

# GEM & MINERAL JOURNAL

Official Monthly  
Publication of the Gem &  
Mineral Society of  
Lynchburg, VA, Inc  
[www.lynchburgrockclub.org](http://www.lynchburgrockclub.org)

OCTOBER 2016

VOLUME 25~ ISSUE 10

## President's Message:

Hello To All,

What a great field trip to Kyanite Mining. I want to thank Mike Morris and the team for giving us the opportunity to collect on the Willis Mountain site. Hey, there were some great finds on Saturday. Blue, White and Red Kyanite were collected as well as some really nice crystals of Variscite, Appatite & Troleite. I hope everyone had as good a time as Nona & I did.

I don't know if this news letter will arrive in your mail box or E-mail before Saturday October the 15<sup>th</sup>, but I want to remind everyone about the Apple Harvest Festival that weekend. It's easy to find, we setup our

booth in the rear parking lot of the Amherst County High School on Business 29 in Amherst, VA. I invite all to come and join in the activities. There are a lot of vendors selling most everything. This is a good time to think about Christmas presents.

We have a special meeting program for October, I'm sure you will get more details in this news letter. That's all for now I hope to see you at the Festival on October 15 & 16<sup>th</sup> and also at the October 19<sup>th</sup> meeting.

Keep Looking Down,  
John Haskins

## From the First V.P..

Dan Bishuk will be talking about gems and minerals found at Hiddenite, NC. at our next club meeting. He'll have samples and will also lead an auction so that we'll have an opportunity to buy something for our own collections. The following websites give us some information about what has been found in that area.

### Gems, Rocks and Minerals - Mining in Western North Carolina

<http://www.ashevillemow.com/outdoor-activities/gem-mineral-mining/rock-collecting-tips/>

### Craggy Pinnacle Garnets

In terms of minerals, North Carolina is one of the most diverse areas and contains some of the richest deposits of gems and minerals in the world. Home to outstanding gemstones, a half-billion dollar mining industry, and the highest elevation on the eastern sea board (Mt Mitchell 6,684'), North Carolina is an exciting state for rock hounds, mineralogists, and geologists alike. Furthermore, North Carolina leads the nation in the production of high grade silicates that are used in everything from tile, paint and insulation to cosmetics and computers. There is a strong possibility that the very computer you are using to read this sentence contains Spruce Pine Silicon.



North Carolina has a lengthy and interesting history of gem mining and production. Because of North Carolina's complex geologic history, beautiful and fascinating gemstones occur in many places in the western part of our state. Thousands of people visit these mines each year and enjoy discovering their own unique treasures. Some incredible finds have been made over the years, including some of the largest sapphires ever found in the United States and the largest emerald ever found in North America.

*Continued on page 14*



## September Meeting Minutes

**Meeting:** Wednesday, Sept. 21, 2016  
@ 7:00 PM

**Attendance:**44

**On Time Drawing Winners:** Siglinde Allbeck, Greg Lester, Dave Woolley, Jim Mizio, Bob McIntire, Dave Callahan, Jack Curtin, Bill Livingston, Kim Stiffler, Hans Schubert, Mark Goode, Tom Davis, Johnny Knight, John Shelor, Nick Wilson, Brenda Finch, Mary McIntire, Donna Wills.

**50/50 drawing winner** –Nona Haskins

**President** - John Haskins-

**New Business:** Scott Duresky will be speaking at our February 2017 meeting and will have micro minerals samples available. Cindy Mitchell asks that club purchase 4 fans for the workshop.

**First VP:** Jack Curtin-Announced our program tonight will be a presentation from Thom Noble. Dan Bishuk Geologist from North Carolina will speak at the October meeting on Hiddenite Mine.

**Second V.P. – Upcoming field trips:** Dave Callahan: 9/24 – Willis Mountain- Dillwyn

October 15<sup>th</sup> & 16<sup>th</sup> - Fieldtrip will be the Apple Harvest Festival at Amherst County High School. Volunteers needed to help with this event, please see signup sheet.

October 15 - Open house at Radford University Museum And Virginia Tech Museum  
Errett Callahan will continue classes through November, see Dave for

information.

**Treasurer:** Frank Midkiff-gave treasury report current balance \$6,013.59.

**Program:** Thom Noble gave a very informative presentation on William Holland School of Lapidary.

Warren Darling - provided items for the Silent Auction tonight.

Warren Darling - provided items for the Silent Auction tonight.

*Minutes submitted by  
Linda Noble, Secretary*

## Welcome New

**Rodger  
Linkenhoker of  
Buchanan, VA**

**Richard &  
Sharon Clarke  
of Monroe VA**

**Aaron  
Tomlin &  
Jody Miller of  
Lynchburg VA**

## 2016 ELECTED OFFICERS

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**Members At Large-**  
Bernardino Rivera &  
Eric Routon

## COMMITTEE CHAIR PERSONS:

**Field Trips**– David Callahan  
**Hospitality**- Monthly Volunteers  
**News Articles**– Natalie Darling  
**Silent Auction**– Warren Darling  
**Swap for Rocks**–Warren Darling  
**Website**– Casper Voogt  
**Workshops**– Dave Callahan  
**FRA Adult Liaison**- OPEN  
**Membership**- Thom Noble

## PROGRAMS

Thank You to Thom Noble for presenting our September program. We enjoyed learning about his and Linda's experiences at William Holland Workshop in Young Harris, GA.

For the October 19, 2016 meeting Dan Bishuk will be talking about gems and minerals found at Hiddenite, NC. He will also be bringing along items for an auction from one of the mines he represents. This should be fun, hope you can join us!

### Bench Tips By Brad Smith

See all Brad's jewelry books at  
[Amazon.com/author/BradfordSmith](http://Amazon.com/author/BradfordSmith)

#### REMOVING SOLDER FROM A BEZEL

Sometimes when you solder a bezel to a base plate, you end up with excess solder that needs to be removed before setting the stone. My choice of tool for this is called an "Inverse Cone" bur used in a rotary tool or flexshaft. It cuts on both the bottom and the side and is shaped so that there's less chance of cutting into the bezel wall than if you used the more common cylinder bur shape. I find the 2 mm size useful for almost any bezel.



#### TESTING FOR SILVER

Often you need to identify some of those unknown "silvery" pieces in the bottom of the toolbox or some piece of old jewelry. Is it silver or something else?

Of course, if you need to know exactly what you have, it's best to send your metals off for refining. But inexpensive silver testing solutions can be used to help distinguish higher silver content alloys from alloys that have the same appearance but with little to no silver content, like German Silver or Nickel.

I purchased a half-ounce bottle of JSP Silver Testing Solution #GT41. It's not a rigorous analytic test, but it lets you know if you're on the right track. And it's inexpensive. Mine was only \$3.

With a fresh solution you have an instant reaction after applying it to the metal being tested. The procedure is simple - as you apply a small drop, look for a color change. Note that the acid will leave a slight mark, so choose a spot that is out of the way or will be easy to polish.

If you suspect the object is silver plated, you should file a little notch somewhere inconspicuous to expose what metal is below the surface. Otherwise, all you test will be the surface plating.

Here's the reaction I got when testing various materials:

|                       |                           |
|-----------------------|---------------------------|
| Fine silver           | Red/Orange                |
| Sterling silver       | Brick Red                 |
| 80% silver 20% copper | Dark red changing to gray |
| Brass                 | Yellow changing to blue   |
| Nickel                | Gray-green                |
| Copper                | Yellow changing to blue   |
| Steel                 | Black                     |
| Stainless Steel       | No color change           |

Caution - If you do any of this testing, know that you are handling a reasonably strong acid. The GT41 label says it includes nitric acid and potassium dichromate.

Wear safety glasses.

Do not get any testing solution on your skin.

Use a solution of baking soda and water to neutralize acid.

Wash and clean up well when you're done.

## FIELD TRIP REPORT...

September field trip  
OFFICIAL COMBINED MINERAL  
COLLECTING FIELD TRIP

KYANITE MINING CORP. DILLWYN, VA  
September 24, 2016; 9:00-1:00

### September Field Trip

The Kyanite Mining Corporation annual open house to Willis Mountain in Buckingham County, VA was a tremendous success. Kyanite Mining's representatives Mike and his two assistants were very pleased with the all safety regulation adherence and how well disciplined everyone was. Big thanks go out to all the various clubs and their leaders for making this a very successful field trip.

The clubs represented were the Gem and Mineral Society of Lynchburg, Va. (GMSL), the Roanoke Valley Mineral & Gem Society (RVMGS), the Richmond Gem & Mineral Society (RGMS), the Gem & Mineral Society of the Virginia Peninsula (GMSVP), the Tidewater Gem & Mineral Society (TGMS), the Shenandoah Valley Gem & Mineral Society (SVGMS), the Northern Virginia Mineral Club (NVMC), the Gem Lapidary & Mineral Society of

Contact Information  
for Field Trips  
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Field Trip Chairman  
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Montgomery Co. Md. (GLMS), and the Southern Maryland Rock & Mineral Club (SMRMC). As far as I could tell, the attendance was around 75 this year.

As far as I could tell from talking with the various clubs and people, everyone found some pretty minerals and was happy with their finds. The weather was clear, not too hot and with a cool breeze making it a beautiful day. We left the mountain promptly at 1pm and some of us gathered in the pavilion behind the office for lunch, relaxation and some interesting conversation.

If you missed the trip this year, there should be another opportunity the end of September next year. Always remember that responsible behavior by everyone and obeying all the safety rules makes the continuation of field trips like this possible. My personal thanks to all the members of the GMSL and RVMGS that helped us host this successful Annual Kyanite Mining field trip.

**Photographs submitted by Linda Noble; additional photos on pages 13 & 15.**



## Up Coming Field Trips



### October Field Trip

The GMSL field trip for this month will be the Apple Festival in Amherst October 15 the 16<sup>TH</sup>.  
(See additional information below)

Those not assisting the GMSL in this event are invited to attend the Museum Open house at Radford University and the Museum open house and mineral sale at Virginia Tech October 15, 2016. You should go to the University websites for detail and directions.

### Amherst County's 2016 Annual Fall Apple Festival

This weekend is the Amherst County Annual Fall Apple Festival, October 15<sup>th</sup> and 16<sup>th</sup> and is a Lynchburg Gem & Mineral Society fund raising event for this year. We need everyone's help to make this a success. Here is how you can help...Saturday, October 15<sup>th</sup> and Sunday October 16<sup>th</sup>.

**Set-up:** Meet us at the Amherst Hardee's by 6:30AM. I will try to arrive there around 6AM with the trailer. Have a bite to eat and we will all drive the short distance to the High School on 29 business arriving there at 7AM. (From US 29 bypass, take the 29 business exit in Amherst. The Hardee's is at the end of the exit ramp)

If you can't meet us at Hardees, drive straight to the Amherst County High School and park in the Festival area behind the school. Tell the gate keeper that you are with the Lynchburg Gem and Mineral Club. We will be setting up toward the rear alongside the building. Same place we were at last year.

The Festival opens to the public about 9AM so we have a LOT to do. We have the Sluice to assemble, tents and signs to erect, geode cracker, tables and matting to position, product to arrange and price. This is where everyone can pitch-in.

**Saturday Sales:** We need a good representation of our membership here. We want smiling and friendly faces. We have made a lot of unique rock products to sell here and we want to have our members available to answer questions and make sales. Since we have three, eight foot tables, that's a lot of produce and impossible for a

couple of people to handle. If a customer is not waited on they will likely leave. If they are engaged in conversation they will likely purchase something. You will be coached on the product line so you can knowledgeable talk about it.

**Home phone: 540-297-1853**

**Cell Phone- 540-874-5201**

We have our forth table for geode sales. Here is an excellent chance to talk about geodes, show samples and see those smiling faces when their geode is opened before their eyes. Yes, you will be coached on the geode background. We can use a couple of people here.

Our very popular sluice line is always a big hit with the kids, young at heart and people of all ages. We can use at least four people here.

We hope to have enough members helping so everyone can take a break and enjoy the show. If you can't work all day, that's OK. We appreciate any time you can spend with us.

We always get several new members at this event so there is always an opportunity to talk to the public and promote the club.

The weather might be a little cool so dress accordingly. There will be plenty of food there too. Bring a lawn chair to sit in if you want.

**Saturday Take Down:** we do not leave the merchandise out at night so between 4 and 5 or when the crowd disperses, we must temporarily pack the merchandise in the trailer for safe keeping. We need 4 or 5 members to do this.

**Sunday Set-up:** The event opens to the public at noon Sunday. We must have about 6 to 8 people to arrive about 10:30AM to unload the trailer and re-stock the sales tables, geode table and sluice line before the public arrives at noon.

**Sunday Sales:** Same as Saturday sales.

*continued on next page*

back in the trailer. She sluice line drained, disassembled

## Up Coming Field Trips

continued from page 5

**Sunday Pack-up:** The public usually departs round 4PM and the vendors start packing up then. This is where we really can use a lot of help. Everything must be carefully wrapped and packed back in the trailer. The sluice line drained, disassembled and packed in the trailer first. The geodes packed away, tents, signs and matting rolled, packed and loaded. This is very time consuming and we must have everything loaded before dark.

Please support your club and help us at this event. Even if you can't assist with the sales and packing, show your support your club by just being there. Wear your club shirt and dress warmly in case it turns cold.



Thank you all and hope to see a great turnout. We always have a lot of fun and great fellowship.  
David

David Callahan...2<sup>nd</sup> VP and Field Trip Leader.  
[540-297-1853](tel:540-297-1853)

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## Rockhounds

by Paul Graupner; Broadus, Montana

*The Rockhounder, October 2016- Whittier Gem & Mineral Society*

*Reprinted from Franklin Co. Rockhounder, October 2016*



There are hounds, you know, that hunt for the fox.  
Now, we are the hounds that hunt the rocks.  
We have rocks in the car; rocks in the head!

But we love to hunt them on river and hill  
And to cut one in two is always a thrill.  
Although you may travel far from your home  
You'll find nothing as grand as a good agate stone.  
God hid them in his mysterious way  
That they may be found in our time and day  
So we might dig and hunt and hike  
Each one is different, no two are alike.

To be out there in your walking shoes  
Is always the cure for the worst of the blues.  
So come with us, have a good look around.  
Any you may become an avid rock hound.

**Donald McIntyre was recognized with a plaque at the GMSL September 2016 meeting.**

**Don, along with his late wife Nell McIntyre, was one of the original founding members of our organization, and he has continued to support and foster growth throughout his many years as a member.**

**Once again, we would like to say THANK YOU, Don, for all you have done and continue to do for The Gem and Mineral Society of Lynchburg, VA Inc.**

**JOB WELL DONE!**



*Photos submitted by Franklin Midkiff.*

**UPCOMING EVENTS**

**OCTOBER 2016**

**Oct. 21-23-Rochester Lapidary Society & EFMLS 66th Annual Convention.** Rochester, NY. <[amfed.org/efmls/convention.html](http://amfed.org/efmls/convention.html)> EFMLS meeting Friday, October 21.

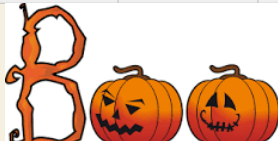
**Nov. 5-6-** 47th Annual Fine Gem, Jewelry, & Mineral Show Gemarama 2016 - Greater Philadelphia Expo Center at Oaks Hall, C. Contact Amy Karash <[amykarash@gmail.com](mailto:amykarash@gmail.com)>

**Oct. 21-23-** Treasures of the Earth Gem, Mineral, Fossil, Jewelry and Bead show- Harrisonburg, VA. [www.toteshows.com](http://www.toteshows.com) for information.

**Oct. 29-** Southern Penn. Fall Rock Swap- South Mountain Fairgrounds- 1.5 miles west of Arendtsville, PA, Rte 234. 8-3; Sponsored by the Franklin County & Central PA Rock and Mineral Clubs.

**Nov. 18-20-** 49th Annual Gem, Mineral & Jewelry Show, sponsored by the Columbia Gem & Mineral Society. Fri. & Saturday 10-6; Sun. 12-5. Jamil Temple, 206 Jamil Rd. Columbia, SC 29210. Jewelry, beads, loose stones, fossils, minerals, gold silver & tools for sale. Geodes sold & cut, rock collections on exhibit, SC Amethyst on display. [www.cgams.org](http://www.cgams.org) for more details.

**Nov. 28-30-** Roanoke Valley Mineral land Gem Club Annual Show and sale at the Salem Civic Center, in Salem, VA. More details as information becomes available.

| SUN | MON | TUES   | WED                 | THURS | FRI | SAT                  |
|-----|-----|--|---------------------|-------|-----|----------------------|
|     |     |  |                     |       |     | 1                    |
| 2   | 3   | 4  | 5                   | 6     | 7   | 8                    |
| 9   | 10  | 11   | 12                  | 13    | 14  | 15<br>Apple Festival |
|     |     |  | 19<br>Meting<br>7PM | 20    | 21  | 22                   |
| 23  | 24  | 25   | 26                  | 27    | 28  | 29                   |
| 30  | 31  |  |                     |       |     |                      |

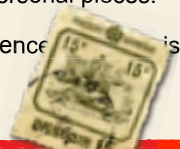
**REMINDER...**

Club workshops are held on the second Saturday of each month at Dave Callahan's home. Workshops are open to members only, and all members are encouraged to attend when possible.

There will be some discussion at this months meeting about possibly offering other days for the workshops also.

This is a great learning & fellowship opportunity, as well as a way to contribute to your club. You can "learn" while helping to fabricate items for sale at our fall festival, then use the equipment available to complete your own personal pieces.

Please consider coming out, regardless of your level of experience. Your presence is needed and appreciated!





## Safety Matters

By Ellery Borow, reprinted from October EFMLS News.

The write right could be re-stated as a right to speak one's mind or write one's thoughts. The other thought for this Safety Matters article is that rockhounds, fossilhounds, lapidary enthusiasts, beadars, etc. are very thoughtful, caring, safety minded, and sharing people. Do you see where we are going with this article? Having reread what was just written, I'm not sure where this is going either. Please let us re-compose...

Key words- right to write...safety...and sharing.

We, as thoughtful folks, as folks who generally have lots of good ideas, and folks who are concerned about their safety and the safety of their fellow rockhounds might consider, as part of their sharing nature, using the ability, to right, and even the duty or obligation (being good and proper rockhounds) to write down and share their rockhound safety ideas.

Sharing ideas and tips is part of a rockhound's nature. What is being intimated here is the suggestion that there is a benefit to sharing those ideas with others by writing the ideas down and then distributing them to our fellow rockhounds.

What we would like to encourage with this Safety matters article is the possibility of encouragement of editors, club officers and safety chairs to support their club members efforts to write down and share the best safety ideas of those members with the rest of the club members and the greater rockhound community in general.

We wish to reinforce and encourage, the right to write, to share member's ideas utilizingg the power of the written word. Please consider doing the right thing and writing down your and their ideas concerning safety matters in our write stuff...and that right should be encouraged.

Be safe, think safety, write safe. Your safety matters.

## Physical Properties and Science of Opal

<http://www.jewelsforme.com/opal-meaning>

Webster's defines opal as "...a mineral...that is a hydrated amorphous silica softer and less dense than quartz and typically with definite and often marked iridescent play of colors." The opal is a stone so distinctive that everyone can identify it, with its many colored flashing lights. The brilliance and vibrant colors within an opal resemble the colors of fall, so it is an appropriate birthstone for the month of October. Opal is unique among gems, as it displays an array of very brilliant miniature rainbow iridescent effects, all mixed together. These colors were very highly prized in Roman jewelry.



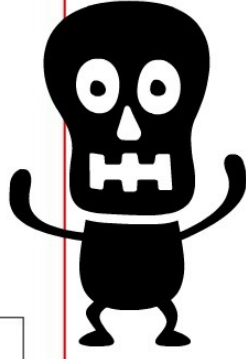


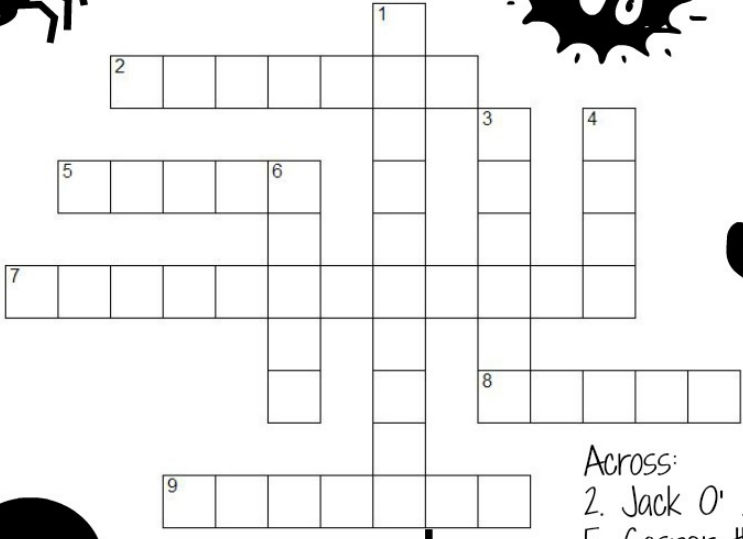
The play of color comes from opal's formation process, which is different than many gems. The color comes from the reflection of the scattering of light from the minute, uniformly sized and closely packed silica spheres that make up precious opal. The arrangement of these spheres, which vary in size and pattern, is responsible for the different colors. The more brilliant the color, or fire, the more valuable the gem. The most familiar opals are nearly opaque white or more translucent white, some having a black or reddish background. All opals vary greatly in their color of fire. Some have only red and orange lights, some also have green, and some also have yellow and blue lights. Black opals may have all of these colors as well as purple. Opals show just about every shade of every color in a variety of combinations. Opals with an abundance of red are usually the most expensive. Those strong in blue and green are equally as beautiful, but less rare, so their price is somewhat less. One of the most rare opals is called the Harlequin opal, which displays color patterns resembling a checkerboard.



*continued on page 12*

# Rock Raiders

Halloween Fun  
Trick or Treat



Across:

2. Jack O' \_\_\_\_\_

5. Casper the \_\_\_\_\_

7. Green Monster

8. Tissue Wrapped

9. Carve a \_\_\_\_\_

Down:

1. What witches ride

3. Loud Cry

4. Candy \_\_\_\_\_

6. Trick or \_\_\_\_\_



## Enhanced, Treated, Heated, Dyed, Stabilized, Created, Irradiated, Fake?

by Deborah Phianz, reprinted from *The Tumbler*, Oct 2016

Gemstones and semiprecious stones have been fiddled with for centuries to make them "more" colorful, more eye-catching, and easier to work. This does not make them "fake." Know what these terms and treatments mean.

**Heat Treated:** This is the most common treatment and is as old as fire. Humans heated agate and jasper so as to be able to shape the stones for tools. Humans also heat gem material to enhance clarity or create color in a stone. Amethyst is heated for citrine and ametrine. Zircon is heated to clarify the stone to clear white. Sapphires are heated to get the most amazing pinks and blues. Tigereye turns blue or red; carnelian agate turns orange-red, aquamarine may go from green-blue to blue. Rubies may lose a purplish tint. Iolite may be turned to a deep blue.

**Dyed:** This is also a common practice. Agate is dyed to fancy pinks, purples, oranges and blues- eye catching and very stable. Chalcedony is often dyed; black is sold as onyx and green is sold as chrysoprase. Howlite is often dyed to look like turquoise, lapis, sodalite and charite. Turquoise and Jadeite are often dyed to enhance the natural color. Alabaster, coral, banded calcite, and marble are dyed to enhance their color or to imitate other semiprecious stones.

**Irradiation:** While topaz is currently the most commonly irradiated gemstone (to get various shades and tones of blue) this is also how one gets those fabulously colored diamonds. In fact, diamond was the first gemstone color treated with radiation.

**Stabilized:** Opals are often stabilized- either by filling such as with Opticon resin (or similar agent) or by capping with as a doublet or triplet. Emerald has a long history of fracture filling due to its popularity and tendency to be highly included and fractured. While natural oils have traditionally been used for filling and stabilization, modern synthetic resins are now being used, such as Opticon, which are more permanent than the natural oils. Turquoise and coral are also stabilized in such a manner so as to make them a bit more durable.

**Created:** This is a touchy subject for some folks. Much like farmed pearls are real with a center of plastic or mother of pearl rather than sand. Still real, still a pearl, just helped to grow by human hand. Laboratory grown

crystals of ruby, sapphire, diamond, emerald and star sapphire are real semiprecious stones...just not grown by Mother Nature.

So...Real or Fake??? This "real or fake" can be argued with all sides being technically correct. That is not the most important information one can have. The really important bit about this from a lapidary or jeweler's point of view is disclosure. Does one know up front that the stone you are getting has been "helped along" by human touch? Do you as a lapidary artist, gem smith, jeweler, or craftsman know what you are using?

## Silver Facts

Reprinted from *The Tumbler*, October 2016

What is Silver? Silver is a precious metal, and much like gold is too fine to be utilized in its pure form. What does .925 mean? To make silver durable enough for use in jewelry, pure silver, which has a .999 fineness (99.9%), is often alloyed with small quantities of copper (7.5%). The copper is added to strengthen the silver and the resulting product is .925 sterling silver.

What are acceptable stamps for Sterling silver? Acceptable quality marks for sterling silver are sterling, sterling silver, ster, and .925.



## Opal...continued from page 9

Opal is a delicate and soft stone, rating a 5.5 to 6.5 on the [hardness scale](#). It is usually milky and translucent. Opal is a hardened silica gel containing 5-20% water. Some opals may crack if allowed to dry out too rapidly after being mined. Opals may be somewhat porous, in which case it is dangerous to immerse it in liquids other than water. Opal is amorphous, meaning, it has no crystal structure. The only other major amorphous gemstone is [amber](#). Good quality opals are transparent, not milky.

Imitation opals have been made using Slocum stone, a man-made glass that gives a play of color. Chips of opal and colored plastic are also put into hollowed rock crystal, and an imitation opal from Gilson Laboratories uses silica spheres.



Opal is formed when silica was liquefied and washed down into fissures in the surrounding rock, where it then solidified into a hardened gel. Unlike most other gemstones, opal is therefore not a crystal, but rather an amorphous solid. Opal is found in fossilized shell, wood and bone. Some precious opal forms in gas cavities in volcanic rocks, as in [Mexico](#), and Slovakia, but most Australian deposits occur in [sedimentary](#) rocks. It is not found in many ancient archaeological diggings for a good reason, as the stones do not last for thousands of years. They contain 5-20% water, which dries out over the years, causing them to become brittle and lose their hardness. The fire, or color, in opals is made by the cracks in it, thus its beauty is also one of its weaknesses, though the cracks are not visible to the naked eye. If the cracks are visible without a magnifying lens, it is not considered to be a fine opal.

The most valuable opals come from Queensland and New South Wales in [Australia](#), which have been the main producer of opals since their discovery in the 1870's. Nowadays, opals are mostly found in Australia, [Mexico](#), the USA, South America, Britain, [Canada](#), [Brazil](#), Czech Republic and Slovakia.



Opal is the [birthstone](#) for the month of October, along with pink [tourmaline](#). It is also [the stone given to celebrate the 14th year of marriage](#). The name opal is thought to be derived from the Sanskrit upala, meaning "precious stone," and later the Greek derivative "Opallios," meaning "to see a change of color."

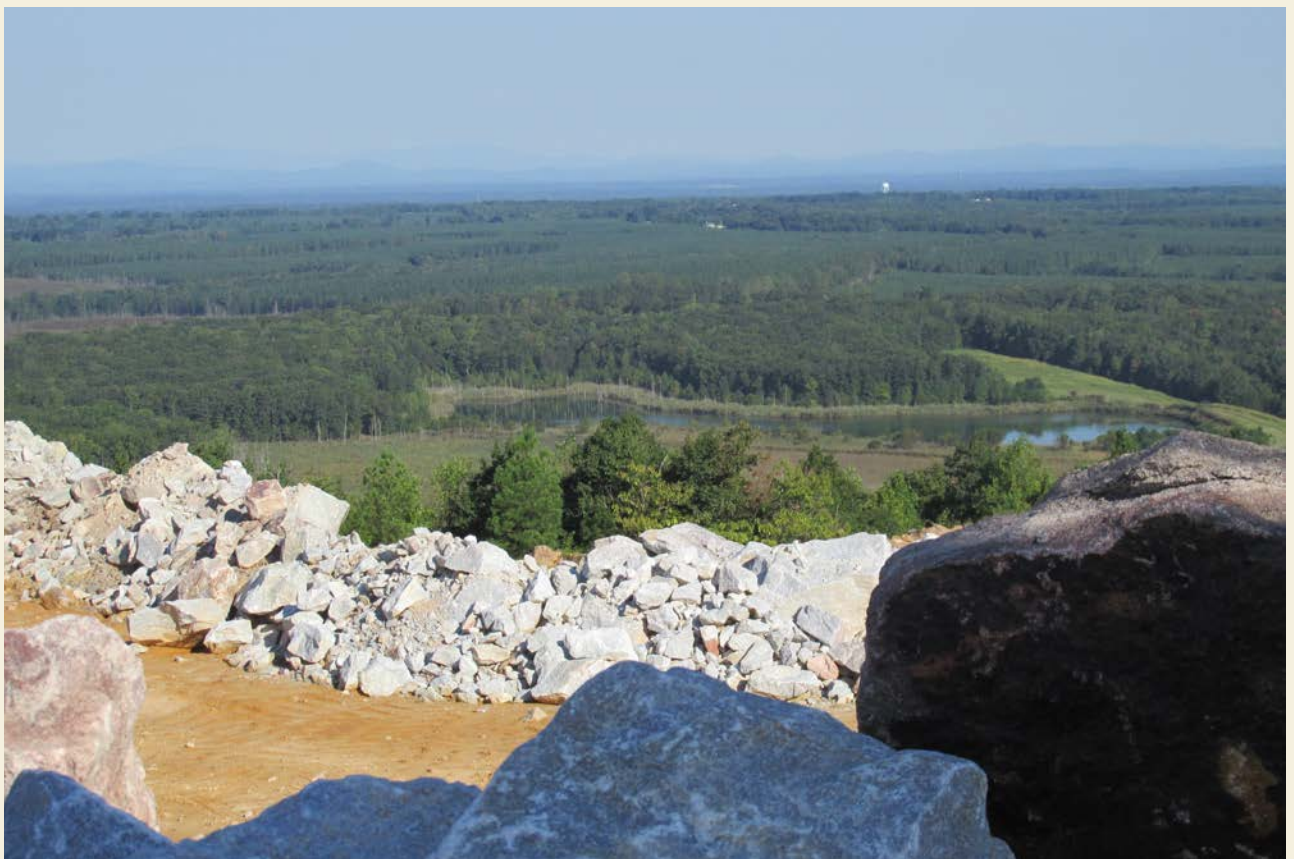




*Kyanite Mining, Dillwyn VA~*

*View from the top of the mountain.*

*Photographs submitted by Linda Noble*



## From the First V.P.

continued from page 1

### Diamond Hill Amethyst



An interesting story was the find of a 1,000 carat-plus aquamarine at a local mine in the Spruce Pine area. The finder literally stumbled over the stone, revealing a flash of bright icy blue. Needless to say, the person kept the gem with glee. Other rich finds have been made at the gold mines nearby as well. One person of the author's acquaintance found a 2 ounce gold nugget near Marion, NC while panning. In fact, miners in the Burke county area found several diamonds while gold panning in the early 1800's at Brindletown Creek. Rumor has it that the persons involved did not recognize the stones for what they were, and smashed them with a hammer to test their hardness. This proved to be a poor idea, and the stones shattered. Later, the fragments were identified by a jeweler. The original largest stone may have been well over 17 carats. To date, 14 documented diamond finds have been reported in NC, with most in the 1800's.

#### Quick Facts:

- North Carolina is divided into three physiographic provinces: **Mountains, Piedmont and**

#### Coastal Plains.

- WNC Mountains are home to **Mount Mitchell**, the **highest point east of the Mississippi River**. Its elevation is 6,684 feet above sea level.

- Western North Carolina Mountains are some of the **oldest in the world**. Among the minerals that make up Roan Mountain, the oldest are a specimen of metamorphic rock known as **Cranberry Gneiss**. Formed over a billion years ago from ancient ocean sediments, they represents more than a billion years of constant change.

- In the 1970's the General Assembly designated North Carolina's official state precious stone the **Emerald** and North Carolina's official state rock **Granite**. NC Emeralds are found near Hiddenite, NC. The largest open face granite quarry in the world is located at Mount Airy, NC.

- The **largest emerald crystal** ever found in North America came from NC.

- Spruce Pine, NC leads the nation in the production of Silicates: (feldspar, mica and pyrophyllite).

- Today, mining is a **half-billion dollar industry** in the state of North Carolina.

- North Carolina became the first state to fund a geological and mineralogical survey in the year of 1823.

Rock Hunting Locations of Western North Carolina



#### North Carolina's Three Physiographic Provinces

1. Blue Ridge
2. Piedmont
3. Coastal Plains

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 Rock Hunting Locations of Western North Carolina



### Mineral Locations Map

Provided by NC Geological Survey

- Local streams and mountains occasionally carry gem garnet and other interesting minerals in much of Western North Carolina.

- A concentration of gold bearing areas also exists between Rutherfordton and Marion, and many WNC counties have produced gold in the past.

- The most famous gem mining areas in Western North Carolina center around the Spruce Pine area and the Cowee Valley near Franklin. The Valley got the name "Cowee" from the Cherokee word "Ani Kawi", meaning "The Place of the Deer".

The following website offers a slide presentation introducing the Emerald Hollow Mine in Hiddenite, NC with beautiful pictures of what has been found there. Hiddenite Gems-Emerald Hollow - visit [Mine-Chemistry-About.com](http://Mine-Chemistry-About.com)

See you October 19th, should be a very interesting meeting. Come and add to your collections.

Happy Hunting,

Jack Curtin

Additional photographs from Kyanite Mining Field Trip.



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The purpose of the Gem & Mineral Society of Lynchburg, VA is to promote education in The Earth Sciences, including: Mineralogy, Geology, Gemology, Paleontology, and Crystallography



Lynchburg Rock Raiders is the official Future Rockhounds of America association of the The Gem & Mineral Society of Lynchburg, VA. Inc.



### MEETING LOCATION

*DIRECTIONS: Fairview Center;  
3621 Campbell Ave., Lynchburg, VA 24501  
434-847-1751~ From Route 29 expressway or Route 460, take the Campbell Avenue Exit. Follow Campbell Ave. to 3621, which is across the street from a Citgo Gas Station. There is a fence around the building and parking on both streets running along the sides of the property as well as a lot in the back. We will be looking for you!*