

# GEM & MINERAL JOURNAL

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

JULY 2015

VOLUME 24~ ISSUE 7



## Presidents Message:

Hello To All,

As I write this monthly news article, we are getting ready to leave for Nashville, TN. Over the 4<sup>th</sup> of July holiday. I know it's rough but someone has to do it. I hope we can pick up some specimens of local rock or something to bring back as remembrance of the trip. Speaking of remembering, I have seen a lot of old western movies but one thing I remember is a phrase from a Clint Eastwood movie, "A man's got to know his limitations". As I spent several days on a ladder with a paint bucket and brush working on my house in the hot sun, I'm glad I remembered my limitations before it was too late. The second morning I was a little stiff and sore, the third morning I don't want to talk about. I guess you can use Clint's phrase in a lot of areas of your life, even in rock collecting. Safety is always something to remember when walking, hammering, lifting and spending a long day in the heat. Remember to use your

safety equipment and stay hydrated, injuries or heat stroke will ruin a good day.

The GMSL sponsored D.M.C. field trip in August is fast approaching. We talked about the Club serving lunch that afternoon, we need to make detailed plans and have several members sign up as lunch servers and helpers so that Dave Callahan can submit his invitation to the D.M.C. members and get a consensus of the number of rock hounds we can expect. The last estimate was around 100 rock hounds. It sounds like a lot but we have had that many at Kyanite Mining Corp on past trips. I hope we will have a lot of help step up at the July meeting. We can make this a great day for everyone. That's all for now, I hope to see you all at the July 15<sup>th</sup> meeting.

Keep Looking Down,  
John Haskins

## From the First V.P.

We're happy to announce an exciting program for July's meeting. Dr. Steve Lenhart's arranged for his friend, Dr. Skip Watts, to speak on the "Mystery of Mountain Lake". Dr. Watts' co-author is George Stephenson. Like solving mysteries? Come join us.

Did you know there's a mine in our country where you can search for diamonds? Yep, sure is; read all about it. The article was taken from the Geology.com website.

The Only Diamond Mine In the World Where You Can Be the Miner- The Arkansas Diamond Mine at Crater of Diamonds State Park.

Where can you find your own diamonds?

If you have a strong interest in gemstones you would probably love to have an opportunity to mine for

diamonds yourself. Here's where you can go - it is the only producing diamond mine in the United States and the only diamond mine in the world where you can be the miner.

### Crater of Diamonds State Park

This diamond mine is located near Murfreesboro, Arkansas. For a fee of a few dollars you can enter the mine, search all day and keep any [diamonds](#) that you find. In addition to diamonds, you might find one of the many colorful [gemstones](#) that occur naturally there. These include: amethyst, agate, jasper, garnet, peridot, hematite, and many others.

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## June Meeting Minutes

**Meeting:** Wednesday, June 17, 2015  
@ 7:00 PM

**Attendance:** 55 members

**Host:** Pam and Eric Routon were host for tonight's meeting and Jessie and Don Dudley will host the July meeting.

**On Time Drawing Winners:** Ann Parker, Frank Midkiff, Jessie Dudley, Bill Livingston, Lydia Kalyna, Hans Schubert, Bernard Rivera, & Linda Noble.

Dave Young won the 50/50 drawing.

**President - John Haskins-** Old Business: There are still a few tickets for the microscope the Eastern Federation is raffling off as a fund raiser to send one of their club members to Wild Acres. The drawing to be held in August.

All funds have been collected for the new florescent mineral cabinet and Dave will order the supplies for the cabinets.

Open Workshop 2<sup>nd</sup> Saturday of each month at Dave Callahan. There is a signup sheet and calendar available for anyone wishing to sign up for a class or to learn something participate at the workshop.

**New Business:** Flint Knapping and other classes being taught by Errett Callahan, see Dave for details and signup sheet. (also see page 9 for additional information.)

**First VP:** Jack Curtin-Jack Curtin – announced that Skip Watts will speak at the July Club meeting and talk about the mystery of Mountain Lake.

**Second V.P. – Dave Callahan:**

Upcoming field trips:

June 27th - Prospect field trip – fee site of \$10 for ½ day and \$20 fee for all day. Signup sheet available.

August 22nd our club will host the DMC field trip to Willis Mountain. If anyone is willing to help with picnic items and cooking please see Dave for sign up.

**Treasurer:** Frank Midkiff- gave the current balance of \$8,630.36. Frank also announced we have received confirmation for our site at the Apple Harvest Festival.

Warren Darling provided items for silent auction.

Jessie and Don Dudley gave away some amethyst from Farmville.

**Program:** Dave Young gave a great presentation about his life as a Rockhound and Miner.

Minutes submitted by  
*Linda Noble, Secretary*

### 2015 ELECTED OFFICERS

**PRESIDENT - John Haskins**

(434) 525-8430

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[jacwcurtin@gmail.com](mailto:jacwcurtin@gmail.com)

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**David Callahan**

(540) 297-1853

[DBCALL1@aol.com](mailto:DBCALL1@aol.com)

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**Linda Noble**

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[linda-noble@hughes.net](mailto:linda-noble@hughes.net)

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(434) 941-1899

[gmsleditor@gmail.com](mailto:gmsleditor@gmail.com)

**Treasurer - Frank Midkiff**

(434) 660-1565

[midkiffsm@gmail.com](mailto:midkiffsm@gmail.com)

**Members At Large-**

Bernardino Rivera &

Dave Woolley

### 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

We all enjoyed the program at our June 17th, 2015 club meeting, presented by Dave Young. Dave is the owner of Stones n Bones, located in Forest, VA. According to Dave, he has been a rock hound from very early in his childhood, and a miner most of his adult life. Dave shared some of his experiences and stories, which were educational and entertaining. Thank You, Dave- for sharing your love of the hobby with us, as well as your continued support of our club.

Our July 15th, 2015 meeting program will be presented by Dr. Skip Watts. He will be speaking on The Mystery of Mountain Lake. Dr. Watts recently presented his lecture at the Museum of Earth Sciences at Redford University. Please join us in welcoming Dr. Watts and let's explore this mystery together.

### BenchTips by Brad Smith

"Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on Amazon"

[www.amazon.com/dp/0988285800/](http://www.amazon.com/dp/0988285800/)

#### SOLDERING PRONGS

I often use prongs to hold an irregular cab or other object on rings and pendants. But prongs can be a little tricky to solder. You have to find some way to hold them all upright while soldering, and the simple butt joint that looks strong sometimes breaks when you start to bend the prong over the stone. There's nothing worse than having a prong break off when you're setting the stone \*#~\*!

I solved both problems with one little trick. It holds the prongs in position while soldering and it gives you a stronger joint at the same time.

Locate and center punch the position for each prong. Then drill holes a little smaller than your prong wire. Sand a small taper on the ends of your prong wires and stand them up in the holes. The wires support themselves, soldering is easy, and the joint is stronger because of the increased soldering area.

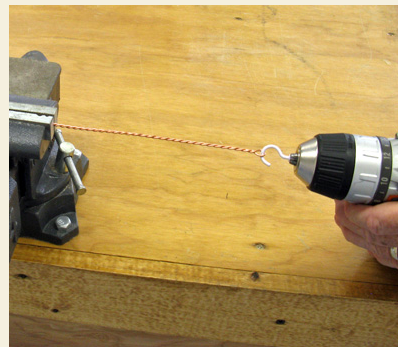
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#### TWISTING WIRE

Twisting wire can be done with an old hand drill but goes much faster with a power tool. My preference is to use a screw gun, although a Foredom should do well.

Just make a little hook out of coat hanger wire (or use a screw-in cup hook) and chuck it up in your screw gun. Grip the free ends of the wire in a vice and slip the looped end onto your hook. Keep a little tension on the wires as you twist.

Note that a power drill is too fast a tool for this unless you have one with variable speed.





## FIELD TRIP REPORT...

### Up Coming Field Trips

#### OFFICIAL COMBINED RE-SCHEDULED MINERAL COLLECTING FIELD TRIP

The Gem & Mineral Society of Lynchburg, VA. Inc.  
and  
The Roanoke Valley Mineral & Gem Society Inc.

SCUFFLIN ACRES FARM AMETHYST SITE.  
Prospect, VA.

#### **THIS IS A FEE SITE....See below for rates.** **July 25, 2015 (RE-SCHEDULED DATE)**

10AM until dusk (but you can leave any time you want)  
RE- Sign-up is required, call me, email me or re-sign up  
at the meeting to get back on the list . If you cancel,  
notify me to be taken off the list. Rain and muddy  
conditions at the site caused the June 27th trip to be  
cancelled.

**MEETING TIME AND PLACE:** We will meet at  
Templeton's Market and Shell station, 4928 Richmond  
Highway, Lynchburg, VA. It is located on US 460 East,  
very near the eastern Lynchburg City limits. This will be  
before you come to the US 29 North bypass exit. From  
Roanoke, drive to Lynchburg on US 460E. Continue on  
around the city like you are going to Appomattox.  
Templeton's is a couple of miles past the US 501 South  
interchange on your left.

We will all assemble beside the market toward the rear  
and behind the gas pumps. Please do not block the  
pumps or store access. This is a good place to gas up  
and grab a bite to eat. We will DEPART FROM HERE  
PROMPTLY AT 9:00 AM, so be on time or be left behind.

**FEE SCHEDULE:** The mine owner has one standard  
rate which is as follows: I will collect the fee at the  
meeting place, Templeton's Market. Please have the  
correct amount. No checks or credit cards. Thank you!

#### Contact Information for Field Trips

David Callahan,  
Field Trip Chairman  
Home phone: 540-297-1853  
Cell Phone- 540-874-5201  
E-mail [dbcalls1@aol.com](mailto:dbcalls1@aol.com)

\$10.00 per person for a partial day or until noon.

\$20.00 per person for a full day until dusk.

Youth under 10 are free.

No additional discounts are offered.

You may leave at any time.

**COLLECTING:** The site is an old dairy farm and we  
will be collecting amethyst from a pegmatite vein that  
has been weathered to a point where a great deal of the  
quartz, feldspar and mica has altered to clay. Much of  
the vein has been exposed by back hoe excavation so  
some solid material is available...but you must dig for it.  
Many rockhounds have collected the loose surface  
material. Some amethyst has a beautiful purple color but  
most will be a dark purple to almost black. Some  
amethyst has a frosty coating that is impossible to  
remove.

I visited the site on Sunday May 31<sup>st</sup> and during my walk  
through, I picked up several pieces of solid pink feldspar  
with a small vein of pretty purple amethyst showing. I  
feel that the site does have potential for some nice finds  
but you must rake through the massive piles of dirt on  
the sides and in the very large and deep trench. If it has  
been a rain recently the pit will be pretty muddy so I  
would strongly suggest that you bring some rubber boots  
and a change of clothes. There is a small creek on the  
lower end that will always be muddy.

We can park beside the pit and it will be almost  
impossible to use a hand truck in the pit so buckets  
should be your first choice. You should bring a hoe or  
something to rake through the dirt piles. A shovel would  
be in order as well as a hammer and chisel.

Bring food and plenty of water. There are NO  
FACILITIES available here so you must go back to 460  
and Farmville to find something.

*Continued on next page*

*Up Coming  
Field Trips*



For additional information or to sign up for field trips, please contact Dave Callahan, Field Trip Chairman

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

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

**E-mail [dbcalls1@aol.com](mailto:dbcalls1@aol.com)**

*Continued from page 4*

A hard hat is not required or steel toed boots. I would recommend good strong boots anyway to keep from turning your ankles in the soft dirt. Also there is no shade here so wear a hat and use sun screen and bug spray. We have reserved the site exclusively for our clubs so we will be the only people there.

**DIRECTIONS:** We will depart from Templeton's Market promptly at 9am. I will have maps available for those driving. The distance to the site is approximately 38 miles and will take about 45 minutes.

The address of the site is 261 Scufflin Acres Lane, Prospect, VA. The only way I could program my GPS was to use Prospect, VA and the intersection of Rt. 645 (Simpson Rd.) and US 460 east (Prince Edward Hwy).

This intersection is NOT the site. Scufflin Acres Lane is off Simpson Rd. Details will be on the map you will receive at Templeton's Market.

If you will be traveling from another direction and will not meet us at Templeton's market, let me know and I will try to help you with directions. I will collect the collecting fees for these people at the site.

**CONTACT:** David Callahan, Field Trip Chairman for The Gem & Mineral Society of Lynchburg, VA. Inc. and The Roanoke Valley Mineral & Gem Society, Inc. E-mail: [dbcalls1@aol.com](mailto:dbcalls1@aol.com), Home Phone: [540-297-1853](tel:540-297-1853) or sign-up at the meeting. My cell number is [540-874-5201](tel:540-874-5201) for contact the day of the trip only. If I don't answer, let them ring and leave a message please.



Dixie Mineral Council Field Trips  
The Southeast Federation of Mineralogical Societies, Inc  
The Friendly Federation - Founded in 1976 to serve.

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DMC Program of the SFMS Field Trip Committee  
An Official Field Trip of the Southern Appalachian Mineral Society (Asheville, NC) HOST  
An Official Field Trip of the (GMSL and RVMGS)

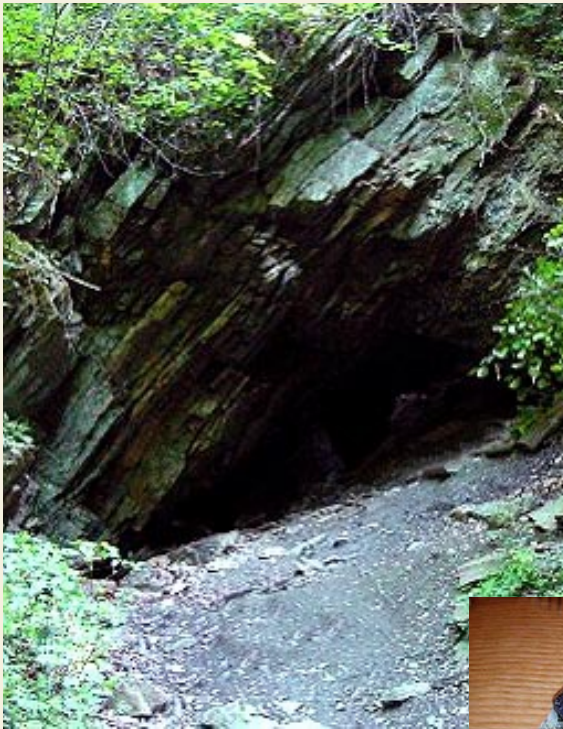
**9:00 AM to dusk**  
**Saturday, July 18, 2015**  
**Little Pine Garnet Mine, Madison County, N.C.**  
**FEE Site**

**DIRECTIONS:** From Asheville take I-26 west to US 25-70 (exit 19A for Marshall, NC – right exit). From north of Marshall, take I-26 south to US 29-70 ( exit 19 for Marshall ). Travel US 25-70 toward Marshall approx. 12.6 miles and turn left on Little Pine Road. There will be a sign for Sandy Bottom Trail Rides at this corner. Follow Little Pine Road 3.8 miles and turn left onto Caney Fork Road. Parking will be at the end of Caney Fork Road. Collectors will car-pool from here to the site. Maps and/or directions will be available from the office to the mine site. We will meet at the office of Sandy Bottom trail Rides 1459 Caney Fork Road, Marshall, NC 28753 at 9:00 AM. Release forms must be turned in and admittance fee paid. You will receive a "ticket" which you must keep with you. Representatives randomly visit the collecting site and check collectors. From I-240 at Asheville time should be 35 to 40 minutes. ( approx. 25 miles ). The Sandy Bottom Trail Rides website also had maps and directions – [sandybottomtrailrides.net](http://sandybottomtrailrides.net). *Continued on next page*

## Up Coming Field Trips...continued from page 5

**HISTORY:** Little Pine was worked commercially around 1904-05 for Garnets to produce sandpaper (garnet paper). Good crystals of Almandine Garnets can be readily found from ½" to 4" or more. Some remain in the Chlorite schist matrix and can be cleaned to produce very showy matrix specimens. There are some crystals that exhibit an elongated growth that is very desirable. Note: All DMC member clubs are required to maintain field trip liability insurance!

**ASSEMBLY:** Parking at the collecting site is limited, so members of attending clubs should arrange to car-pool from the meeting site to the collecting area. The road into the mine crosses a shallow stream, however most vehicles should pass without problems. WE CANNOT BLOCK THE DRIVE as it is also a homeowner's access road.



Above opening to the Little Pine Adit.  
Right: Cleaned up specimens  
collected at the Little Pine Mine



**EQUIPMENT:** For dump collecting bring scratching tools, small shovel, or pick type rock hammers. To enter the mine, a hardhat and some type of headlamp is necessary. The ceiling of this mine has some loose material and is not suited for children. DO NOT dig into or weaken the support columns! Believe it or not people do this foolish thing. Fill in all dug holes.

**COST:** The Dixie Mineral Council Group is receiving a discounted rate of \$20.00 per person per day. There is not a special rate for children who attend! Please identify yourself as being a member of the Dixie Mineral Council Field Trip to receive this rate!

The collecting limit is one gallon of Garnets per person. Children 8 and older allowed with close adult supervision. There are dump areas that are child friendly; however there is also a mine shaft and tunnel where children should not be allowed to venture.

**RELEASE FORM:** Each individual **MUST** fill out a **Sandy Bottom Trail Rides release form**. Go to their website - [sandybottomtrailrides.net](http://sandybottomtrailrides.net) to download form. It will save time if you have these completed prior to arrival. Children under 18 must have a parent or guardian fill out a form on their behalf **NO EXCEPTIONS**.

A Port-O-Let is located at the mine site. Bring water, food, and bug repellent. No pets.

Contact: Ken Casebeer - Phone1- [828-277-1779](tel:828-277-1779) No calls after 8:30 PM please! E-mail - [casebeer@law.miami.edu](mailto:casebeer@law.miami.edu)



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 The Southeast Federation of Mineralogical Societies, Inc  
 The Friendly Federation - Founded in 1976 to serve.  
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**DMC Program of the SFMS Field Trip Committee  
 An Official Field Trip of The Gem & Mineral Society  
 of Lynchburg, Virginia Inc. (HOST)**

**9:00AM until 1:00PM EDT  
 Saturday – August 22, 2015  
 KYANITE MINING CORP., DILLWYN, VA  
 WILLIS MOUNTAIN KYANITE MINE**

**COLLECTING:** Mostly white with some rare blue kyanite. Some of the white kyanite and quartz here have a beautiful light blue fluorescence and the apatite glows yellow so bring your short wave lamp and blackout cloth. Also expect to find pyrite, white muscovite, green fuchsite and red iron-stained muscovite, hematite or goethite-coated kyanite with some having a beautiful iridescent coating. The green apatite and trolleite are there but hard to locate. You can also find some small rutile crystals.

**WHERE:** The mine is on US 15 between Farmville and Sprouses Corner, Buckingham County, Virginia. For GPS, enter Dillwyn, VA., and 30 Willis Mt. Plant Lane (or try road). Choose James Madison Hwy or Rt. 15 as the cross street location. This is for the mine office and the assembly area.

**DIRECTIONS:** If you will be arriving from the north, at the US 60 and US 15 intersection in Sprouses Corner, drive south on US 15 James Madison Highway for 4 miles and turn left on Willis Mt. Plant Lane. Turn left and stop at the stone mine office on the corner. Park out of the way in the parking lot or along Willis Mt. Plant Lane. Do not to block traffic and do not park along Rt. 15.

If you will be arriving from the south, at the US 460 and US 15 intersection just east of Farmville, drive north on Rt. 15, James Madison Highway for a little over 12 miles to Willis Mt. Plant Lane. The stone mine office is on the right. Park out of the way in the parking lot or along Willis

Mt. Plant Lane. Do not block traffic and do not park along Rt. 15.

**ASSEMBLY TIME:** Everyone will meet at the mine office no later than 8:30 AM for sign-in. We will have a mandatory safety briefing starting at 8:45. We will then load up and convoy a short distance to the mine area about 9:00 AM. You will be able to drive to the collecting areas.

**SAFETY MEETING:** Everyone must arrive at the office parking lot no later than 8:30AM to sign the release form and hear the required safety briefing. Each Club field trip leader, or their appointed replacement, will act as safety observer while in the mine and will be expected to be on the lookout for and correct all safety infractions from any collector from any club. Keep in mind that this site is one of the few that is still open for collecting. Not obeying all the safety rules will cause this site to be closed to all future collecting.

Kyanite Mining Corp. is very safety conscious and has an excellent record. We will also have several club members with blaze orange vests who will be on the lookout for unsafe situations and conditions. If you are in an unsafe area you will be asked to move. We will be in an active mining area with many potential hazards. Please respect the safety berms, high wall setback and marked unsafe areas. Be aware of your location at all times.

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**UPCOMING EVENTS**



*July 2015*

**July 22-26-** Franklin NC Gem shows. Retail, Wholesale and club show. [www.xpopress.com/north-carolina-gem-mineral-fossil-jewelry-shows-sc...](http://www.xpopress.com/north-carolina-gem-mineral-fossil-jewelry-shows-sc...)

**July 26-Aug 2-** Spruce Pine NC Gem and Mineral shows. Indoor Wholesale show and Outdoor Grassy Creek show. visit <http://www.mitchell-county.com/visiting-gems.php> for information on the area as well as the shows.

**August 22-23-** Annual Rock & Mineral Show sponsor by St. Lawrence Co. Rock & Mineral Club. Madrid Community Center, Madrid, NY

**Sept. 12-13-** Annual Gem, Mineral & Fossil Show sponsored by the northern Berkshire Mineral Club. Fraternal Order of Eagles, 515 Curran Hwy, North Adams, MA

**Sept. 19-20-** Annual Gem, Mineral Fossil and Jewelry Show & Sale sponsored by the Mid-Hudson Valley Gem & Mineral Society. Golds Gym & Sports Complex, 258 Titusville Rd; Poughkeepsie, NY

**Sept. 26-27-** Annual Gem, Mineral & Jewelry Show hosted by the Gem Cutters Guild of Baltimore. Howard Co. Fairgrounds, West Friendship, MD.

SUN	MON	TUES	WED	THURS	FRI	SAT
			1	2	3	
5	6	7	8	9	10	11
12	13	14	15 Meeting 7PM	16	17	18
19	20	21	22 Franklin Gem Shows>>	23 >>>>>>	24 >>>>>>	25 Field Trip >>>
26 Franklin Shows End, Spruce Pine Shows Begin	27 Spruce Pine>>	28 >>>>>>	29 >>>>>>	30 >>>>>>	31 >>>>>>	Spruce Pine Shows end Aug. 2

**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. All help is needed and appreciated!



## Rock Raiders

For any Rock Raiders, (or anyone for that matter) who wants to learn more about rocks and minerals in a fun way, you may want to visit [www.diamonddanpublications.net](http://www.diamonddanpublications.net)

On the site you can download games, information, and past publications in pdf format. You can also order books and other materials. The information is easy to understand with many color graphics, as it is intended to be of interest to jr. rockhounds.

**Welcome to our  
Newest Member:  
Jennifer Adams,  
from Lynchburg VA**

### Errett Callahan's Primitive Technology CLIFFSIDE WORKSHOP

**NEW SCHEDULE, Open House Offering  
Spring, Summer, Fall 2015**

**Call ahead or just come as often as you like, relax,  
make something, bring a friend.**

Dr. Errett Callahan welcomes students of Primitive Technology into his home now **Every Sunday** hence forth this year.

**Address:** 2 Fredonia Avenue, Lynchburg, VA. 24503  
This is off Rivermont Avenue in the historical district.  
Last house on the right at the end of the street.  
Please park in the driveway, not on the street.

**Home Phone:** [434-528-3444](tel:434-528-3444). If no answer, please leave a message and a number to return your call.

**When:** Every Sunday, rain or shine, 10:00 AM to 2:00 PM.

Bring your own lunch.  
Tools, material and literature available to loan (tools) or purchase (material and literature).

**Fee:** \$20.00 per day for instruction; Cash or check only please.

Ask about a reduced rate for a couple;  
Free if you just wish to observe.

Subjects Available:

Flintknapping  
Slate working  
Soapstone working  
Stone axe making  
Hafting  
Archery  
Primitive ceramics  
Fiber technology  
Lithic analysis  
Artifact sketching  
Observe demos  
Practice for the fun of it  
Explore the grounds  
See the museum of his work  
Read the writings  
Just be a Callahan student, relax and enjoy it.

Special invitation to:

The Gem and Mineral Society of Lynchburg, VA. Inc.  
The Roanoke Valley Mineral and Gem Society, Inc.  
Sedalia Group  
Society of Creative Anachronism  
All friends, past students, interested people and groups.

## Hawaii's Colorful Sand

by Mary Gurney, reprinted from July 2015 Tips and Trips

Hawaii is a chain of 8 major islands and 124 small islands, reefs, atolls, and shoals. The islands are surrounded by coral reefs that both create and can protect the Hawaiian beaches. The sand there is created by two main factors: mechanical erosion mostly by waves and currents, and bioerosion by marine animals.

The Hawaiian sands like most sands are composed of tiny fragments of rock, mineral, and biogenic material found on and around the islands. One of the unusual characteristics of Hawaiian sand is how little quartz is found. The relatively "new" age of the islands and that the islands are composed of volcanic materials are factors of the sand content. The primary components of Hawaiian sand are biogenic, basaltic, pyroclastic, magnetite, olivine, apatite, and chlorite.

Considering the limited sources and land mass, Hawaii has quite a range of sand colors and beaches, some of which are quite rare. Hawaii is relatively "new" with the oldest island estimated at 6 million years old and the youngest, the Big Island of Hawaii at .4 to 1 million years old.

### Green

The most rare sand is the Green sand found on the Southeast part of the Big Island of Hawaii. A littoral cone (Pu'uOMahana) of basaltic lava high in olivine (also known as peridot) in the area is the main source of this sand. The newer sources create larger, sharper, and brighter green sands. The more these sands are exposed to weathering and erosion the smaller, rounder and darker the granules become.

The olivine, a magnesium iron silicate is a common mineral on earth but not usually near the conditions that create a beach sand. Phytoplankton can create the look of a green beach but is not sand. There are few green sand beaches on earth made from minerals. Hawaiian green beaches are found in the Sough Point area small coves, Mahana beaches and the famous Papakilea Beach.

### Red

One of the other very rare beach sands is the red beaches found on the island of Maui. The most popular red beaches Kaihalulu Beach in the town of Hana. The nearby red volcanic cinder cliffs and hills weather and erode to create the sand. This source is rich in iron and

tends to stay in this area because an offshore lava reef protects the beach from being eroded away by waves and currents. However, should you wish to visit some areas of red beaches, you must get permission to cross private properties. You might also wish to know that Kaihalulu Public Beach is one of Hawaii's clothing optional beaches! You may get more than an eyeful of sand!

### Glass Beach

One of the more usual beaches is the glass beach found in the southern end of the island Kauai, near Port Allen Harbor, in the town of Ele'ele. This area used to be a dump for glass, bottles, flasks, and window glass. After 30 years or so the glass has been broken down and reduced to sand size rounded particles of mostly brown, aqua, blue, and clear glass. The waves and currents as well as the particles rubbing each other created the "beach". The offshore reefs help to somewhat protect this beach from being washed away. Amazingly, an ounce of this "sand" was more expensive than an ounce of any other Hawaiian sands.

### Yellow (or tan)

Although most beaches in the world range from a yellowish to tan color, Hawaii has lower percentage of these than any of the other kinds of beaches. In Hawaii these beaches also have a high content of coral and seashells rather than rock or mineral content. The island of Maui has many of these beaches and also Halawa Beach and Hulopoe Bay. The most famous of these beaches is Waikiki, in the state capital of Honolulu. There have been many controversial accusations and articles claiming that the Waikiki beach sand was really imported from another country. The Department of Land and Natural Resources and the Department of Tourism vehemently deny and importation of beach sands.

### White Sand

There are many white beaches in Hawaii. Since Hawaii does not have a large source of quartz, most of these beaches are created from the corals, algae, mollusks, foraminifera, echinoderms, and bryozoans found in and around the islands. The eroded limestone particles coral, shell and other fragments are created by more than the normal mechanical weathering and decomposition.

Creatures eating the coral, algae, and other things break them down and pass them through their system. Yes, these highly popular beaches have a very high content of sand made and expelled as animal waste!

*Continued on next page*

## Hawaii's Colorful Sand

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The largest contributor to this type of sand are the many types of parrot fish. One parrot fish generally creates about 198 pounds of sand per year! Other animals contributing sand waste to create these beaches are boring worms, grazing urchins, bivalves, and boring sponges.

These types of beaches bleach even whiter in the abundant sun of this area. The white sand under the shallower shore waters also reflect a beautiful azure blue popular with beachgoers. This white sand also reflects the sun rays so sun tans are quickly and easily achieved. However, unwary beachgoers easily sunburn on these beaches quickly too. White beaches make great lures to the tourists that make up the biggest part of Hawaiian income.

One of the popular beaches is the Magic Sand Beach on the Big Island. The occasional large storm will wash all the sand away leaving a rocky shore. However, soon the waves and currents redeposit the sand within anchoret time creating the "magical" appearing and disappearing of beach sand.

These beaches are common found on the windward side of Oahu, the northern side of the Big Island (Hawaii), and Molokai. Some of the more popular beaches are La'aloa (Magic Sand Beach), Kailua Bay, Makaiwa Bay, and Kahala'u beaches on the Big Island, and Waimanalo Beach (Oahu), Aneaho'omalua, Hapuna, and Waialea.

### **Black**

Black sand beaches are not as uncommon as other types of sand in Hawaii, but these beach sands are generally a beautiful shiny black. As Hawaii is composed of volcanoes, the numerous black sand beaches throughout the islands and archipelagos are understandable. The most famous are the Punalum'u Black Sand Beach, Honokalan, and Honokalani Beach on the Big Island, Kaimu near the Kilauea volcano, Halawa Beach in Molokai, and the Kelewi Beach Park, and on Maui.

The creation of new beaches from the Kilauea volcano have allowed scientists to observe and study the creation of black sand beaches. The volcanic lava flowing into the colder ocean waters is immediately changed to glasslike obsidian that shatters from the resulting steam. The treacherous waves and currents beat at the lava flows and breaks down the shattered

fragments and lava rocks quickly. The beach by Kaimu Beach is estimated at around 25 years young.

The majority of black sand beaches have a "short" life span of a few hundred years because when the volcano stops erupting so does the primary black sand source. The wave and current erosion carries black sand away and generally deposits other sands eventually creating a mixed sand beach.

Sea turtles favor the black sand beaches for egg laying. The biologists believe it is because the black sand adsorbs the sun rays' warmth. It can make it hot for the human bare feet (and other body parts)!

### **Salt and Pepper**

This is a common type of beach mostly created from a mix of black lava sands (pepper) and the white, biogenic (salt) sands in the area. They can also be created by the eroded and redeposited sands of other locations mixing together. Some of the more popular salt and pepper beaches are on the Kona side of the Big Island, the windward side of Oahu and many of the other islands, and Hamoa in Maui and Ke-awa-iki.

### **Pele's Curse**

Pele's curse seems to be an urban legend created by ecology minded rangers (most cited source) or lazy bus drivers. Pele's curse does include no pork over the Pali Highway in Oahu, no picking of red Lehua blossoms on Ohia trees, etc, but does not specifically address sand.

There is a Hawaiian legend of not removing a male or female black lava rock or they cannot produce baby black pebbles of sand and the "beach" may disappear. There was one modern religious reference to the spirits or the dead residing in the land, rocks, and plant life until they can move on so they should be treated with respect and care. However, should you believe in curses and wish to remove a Pele curse you could try offering food or flowers at the Halema'uma'u crater.

There is a law that says not to remove items from National Parks and not to remove more than 1 gallon of sand per day from other beaches. Privately owned beaches can post no removal signs. There are many return sites for those wishing to return "cursed" sand, rocks, etc. Even if this curse is an urban legend, all geological sites should get respect to sustaining and caring for the environment and site.

*List of sources included with original article in July 2015 issue of Tips and Trips, Newsletter of the Georgia Mineral Society, Inc. <[www.gameneral.org](http://www.gameneral.org)>*

## Up Coming Field Trips...continued from page 7

**SPECIAL NOTE:** All the participating club field trip leaders, send me a list of your total collectors and those staying for lunch so that I can compile a list and forward it to the mine management by 8-17-15. Since this the Annual Kyanite Mining Corp. Open House event, there will be many other area clubs in attendance. There is a limit of 125 collectors from all clubs for this event so there will be room for everyone. If you have ANY QUESTIONS on the safety requirements or anything else, let me know ahead of time. Do not show up with improper safety equipment and expect to be admitted anyway. The only reason we can collect here today is because we always comply with every regulation they require. Remember, we are just one infraction away from having this site closed to all future collecting.

**EQUIPMENT:** The standard quarry safety gear required is a hard hats with a manufacturer's date of 5 years or less, (check the date stamp usually under the brim) safety glasses, a pair of wheel chocks either purchased, home made or even a rock is acceptable. Every time you leave the car, turn off the engine, put it in park and apply the hand brake and wheel chocks. **ADULTS: ONLY STEEL TOED BOOTS WILL BE ALLOWED, THERE WILL BE NO EXCEPTIONS!!!** If you do not have the required safety equipment, you will not be allowed to enter the quarry. Also required are long pants, gloves, hammer and chisels, wrapping paper, buckets, and water. Be prepared for windy, hot or wet weather. We will be on the mountain top and it's always windy. We can drive to the designated collecting area, so hand trucks should not be needed. Bring a camera, as the view is awesome.

**AGE LIMIT:** There is no age limit, but all youth must be signed for, supervised by an adult and have all the required youth safety equipment. No Exceptions!!! The mine will accept a good bicycle helmet for the youth only if a standard hard hat is not available in their size. Youth can wear good strong leather boots. No sneakers or flip flops allowed. All pets must be under control at all times.

**OTHER PLANNED EVENTS:** We will have available immediately after the dig at 1PM, a hot lunch and a drink for a nominal fee. You may also bring your own lunch, especially if you are on a special diet. This service will be available in the pavilion beside the office and continue until everyone has eaten. This will also be a social get-together so that we can have a chance to become better acquainted with our rock club neighbors and to provide some time to relax before the long ride home. You might want to bring your own lawn chair and rest a spell under the shady pavilion.

### **SEVERAL LODGING SUGGESTIONS:**

Sprouses Corner (about 1 mile away)  
Star Motel 1-888-564-5422

Farmville (about 20 miles away)  
Day's Inn 1-434-392-6611  
Super 8 Motel 1-434-392-8196  
Comfort Inn 1-434-392-8163

**CONTACTS:** David Callahan, Field Trip Chairman, The Gem & Mineral Society of Lynchburg, VA. Inc.  
Phone: 540-297-1853, Cell: 540-874-5201 (use cell the day of the event only please)  
dbc11@aol.com. Visit our web site  
[www.lynchburgrockclub.org](http://www.lynchburgrockclub.org)

*DMC is a program of the Field Trip Committee of the Southeast Federation of Mineralogical Societies, Inc.*

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*"Field trips are open to all members of associated clubs of the DMC program of the SFMS Field Trip Committee and to all members of SFMS member clubs who have provided their membership with SFMS liability insurance. Because of insurance requirements, members of the GENERAL PUBLIC are NOT invited on this or any DMC program field trips!"*

*World Wide Web site for the DMC is:  
[http://www.amfed.org/sfms/\\_dmc/dmc.htm](http://www.amfed.org/sfms/_dmc/dmc.htm)*

*Willis Mountain Specimen photographs on page 14*

## *From the First V.P.*

*continued from page 1*

The diamonds at the Park occur in the soil and that makes them easy to look for. Some people find them after it rains by walking through the field looking for the bright reflection of a diamond that has been washed clean by the rain. Other people dig in the soil and carefully search through it one shovel-full at a time. You can bring your own tools or rent tools at the Park. Power tools are not allowed, however, the Park periodically plows the diamond field to turn up fresh soil. (See the satellite image at right for a view of the plowed fields of the Park.)

Searching is easy but you will need a combination of luck, patience and a very sharp eye to find a diamond. Most people don't find a diamond during their visit but a few miners have been extremely successful. Every one has fun.

### ***Who Discovered Crater of Diamonds?***

Diamonds were first discovered at this location in 1906 when John Huddlestone found two strange crystals in the soil of his farm. He didn't realize that his farm was right above a volcanic pipe filled with lamproite (a volcanic rock formed from partially melted mantle materials which sometimes contains diamond-bearing rocks known as xenoliths that have been transported up from the mantle).

Huddlestone suspected that his crystals might be diamonds and took them to a local jeweler for assessment. Word of the discovery leaked out and a "diamond rush" began. Soon thousands of people descended upon the Murfreesboro area, however, the Huddlestone farm and immediately adjacent land was the only location with promise of becoming a diamond mine. Why? Because the diamond-bearing pipe was several hundred yards in diameter. There are other volcanic pipes in the area but they have yet to yield more than a few diamonds.

### ***Inspiration from Africa***

The big diamond rushes in Africa occurred in the late 1800's and information about the deposits there was widely published. Prior to Huddlestone's discovery, geologists at the Arkansas State Geological Survey suspected that diamonds might occur in the greenish [peridotite](#) soils near Murfreesboro because they

were similar to the soils above the African [diamond deposits](#). They did fieldwork in the area but did not find any diamonds.

The general public also knew about the diamond rushes in Africa and this fueled excitement about Huddlestone's discovery. One of the large diamond discoveries in Africa was also made on a family farm. The owners of the farm sold out because they could not protect their land from the hordes of diamond hunters. The farmers' name continues today as the name for one of the largest diamond mining companies in the world - De Beers.

John Huddlestone sold his farm for \$36,000 and it was later bought and sold multiple times. It was temporarily worked as a commercial diamond mine. It was not extremely productive and was not reopened after a fire destroyed the plant in 1919. Properties adjacent to the Huddlestone farm were also heavily prospected with some attempts at diamond production, none of which were sustained.

### ***Pay-to-Prospect Mining***

In the early 1950's the property was opened as a public pay-to-prospect mine and in 1951 the name was changed to the "Crater of Diamonds". The State of Arkansas purchased the property in 1972 and began operating it as "Crater of Diamonds State Park." It is still open year-round as a pay-to-prospect mine visited by over 100,000 people per year.

Most visitors do not find a diamond but almost everyone has fun prospecting. Since the park opened in 1972 a little less than 3,000,000 paid visits to the park ("visits" is used instead of "visitors" because many people visit the Park many times) have resulted in about 30,000 reported diamond finds. Most of the diamonds found are very small - too small for cutting into a mountable stone. The 30,000 stones reported have an aggregate weight of a little under 6,000 carats, making the average stone about twenty points (.20 carat) in weight.

The diamonds and other minerals found at Crater of Diamonds State Park are genuine Arkansas minerals. They are not "salted" specimens brought in from other localities to enrich the soil or the collecting experience. Diamonds from the Park have unique characteristics and experienced individuals are able to recognize them.

*continued on page 15*

## Sunshine News



In a recent email from Linda Noble we learned that Thom is recovering nicely from recent surgery.

Franklin Midkiff is dealing with knee problems and hopes to see the Orthopedic Dr. soon. Jean Midkiff had a procedure on her eye and is doing fine.

Please keep these club members in your thoughts and prayers, as well as anyone else who may need a little extra Sunshine.



*Specimens collected on previous trips to Willis Mountain. Submitted by Dave Callahan*



## From the First V.P.

continued from page 13

### Spectacular Diamonds Found At The Park

Although most stones found are small, some spectacular specimens have been found.

The "**Uncle Sam Diamond**", the largest diamond ever found in North America, was found there in 1924. This pale brown, 40.23 carat stone was found in 1924 by W. O. Bassum. It was cut into an emerald-cut gem weighing 12.42 carats which was sold in 1971 for \$150,000.

The "**Strawn-Wagner Diamond**" was found in 1990 by Shirley Strawn. This 3.09 carat stone was cut into a 1.09 carat brilliant-cut gem. It was the first stone to receive a perfect grade of 0/0/0 by the American Gem Society. A photo of the diamond can be seen at right.

A number of beautiful canary-colored diamonds have been found at the Park. The most famous is the "**Okie Dokie Diamond**" found in 2006 by Marvin Culver. This 4.21 carat diamond was featured in a number of television programs and magazine articles.

### Some Not-So-Spectacular "Finds"

The Crater of Diamonds is the only producing diamond mine in the United States and many people who collect minerals or gemstones would like to own a genuine United States diamond. This patronage of the locality gives a small diamond found at the Park a value that is much higher than a diamond of similar size and grade found at almost any other location in the world.

In 2007 a person reportedly purchased a number of diamonds from a mine in India that were similar in characteristics and color to diamonds found at the Park. This person then visited the Park and claimed to "find" these diamonds in the soil of the Park. His intent was to sell them on eBay as "United States diamonds." Fortunately, a small group of mineral experts became suspicious of the "finds" and [documented](#) it as a fraud.

### Why Are There Diamonds in Arkansas?

The occurrence of diamonds in Arkansas continues to intrigue geologists. About 100 million years ago a deep-source volcanic eruption occurred in this area bringing material from the mantle rapidly up to the surface. The

rising magma was rich in gases that expanded to thousands of times the volume that they occupied while under the enormous pressures at mantle depth. This rapid gas expansion produced an explosion as the magma approached the Earth's surface. This explosion blasted a crater and blanketed the surrounding landscape with ejecta.

Within the ejecta were many fragments of mantle rock that were carried up to the surface with the rising magma. These fragments are known as "xenoliths". They contained the diamonds.

Over time the ejecta was weathered and a greenish soil formed above the crater. During the weathering process the least stable minerals were destroyed and the most stable minerals were concentrated in the soil. Diamonds are very resistant to weathering and were thus concentrated in the soil.

Last update of this article: May 3, 2013.

Contributor: [Hobart King](#)

If you decide to give it a try, bring one back for me!

Happy Hunting,  
Jack Curtin



*Rough diamonds from the Crater of Diamonds State Park*

GEM & MINERAL SOCIETY OF LYNCHBURG, VA, INC.

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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



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*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!*