
Elections of Officers**

**September Birthdays**

- 2 - Elena Marsh
- 2 - Paul Thomas
- 4 - Ross Young
- 9 - Marie Tsacrios
- 15 - Claudette Rollins
- 18 - Victoria Mahar
- 29 - Norm Holbert
- 30 - Denis Bernard



**September Anniversaries**

- 19 - Robbie & Janet Hayles
- 20 - Ralph & Ellen Crawford



**Membership renewals are due in September.  
Please pay Ellen Crawford at a meeting or  
mail a check to museum "attn membership".**

***Newsletter DEADLINE  
Tuesday, September 12th***



**Tom Sterrett, President**

Hi Y'all!

Summer is waning, August is here! We are a week away from the eclipse. Get out and sell those eclipse packs for our museum. Every one sold is \$2 more for our club coffers. Buy some to give away – they make great souvenirs for your guests.

Also coming up is the Heritage Festival at Cowee School, Saturday, August 19. They should have lots of visitors this year. Make sure you let our museum visitors know of all the other activities in the area. The more we help each other, the more we all prosper and grow.

Our August club meeting will feature Kim Cochran. He always puts on an excellent presentation and usually a quiz. It's always very enlightening. Also on the agenda is our yearly election for officers and board members. The September meeting will be the Installation Banquet and meeting.

Exciting field trips, our new pebble pups program and more to come.

Volunteer, help out, donate some time – Just Show Up! We need help in all areas of our club management.

And as always...Rock On!!!



**Minutes–July 20, 2017–General Meeting**  
**The Gem & Mineral Society Of Franklin, North Carolina, Inc.**

The meeting was called to order by President, Tom Sterrett at 6:40 p.m. on Thursday, July 20, 2017, at the Masonic Lodge.

Membership – Ellen Crawford reported 55 members and 2 guests present.

Minutes – Tom Sterrett asked if there were any corrections or additions to the last minutes and there were none. Lake Holland moved that the minutes be accepted as printed and Fred Plesner seconded the motion. Voted and carried.

President – Tom Sterrett announced that we will begin the Pebble Pup program tonight and, as an introduction, Marsha Harmon and Jane Morgan will accompany them to the museum for a tour while we have our business meeting.

Al Pribble was introduced and he presented officer and board member nominations and asked if there were any nominations from the floor. The following are nominated:

President – Al Pribble, Ross Young

Vice President – Arlon Eldridge

Board Members – Jane Morgan, Mike Gillen, Tom Parker and Kathy Young

Secretary – Susan Fritz

Treasurer – Lake Holland

Assistant Treasurer – Marie Tsacrios

Elections will take place at the August general meeting (next month).

Vice President – Arlon Eldridge reported he has an application for a mini-grant to be given in August.

Treasurer – Lake Holland reported the month of June was very good and he anticipates that trend to continue. He reported that we made \$902 from our auction.

Museum Manager – Tom Marsh thanked those who came to clean the inside and outside of the museum. A big thank you to John Hayes who cooked a pork dinner for everyone. Tom reported that there will be extended hours for the eclipse and that the museum will be open on Sunday from 12 to 4. Elena Marsh, Tom Marsh and Cy Amrich will be working the weekend, August 19, 20, and 21. Sign up sheets for the extended hours will be circulated. Even if you can come for an hour or two, your assistance will be greatly appreciated.

Workshop Manager – John Hayes presented two Certificates of Completion for the cabbing class that was taught by Cy Amrich. Congratulations to Brenda Isaacs and Joe Laurello.

Gift Shop – Elena Marsh stated the gift shop is doing well; last Saturday we made almost \$400.

Elena announced that effective December 31, 2017 she will be stepping down as gift shop manager. She is willing to train whoever may step into this position and she suggests two people. She has typed up a job description. Elena was given a big round of applause for her work over these last few years.



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

Publications – Ellen Crawford stated that the deadline for the newsletter is Tuesday, August 15, 2017. She apologized for no hard copies being available of the newsletter this past month as she had difficulties with the printer. Ellen requested that members please keep her informed of any changes in personal information so that she can keep the roster current.

Publicity – George Fritz will be working on an ad to be placed in the Macon County News and Franklin Press the Friday prior to the eclipse.

Field Trips – Lake Holland reported on a Federation trip to Propst Farm in Lincoln County on August 26 (approximately 2½ hours away) and another to Linville Caverns on September 9 that includes a picnic and tour (leave at 8 a.m. and return at 4 p.m.). If interested, please contact either Marsha Harmon or Lake Holland.

Programs – In August we hold our elections and will also have Kim Cochran as a speaker. In September we hold our banquet and December is our end of year party. We need programs for October and November.

**OLD BUSINESS:**

Eclipse – Members were reminded of the sunstone/moonstone packets that will be for sale for \$2 per packet or \$1 per packet wholesale (minimum 25 packets).

Daughters of the American Revolution – By request of the DAR, Al Pribble gave a successful presentation to this group two weeks ago at their monthly meeting.

**NEW BUSINESS:**

Wire Wrap II Class – Diane Mason announced this class will start in September and run through October. Please contact her if interested. Beginners Wire Wrap class will start in the spring.

William Holland – Diane Mason suggested we purchase a color ad in the new William Holland booklet to be printed soon. It was decided that we would do this.

Heritage Days – Cowee – We will have a tent and table set up at this event.

Where's Waldo? – It was noted that Waldo is now in the Indian Room.

Diane Aiello stated that she has a women's group on September 26 interested in having a demonstration.

It was noted once again that the charge for mailing the newsletter will be \$25 yearly in addition to normal membership dues.

Norm Holbert moved that the meeting be adjourned. The motion was seconded by Diane Mason. There being no further business the meeting was adjourned at 7:20 p.m. by President, Tom Sterrett.

Everyone enjoyed the ice cream social that followed (thank you Arlon Eldridge for the ice cream).

Respectfully submitted,  
*Susan L. Fritz, Secretary*



Photo by George Fritz

## Field Trip News

Marsha Harmon - Field Trip Coordinator  
Lake Holland - Assistant



There are plenty of opportunities available, in the next couple months, for all who want to learn and participate in our field trip program.

August 26 in Lincoln County, NC a 2 hour 36 minute one way trip to **Propst Farm**. This property recently reopened and offers corundum (mostly small clear ruby), magnetite, kyanite and quartz crystals. DMC trip that cost \$25.

September 9 **Linville Caverns** with picnic. Leaving Museum at 8 am and return 4 pm. Carpool or possible van rental for travel to Marion, NC. \$7.50 seniors to get in, please bring your own food and an ice chest will be provided.

September 30 **Clarksville**, GA. This is a \$10 DMC trip for kyanite and mica books. Carpool from Museum leaving at 8 am. It was easy pickings the last time we were there.

October 6, 7 and 8 **Graves Mountain**, Lincolnton, GA. Free hunting in 3 huge pit mines with golf cart assist, rock swap/shop, restrooms on site and food/drinks available. Many interesting minerals can be found here. 2 hours and 50 minutes one way but a great sleep over opportunity which always draws many rock hounds.

On the back board of our Museum there is additional information on each trip. If ya can't get there just call Marsha Harmon [828 369-7262](tel:8283697262) with your questions and/or if you are looking to carpool or are in need of equipment. All DMC sponsored trips require club membership.

## Gift Shop

Elena Marsh - Gift Shop Manager



Life has been made a bit easier and also more hectic now that Anamay and Ron have made it back to NC for a month - with her help, along with my husband, Tom, and her husband, Ron, we managed to visit all the tents at the gem show. Many new and interesting purchases were made, have been carded, priced and put on the shelves and display areas for sale and amazingly, some have already sold.

We have strived to make the gift shop something that the club is proud of and I hope we have succeeded. Please stop by and see our new items. Remember Christmas is just around the corner – maybe even for a gift for you.

A book order has been completed and I have quite a few more books for children. Please check the gift shop to see what's new – for your children, grandchildren or friends.

Some amazing gem trees created by a few of our members are now featured on the shelves of the gift shop. Thank you so much for any and all donations that are given to us.

**Gift Shop** cont'd on Page 7

**Gift Shop** cont'd from Page 6

Please check out our Facebook and TripAdvisor websites. Cy Amrich has done an amazing job to highlight our museum and activities. Visitors' comments indicate they have enjoyed their visit to the museum and that our hosts are super friendly and helpful.

The museum will be open for extended hours on August 19, 20 and 21<sup>st</sup>, the weekend and day of the eclipse. There is a sign up sheet in the museum for those specific days – hours will be 10 – 4 Saturday, Sunday and Monday. The town expects record crowds and although there are a few members already committed to times those days, any other help would be appreciated.

I have decided to step down as gift shop manager as of December 30, 2017. It has been my pleasure to serve the club and museum in this capacity. I cannot speak for Anamay, who has been my sidekick for these last few years, to say if she will continue on as assistant to the new manager (if asked). I suggest that anyone that has any interest in this position to please contact me as soon as possible to review what duties Anamay and I have been doing. I have written a job description that has been given to Tom Sterrett but I can also provide one if needed.

The club and museum are only as strong as the members who serve it – please consider volunteering in some capacity each month. Thanks for hosting - see you in the museum soon –

Elena



**Discovering Diamonds**

Submitted by, Al Pribble

Natural diamonds are old, almost as old as the planet itself. They mostly originated in the Earth's mantle around 1 to 3.5 billion years ago and typically were brought to the surface during deep and violent volcanic eruptions some tens of millions of years ago. They are also one of our best windows into our planet's dynamics and can, in what is essentially a galactic narrative, convey a rich story of planetary science. Each diamond is unique in its chemical and crystallographic detail, with micro-inclusions and impurities within them having been protected over vast timescales.

Diamonds are usually found in or near the volcanic pipe that brought them to the surface. In 1871 near Kimberley, South Africa, the first diamond rush began – and where the mineral that hosts most diamonds got its name: kimberlite. Many sources have since been discovered and there are now more than 6,000 known kimberlite pipes, of which only 1% (60) are economically worth mining. However, with current mining extraction technology, which generally involves crushing raw kimberlite, diamonds are often damaged. With the number of new diamond sources declining, combined with high rates of diamonds extractions, aging mines and increasing costs – it is predicted that rough diamond production will decline relative to demand, possibly as soon as 2020.

Positron emission tomography (PET) developed to observe body organ function and detect cancer tumors has been adapted to discovery of diamonds in a new technology called MinPET (mineral positron emission tomography). It could help to ensure that sources of natural diamonds last for much longer. MinPET uses a high-energy photon beam and PET imaging to scan mined kimberlite for large diamonds, before the rocks are smashed to pieces.

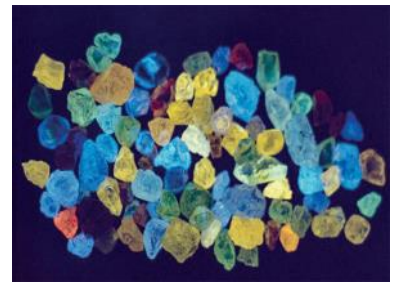
**Discovering Diamonds** cont'd on Page 8

**Discovering Diamonds** cont'd from Page 7

Over millennia, humans have invented numerous ways to look for diamonds. Early techniques to recover loose diamonds used the principle that diamonds are hydrophobic, so resist water but stick readily to grease or fat. Some stories even tell of eagles recovering diamonds from deep, inaccessible valleys, when fatty meat thrown onto a valley floor might stick to a gem: a bird would fly down, devour the meat, and return to its nest, where the diamond could be recovered from its droppings. Today, technology hasn't evolved much. Grease tables are still used to sort diamond from rock, and the current most popular technique for recovering diamonds (a process called dense media separation) relies on the principle that kimberlite particles float in a special slurry while diamonds sink.

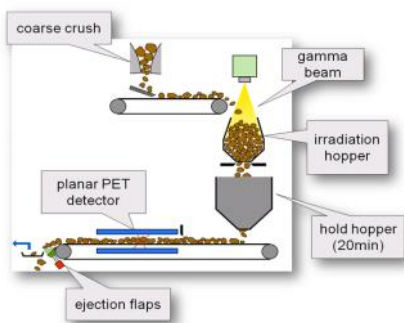
The excessive processing required with these older technologies wastes water, takes up huge amounts of land, releases dust into the surrounding atmosphere, and leads to severe diamond breakage. Just 1% of the world's diamond sources have economically viable grades of diamond and are worth mining (60 sites). At most sites the gemstones are hidden within the kimberlite, so diamond-recovery techniques must first crush each rock into gravel and typically is under one carat per tonne – more dilute than gold ores.

Early forms of sensor-based sorting, in use since 2010, use X-ray stimulated optical fluorescence, which essentially targets the micro impurities and imperfections in each diamond. Using this method, the mined rocks are dropped during the extraction process at the plant, and the curtain of falling rock is illuminated by X-rays, allowing a proportion of liberated or exposed diamonds to fluoresce and then be automatically extracted.



When this technique was introduced with several X-ray sorting machines costing around \$6 million, it paid for itself in just a few months and four large diamonds worth around \$43 million. These diamonds, presumed to be fragments of a larger single one, were 508, 168, 58 and 3 carats, in comparison to the average one-carat engagement ring.

PET, which has benefited from many innovations in detector development at CERN has traditionally been used to observe processes inside the body. A patient must first absorb a small amount of a positron-emitting isotope; the production patterns of gamma rays that can be reconstructed to build a 3D picture of metabolic activity. Since a rock cannot be injected with such a tracer, MinPET requires irradiation of the rocks with high-energy photon beam and thereby generate the position of the diamonds.



The idea to apply PET imaging to mining began in 1988, in Johannesburg, South Africa, where a small research group of physicists used PET emitters and positron spectroscopy to study the crystal lattice of diamonds. Advances in PET imaging over the next two decades led to increased interest from industry, and in 2007 MinPET achieved its first major success in an experiment at Karolinska hospital in Stockholm, Sweden. By 2015 the technology was ready to move out of the lab and into a diamond mine.

Although today's synthetic diamonds offer serious competition, natural stones are unique, billions of years old, and came to the surface in a violent fiery eruption as part of a galactic narrative. They will always hold their romantic appeal, and so will always be sought after. Article adapted from CERN Courier, July/August 2017, page 29, by Connell, Cook & Ballestrero

*This new use of technology is an example of pure research being adapted to economically benefit everyone. I have a vested interest in this article because as an engineer on the now defunct Superconducting Super Collider I saw first hand the benefit of pure research. That program was canceled because there was no immediate economic return envisioned, yet most of the technology in use today, from transistors to x-ray to MRI is based on research started in the 19<sup>th</sup> Century. Illustration 1: Diamonds fluoresce in different ways under excitation*



**From the Southeast Federation of Mineral Societies  
Gem and Mineral Shows**



**September 1, 2, 3 & 4, Hendersonville, NC**

Annual show; Henderson County Gem & Mineral Society; Whitmire Activity Bldg.; 301 Lily Pond Rd; Friday thru Sunday 10:00 AM to 6:00 PM and Monday 10:00 AM to 5:00 PM; Adults \$5, Students 12 & under free; "Colorful Copper Minerals" is the theme; contact Diane Lapp, 400 N Main St, Hendersonville, NC 28792, (828)-698-1977; e-mail: dlapp\_2000@yahoo.com; Web site: HCGMS.com

**October 20, 21 & 22, Franklin, NC**

28th Annual Leaf Lookers Gemboree; Sponsored by Chamber of Commerce and Gem & Mineral Society of Franklin

**Other Events**

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

SEBA 3rd Saturday; BlueGrass Jam Session; Historic Cowee School; 12:00 PM to 3:00 PM; FREE

**Franklin, NC, Cowee Community**

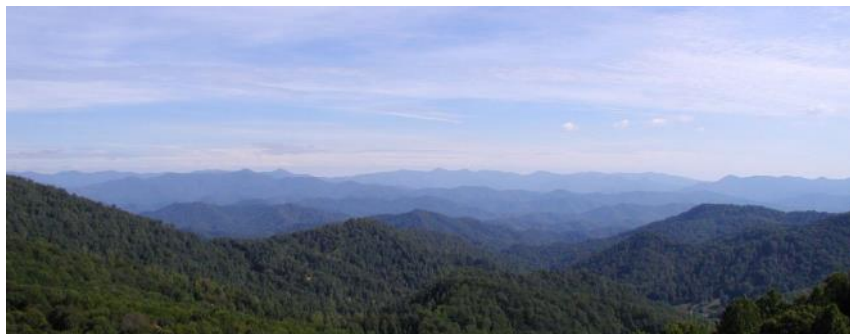
T. M. Rickman General Store; 259 Cowee Creek Road; Saturdays; 10:00 AM to 4:00 PM

**October 21, Downtown Franklin, NC**

21st Annual PumpkinFest

**October 24 & 25, Asheville, NC**

G&L W Trade Show; US Cellular Center; 87 Haywood Street; Tuesday 10:00 AM to 6:00 PM and Wednesday 10:00 AM to 3:00 PM



*THE MOUNTAIN GEM*

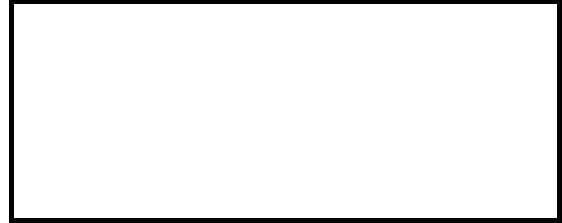
*Ellen Crawford, Editor*

*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	29	31** Elections
September	26	28 Banquet
October	24	26
November	14	16
December	12	16 Year End 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 the last Tuesday of the month at the 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.*