

# GEM & MINERAL JOURNAL

SEPTEMBER 2012 VOLUME 21~ ISSUE 9

Official Monthly  
Publication of the Gem &  
Mineral Society of  
Lynchburg, VA, Inc

[WWW.LYNCHBURGROCKCLUB.ORG](http://WWW.LYNCHBURGROCKCLUB.ORG)

## Presidents Message

Hello To All,

Here we go again!! I have just received word from the Lynchburg Parks & Rec. Dept. that the Club will be moving our meeting location for our October 17<sup>th</sup> Society meeting. Our new assigned meeting location is The Fairview Neighborhood Center at 3621 Campbell Ave. Lynchburg, VA. 24501. For those not familiar with the area, Campbell Ave is the 501 North Business route that is between the U.S. 460 bypass and the 29 Express-way through the middle of town. A landmark across the street is a Citgo Gas & store. Remember this move will not take place until our October 17<sup>th</sup> meeting. Directions will be available at the meeting as well as in our news letter. The P&R Dept. needs to move all Club activities to other locations before they can move all of their

personnel and equipment before remodeling begins. They tell me that the relocation will last for about 18 months, but we will be returning to a newly remodeled facility with new seats for the auditorium.

The Club workshop on August 18<sup>th</sup> was a great success. I would like to thank everyone that came to lend a hand. We packaged over 360 Five Dollar Sluice bags with a nice assortment of gems, minerals & crystals. Also several members jumped in and gave the trailer a good wash job. I must say it looks as good as new, thanks guys. The Water pumps and containers also got a bath and washed away several years of silt & sand build up. The trailer is all loaded with supplies for the Apple Harvest Festival at the Amherst County High School on October 20-21<sup>st</sup>. There will be volunteer sign up sheets at the next two meetings, I hope you will come and join in

*Continued on page 15*

## From the First VP:

Has anyone braved the hot summer weather to do any rock hounding lately? If so, perhaps you took your grandchildren or some neighbor kids along. Did they ask you to identify their rocks? Sometimes it's hard to explain exactly what the science of rock identification is all about. This article written by Andrew Alden, About.com's Guide to Geology sure helps to explain things in a logical straightforward manner. Might help you too.

### **"How to Look at a Rock"**

"People don't usually look at rocks closely. So when they find a stone that intrigues them, they don't know what to do, except to ask someone like me for a

quick answer. After many years of doing so, I hope to help teach you some of the things that geologists and rockhounds do. This is what you need to know before you can identify rocks and give each one its proper name.

### **Where Are You?**

The first thing I ask a questioner is, "Where are you?" That always narrows things down. Even if you aren't familiar with your state geologic map, you already know more about your region than you suspect. There are simple clues all around. Does your area contain coal mines? Volcanoes? Granite quarries? Fossil beds? Caverns? Does it have place names like Granite Falls or Garnet Hill? Those things don't absolutely determine what rocks you might find nearby, but they are strong hints. *Continued on page 11*

## August Meeting Minutes

**Meeting- Wednesday**, August 15, 2012

**Attendance-** 30 members and 9 guests

**Host-**Thank you Pam Klien for tonight's refreshments. For September our hosts will be Jean and Franklin Midkiff.

**On Time Drawing-** Winners were: Nona Haskins, Steve Lenhart, Don McIntyre, Cindy Conner, Darin Lester, Julie Leyzorek-Hare, Kitty McGann, Anne Torning, John Haskins, Bernard Rivera.

**Old Business-** John Haskins: There will be a workshop at Dave Callahan's on Aug. 18 to fill sluice bags, clean out the trailer and prepare for the Apple Festival. If you have specimens to donate please bring them to the next meeting or to a workshop.

The EFMLS Picnic and Rock Swap August 25th in Maryland.

**First V.P.-** Jack Curtin: Dr Lenhart will be presenting information on Sedimentary Rocks for tonight's program. Next month we will have Mark Tinsley, an Associate Geology Professor from CVCC.

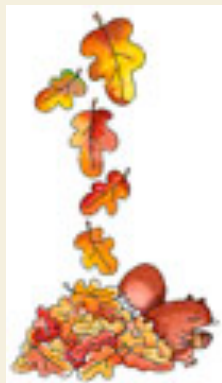
**Second V.P.-**Dave Callahan: Field trips/ Activities: 8/25: DMC Trip to Tenn. gold mine; 8/25: Eastern federation picnic; 9/22: DMC trip to Savannah River in Georgia; 9/22: Willis Mountain from 9-1;  
**Treasurers Report-** Franklin Midkiff: Balance at this time is \$8020.68

**New Business-**Magnetic (or pin on) Name tags will be ordered - cost is \$8.00 each, there will be a sign up sheet at the next meeting.

Tonight we enjoyed a program on sedimentary rocks by Dr. Lenhart, and also our silent auction and specimens for sale by Dave Callahan.

**Minutes submitted by:**

**Brenda Glass, Secretary**



### 2012 ELECTED OFFICERS

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

**Members At Large-**  
Bernardino Rivera &  
Tony Shields

### **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-** Jon Glass  
**Membership-** Thom Noble

# PROGRAMS

For our September program we look forward to having Mark Tinsley, Geology professor at CVCC who will speak to our club. Please join us and lets give Professor Tinsley a warm, GMSL welcome.

Another fabulous program by Dr. Steve Lenhart was enjoyed at our August meeting. The topic this time was Sedimentary Rock. THANK YOU, Dr. Lenhart, for your continued support and and for sharing your knowledge and passion with our club!

*Photo's submitted by Don McIntyre*



## Bench Tips by Brad Smith

More Bench Tips by Brad Smith are at:  
[groups.yahoo.com/group/Bench Tips/](http://groups.yahoo.com/group/Bench%20Tips/)  
 or [facebook.com/Bench Tips](http://facebook.com/Bench%20Tips)

### NEWS ITEMS OF INTEREST

#### INTRO TO FACETING

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Ron Gibbs has a nice presentation on faceting that is particularly well illustrated. It's from a seminar he gave at the Michigan Geology and Gemological Society.

<http://theimage.com/faceting/>

#### FREEFORM GEM CARVING

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Have you ever wondered how to carve and polish a freeform gemstone? Hans Meevis, a jeweler from Saint Martin, has a nicely done tutorial on his work with a 10 ct Aqua. It's definitely worth a read. Enjoy!

<http://www.ganoksin.com/borisat/nenam/freeform-gem-carving.htm>

*Continued on page 10*





## FIELD TRIP REPORT...

### UP COMING FIELD TRIPS

#### Contact Information for Field Trips

David Callahan,

Field Trip Chairman

Home phone: 540-297-1853

Cell Phone- 540-874-5201

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

**OFFICIAL COMBINED MINERAL COLLECTING FIELD TRIP  
THE GEM AND MINERAL SOCIETY OF LYNCHBURG, VA INC. &  
THE ROANOKE VALLEY MINERAL & GEM SOCIETY INC,  
ALONG WITH MANY OTHER AREA GEM AND MINERAL CLUBS  
KYANITE MINING CORP.----ANNUAL FIELD TRIP**

**September 22, 2012 ~ 9:00 AM to 1:00 PM**

*If the mine is working, we may have to limit our collecting areas.*

**Sign up required,** call me, email me or sign-up at the meeting. All club field trip leaders send me a list of your total collectors so that I can compile a list and forward to the mine management by 9/20/2012. *There is a total limit of 100 collectors from all clubs for this event.*

**SAFETY:** Everyone should arrive at the office parking lot between 8:30AM and no later than 8:45AM for the required safety briefing. Each club field trip leader, or his appointed replacement, will act as safety observer and will be expected to be on the lookout for and correct all safety infractions from any collector. 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 COLLECTING.*

**DRIVING FROM ROANOKE AND LYNCHBURG AREA:** From Roanoke, follow US

460 East to Lynchburg, to the Sheetz Station on US 460 and Rt. 811 in New London. Continue on the US 460 East by-pass around Lynchburg thru Appomattox and take Rt. 24 North to the end at Us 60 at Mt. Rush. Continue on US 60 East to Sprouses Corner. Turn right on US 15 South and drive 4 miles to Willis Nt. Plant Road. Turn left and stop at the stone mine office and park out of the way as not to block traffic. Allow 1 1/4 minimum hour driving time from New London west of Lynchburg.

**GENERAL LOCATION AND ASSEMBLY TIME:** Everyone will meet at the mine office for sign-in and safety instruction, be there between 8:30 and no later than 8:45 AM. The mine is located north of Farmville, VA on Rt. 15 North. Proceed from US 460 North on Rt. 15 for a little over 12 miles to Willis Mt. Plant Rd. The stone mine office is on the right. If you approach from Rt. 60 at Sprouses Corner, then go south on Rt. 15 for 4 miles to Willis Plant Rd. and

*Continued on page 5*

**Field Trip Report...** *continued from page 4*

the office will be on your left. Wait in the parking lot and do not block traffic. Many trucks may be using the road. While you're waiting, be sure to enjoy the beautiful blue kyanite boulder in the front yard from the old closed Baker Mountain.

**COLLECTING:** Willis Mountain is what's known as a monadnock. The kyanite exposure resisted weathering and, as the surrounding area was eroded and weathered away, the mountain outcrop was left standing. This is very much like the famous Graves Mountain kyanite mine in Georgia. The center of the mountain has been mostly mined away. We should be able to find plenty of white kyanite blades in the massive kyanite quartzite; pyrite; quartz; hematite with some iridescent red mica, apatite and possibly some blue kyanite and pale green trolleite. Some of the white kyanite here fluoresces a beautiful light blue as well as some of the quartz.

**EQUIPMENT:** Standard quarry gear is required such as hard hats, safety glasses, good strong boots, long pants, gloves, hammer and chisels, wrapping paper, buckets, food 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 children must be signed for and supervised by an adult.

**WEATHER:** The trip will be cancelled in case of hard rain or thunderstorm. Call to confirm if there is any question.

**CONTACT:** Dave Callahan, information at the top of page 4.



**DMC Program of the  
SFMS Field Trip Committee  
An Official Field Trip of The Lowcountry  
Gem & Mineral Society  
of Charleston, SC (HOST)  
An Official Field Trip of the  
(GMSL and RVMGS)**

**Meeting time** 10:00 AM

**Saturday, September 22, 2012**

Savannah River Agate, Girard, GA. **WHAT:** Savannah River Agate, fossils, and micro-minerals

**WHERE:** River Road outside of Girard, GA.

**WHEN:** Saturday September 22, 2012

**TIME:** Meet at 10:00 AM at the Girard city Post Office on Hwy. 23. We will leave promptly at 10:30 A.M.

**CHILDREN AND PETS:** Children and pets are welcome, but need to be supervised as we will be hunting on a dirt road.

**COLLECTING:** This site is part of a public right-of-way so we will be collecting in this dirt road and road cuts for the famous Savannah River Agate/Chert. This material is actually a conglomeration of agate, jasper, chert, and opalite all mixed together to form a layered specimen that will tumble or cab into beautiful display pieces. This rock occurs as black and brown mottled agate and in a large range of pastel colors from greens to yellows to violets. There are also micro-minerals found in the agate/chert vugs such as wavellite, hematite, druzy quartz, barite, hyalite opal, and many others. You may also find scarce fossils of Oligocene-age deposits from 30-35 million years old such as bryozoans, gastropods, echinoids, and other less abundant fossils such as diatoms, barnacles, and tortillas.

*Continued on next page*

**Field Trip Report...** *continued from page 5*

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**BRING:** A rock hammer and scratching tool. Dig if you want, but fill in the holes after finishing. Chisels and a sledge hammer are needed to find micro-minerals. More importantly, you will need eye protection (face shield would be best) and long heavy pants as this agate can act like shrapnel when cracked with a rock hammer or sledge hammer. Bring a lunch, plenty of fluids, bug spray, sun screen, a hat, gloves, sturdy shoes, and lots of 5 gallon buckets.

**SPECIAL CONDITIONS:** Do NOT leave the road cuts. Please stay off of private property. Please do not go to the collecting site ahead of the group!

**DIRECTIONS:** From I-20 take Hwy. I-520 (west of Augusta) south to Hwy. 56 and travel south. Go through McBean (do not take Hwy. 56 Spur). Turn left on Hwy. 23 to Girard and meet at the city Post Office on Hwy. 23 at 10:00 A.M.

**CONTACT:** Larry Moss at (843) 225-6931 for more information. Email: [jorel611@yahoo.com](mailto:jorel611@yahoo.com)

Or...David Callahan, GMSL and RVMGS field trip leader [dbcall1@aol.com](mailto:dbcall1@aol.com) or 540-297-1853



**Our Potential October Field Trip**

I am trying to set up a local quarry field trip on October 27, 2012, but I have not been able to confirm the trip or the date. Please keep this date open and as soon as it has been confirmed, you will be notified by email broadcast, the October newsletter or at the October meeting.



*Photographs from the August 18th workshop at Dave Callahan's home. Thanks to all who came out to help, and thanks, Dave for submitting the pictures.*





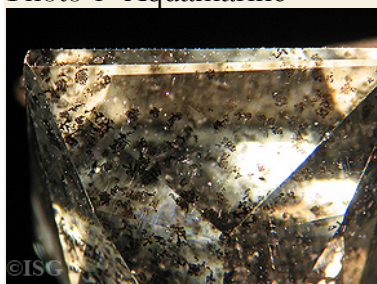
**Cuneiform and Exploded Snowballs!  
More fun with gemstone inclusions**

<https://mail.google.com/mail/u/0/?hl=en-GB&shva=1#inbox/1390dc48914c9a28>

*Article submitted by John Haskins*

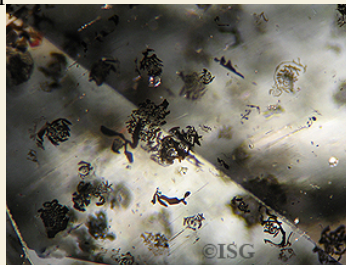
For a lot of us in this business, a large part of the fun of gemology is the study of gemstone inclusions. Not the technical stuff...the fun stuff. The weird, unusual, strange and just plain bizarre. Below are a few of the latest additions to our gemstone photo collection of strange and unusual inclusions. As always, we turned to the PHOTOATLAS of inclusions by Koivula and Gubelin to confirm the identity of these. For our specimens today we relied on Volumes 2 and 3. These books are an absolute must for any gemologist, no matter what part of this industry you work with. As John Koivula wrote in my Volume 3 autograph: "to Robert, Inclusions are small, but they answer big questions." Absolute truth from the most highly respected authority on gemstone inclusions. You can find his books at this link: [PHOTOATLAS](#).

Photo 1- Aquamarine



This specimen came into the ISG office in a parcel of aquamarine study specimens some time ago and it took a while to realize we had something weird in the mix. As you can see in the 10x image, the stone was full of black inclusions that looked more like a heavily included diamond than the usual aquamarine. This stone appeared to have had someone hold a pepper shaker over it and just shower it with black flakes. But it got stranger with high magnification.

Looking at the stone under 30x magnification photo 2



it almost appeared that someone from the Far East had written secret messages inside the stone as the writing first looked like some ancient Chinese writing, or perhaps some ancient cuneiform writing. Or just maybe... this was a secret message from a previously unknown and super secret aquamarine mine hidden somewhere out on a remote Tibetan desert! Could it be?

Fortunately, the PHOTOATLAS Vol. 2 was close at hand and reviewing page 317 relieved us to find that we have a natural aquamarine with ilmenite inclusions...and a bunch of them. After a further search, we found one of our fellow World Gem Society members has a wonderful specimen for sale on Ebay. Here is the link to that offer: [Aquamarine with Ilmenite](#). Below you can see a wide shot panel of these unusual inclusions at 60x. A great collectors piece for anyone who loves to study inclusions. And a great demonstration of the importance of the PHOTOATLAS to anyone doing gemology in today's market. But there is more.....



This past week we were asked to identify the sapphire at left for origin and any treatments. Once again a simple review turned into a fun learning experience. Yes, it is natural, and yes it is heated. But the

*Continued on page 9*

*Upcoming Events*

SEPTEMBER 2012

**Sept. 15-16-** 47th Annual Rock and Mineral Show and 62nd annual EFMLS Convention sponsored by the Central Pen. Rock and Mineral Club. Zembe Shrine, 3rd and Division Sts., Harrisburg, PA.

**EFMLS Annual Meeting Friday, Sept. 14.**

**Sept. 22-23-** 48th Annual Atlantic Coast Gem, Mineral & Jewelry Show hosted by the Gem Cutters Guild of Baltimore. Howard County Fairgrounds, MD. 32 at I-70; West Friendship, MD.

**October 19-21-** SFMS Annual Meeting- Details begin on page 9 of the August issue or the SFMS website <[www.amfed.org/sfms](http://www.amfed.org/sfms)>

**Oct. 26-28-** Treasures of the Earth Gem, Mineral & Jewelry Show; Rockingham Co. Fairgrounds, Harrisonburg, VA. [www.toteshows.com](http://www.toteshows.com) for details.

SUN	MON	TUES	WED	THURS	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14 <i>EFMLS</i>	15 <i>Convention Gem show</i>
16 <i>Gem show</i>	17	18	19 <i>Meeting 7PM</i>	20	21	22 <i>Field Trip</i>
23	24	25	26	27	28	29
20						

**IMPORTANT ~ MEETING LOCATION CHANGES:**  
We will be moving our meeting location beginning with the October 17, 2012 meeting.

**September 19, 2012 MEETING ~ 7:00PM**

Lynchburg Parks and Recreation  
301 Grove St, Lynchburg, VA 24501  
(CURRENT LOCATION)



**OCTOBER 17, 2012 MEETING ~ 7:00PM**

**Fairview Center**

(A division of Lynchburg Parks and Recreation)  
3621 Campbell Ave., Lynchburg, VA, 24501

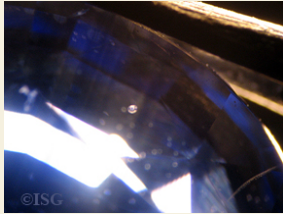




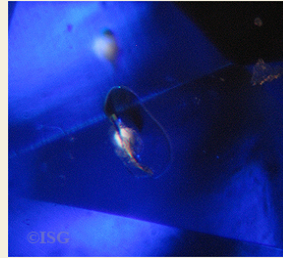
## Cuneiform and Exploded Snowballs!

*Continued from page 7*

indicator of the heat treatment turned out to be a "photo op" all its own. Why? Snowballs! And not just snowballs....exploding snowballs. When sapphires are heated high enough to cause color alteration, certain inclusions "explode" (Photoatlas, Vol 3 pp 314) causing not only the discoid fractures you will see, but also the snowball looking remnants left by the original inclusion that exploded. The result from a technical view is verification of high heat treatment of the sapphire. From the romantic view....we have exploded snowballs in sapphire due to heating. And as always, the romantic is far more fun than the technical. But let's take a look as both sides should benefit from these images....



At 10x magnification the "exploded snowball" appears to be just a tiny white inclusion in this sapphire. The color bands along the crystal growth faces are quite apparent in the image above, but in this side lighted view the banding is not so apparent. But the small white inclusions (there are several in the stone) start showing up quite nicely under 10x. At 90x at right the snowball and discoid fracturing is easily visible. This is a very strange inclusion when you first see it as the first thing that comes to mind is precisely the name from the Photoatlas....**snowball**. And while some of our Tuesday night group thought it looked a lot like the planet Saturn (which it sort of does) the snowball image is unmistakable. An image very much like this one is on page 315 of the Photoatlas Vol 3.



Here is a look at yet another exploded snowball in this sapphire. All are a bit different in size and shape except for the image below. In this image we all decided that these look like space ship starfighters (the Tuesday night ISG Discussion Group has a great imagination), but after going back and looking at this image and the actual specimen we realized that this is a single exploded snowball being reflected in mirror image off of facet junctions, and not star fighters inside this sapphire.

And finally is this large fracture surrounding an exploded snowball that caused the fracture to form. This is a great shot and demonstrates the violence that occurs inside of gemstones during high heat treatment. While we found no indication of anything other than heat treatment in this stone, the high heat was most likely used to try to get the blue color to be more uniform and not so banded in this stone. Beautiful sapphire on its own merits, but when we consider the beauty of the inclusions inside it makes this gemstone even more desirable in our view.

If there is one thing that we as an industry need to remember its that the desire to own gemstones is based on beauty and romance. And even in included gemstones, beauty can be found in many ways and places. Sometimes we get caught up too much in the technical and lose our vision of what is really important when it comes to gemstones.

Consumers never lose that vision. We should not either.

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**Bench Tips...***continued from page 3*

**BenchTips for the Month**  
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**RAISING A CABOCHON**

When a cabochon sits too low in a bezel, the bezel hides a lot of the stone. Solution is to either sand down the bezel height or boost up the stone. Question is what do you use to elevate your cab ?

I was taught to use fine sawdust but now think that there's a better solution, especially for use in rings. I reason that rings will frequently get wet, which would cause the sawdust to swell in size and push the stone against the bezel. Then when the sawdust dries out, the stone would be a little loose. In any case, I now prefer pieces of plastic sheet to boost up my stones. Pieces are readily available from product packaging or from old credit cards. I just cut a piece to loosely fit the bezel and drop in the stone (with some dental floss) to check it's height.

**TIP FOR A TRANSPARENT CAB**

When bezel setting a transparent cabochon in silver, I worry that the silver will tarnish under the stone and will destroy the brilliance of it's color & pattern. So I take one extra step before setting the stone. I place a piece of thin silver Mylar plastic under the stone to act as a mirror that will never tarnish.

This Mylar is readily available in craft and gift wrap stores, or in a pinch from a party balloon supplier. You may want to experiment with using colored or patterned Mylar (i.e. diffraction pattern) under some stones.

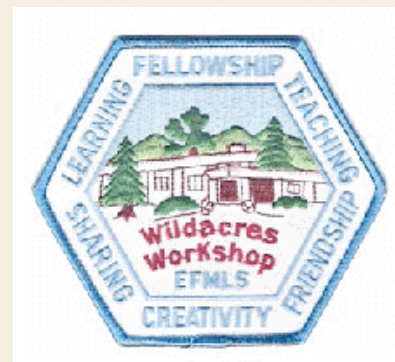
**Wonderful Wildacres**

*by Steve Weinberger, Workshop Committee Chairman  
reprinted from September 2012 EFMLS News*

Our final session for 2012 is just around the corner.. in fact, so close that I'm already starting to pack my teaching gear. We have a wonderful lineup of classes and teachers for this september session, and what looks like a wonderful mix of new and returning participants.

The Wildacres retreat is an extra special place. Set off the Blue Ridge Parkway on a private mountain of its own, the campus features wonderful views of the mountains, clean air and the sounds of nature and people having fun. Missing are the sounds of the city--blaring radio and TV noise, blaring horns, or angry voices.

If you've never been to an EFMLS Wildacres Workshop before, now is the time for you to seriously consider making time to attend in 2013. Although we will not receive our dates from the Wildacres Foundation before November, we encourage you to set aside a week in either spring or fall (or both) to come to North Carolina with us and experience the experience of an EFMLS Workshop for yourself. We'll have information about our dates, class offerings and guest speakers in the EFMLS News just as soon as we have the information this fall.



## From the First VP:...Continued from page 1

This step is something you can always keep in mind, whether you're looking at street signs, stories in the newspaper or the features in a nearby park. And a look at your state's geologic map is intriguing no matter how little or how much you know.

### **Make Sure Your Rock Is Genuine**

Make sure you have real rocks that belong where you found them. Pieces of brick, concrete, slag and metal are commonly misidentified as natural stones. Landscaping rocks, road metal and fill material may come from far away. Many old seaport cities contain stones brought as ballast in foreign ships. Make sure your rocks are associated with a real outcrop of bedrock. There is an exception: many northern localities have lots of strange rocks brought with the Ice Age Glaciers. Many of the state geologic maps show surface features related to the ice ages. Now you will start to make observations.

### **Find a Fresh Surface**

Rocks get dirty and decay: wind and water make every kind of rock slowly break down, the process called weathering. You want to observe both fresh and weathered surfaces, but the fresh surface is most important. Find fresh rocks in beaches, road-cuts, quarries and stream-beds. Otherwise, break open a stone. (Don't do this in a public park.) Now take out your magnifier. Find good light and examine the rock's fresh color. Overall, is it dark or light? What colors are the different minerals in it, if those are visible? What proportions are the different ingredients? Wet the rock and look again. The way the rock weathers may be useful information—does it crumble? Does it bleach or darken, stain or change color? Does it dissolve?

### **Observe the Rock's Texture**

Observe the rock's texture, close up. What kind of particles is it made of, and how do they fit together? What's between the particles? This is usually where you may first decide if your rock is igneous, sedimentary or metamorphic. The choice may not be clear. Observations you make after this should help confirm or contradict your choice.

*Igneous rocks* cooled from a fluid state and their grains fit tightly. Igneous textures usually look like something you might bake in the oven.

*Sedimentary rocks* consist of sand, gravel or mud turned to stone. Generally they look like the sand and mud they once were.

*Metamorphic rocks* are rocks of the first two types that were changed by heating and stretching. They tend to be colored and striped.

### **Observe the Rock's Structure**

Observe the rock's structure, at arm's length. Does it have layers, and what size and shape are they? Do the layers have ripples or waves or folds? Is the rock bubbly? Is it lumpy? Is it cracked, and are the cracks healed? Is it neatly organized, or is it jumbled? Does it split easily? Does it look like one kind of material has invaded another? Some kinds of structural features, like concretions, folds, ripples and slickensides, appear in this gallery of geologic features and processes.

### **Try Some Hardness Tests**

The last important observations you need require a piece of good steel (like a screwdriver or pocket knife) and a coin. See if the steel scratches the rock, then see if the rock scratches the steel. Do the same using the coin. If the rock is softer than both, try to scratch it with your fingernail. This is a quick and simple version of the 10-point Mohs scale of mineral hardness: steel is usually hardness 5-1/2, coins are hardness 3, and fingernails are hardness 2.

Be careful: a soft, crumbly rock made of hard minerals may be confusing. If you can, test the hardness of the different minerals in the rock. Now you have enough observations to make good use of the quick rock identification tables. Be ready to repeat an earlier step.

### **Observe the Out Crop**

Try to find a larger outcrop, a place where clean, intact bedrock is exposed. Is it the same rock as the one in your hand? Are the loose rocks on the ground the same as what's in the outcrop? Does the outcrop have more than one kind of rock? What is it like where the different rock types meet each other? Examine those contacts closely. How does this outcrop compare to other outcrops in the area? The answers to these questions may not help in

*Continued on page 15*



## Hear Here, Part II

**By Ellery Borow, Safety Chair,**

*reprinted from September 2012 EFMLS News*

Safety Matters articles are not usually cutting edge material. Something new, however has come to my attention concerning hearing loss. The June 2011 issue of the EFMLS NEWS included a Safety Matters article titled "Hear Here!" This article described the various noises rockhounds encounter and what one might expect to expect for hearing loss resulting from long term exposure to such noises. The late breaking news in hearing loss is a recent study indicating that even moderate noise levels may be harmful.

In the June 16, 2012 (Volume 181, Number 12) issue of Science News, there is an article by Rebecca Cheung titled "Moderate noise may harm hearing." The article reports on a study, published online in the May 15 issue of Nature Communications, which finds that constant low-level noise might cause problems with hearing. The study found that noise which has usually been deemed safe for human ears could in fact produce impairment in one's perception of sound.

Brief exposure to sound levels of around 100 decibels cause inner ear damage. Exposure to constant levels of noise greater than 85 decibels, also cause inner ear damage and loss of hearing. Until now, however, the impact of exposure to chronic low level sounds has not been well studied.

The new study focused on long term exposure to sound levels around 65 decibels, which are levels toward the high end of normal human speech. Following the two months of testing, subjects were found to have fewer nerve cells used in the detection of sharp sounds. Subjects also did not perform as well on listening tests compared with those not exposed to the low level sounds.

Coauthors of the study, Michael Merzenich, a neuroscientist at the University of California, San Francisco, and Xiaoming Zhou of East China Normal University in Shanghai, also made maps of rat brain's auditory cortex, indicating the loss of nerve cells that respond to highly pulsed sound patterns.

While this study is new and will no doubt be subject to much review and critique, it does give one pause for thought. How much noise does it take to be labeled toooooo much noise? My hunch is that, having spent much of my working life around LOUD noises, additional studies may come to validate the detrimental nature of noises we now consider safe.

What is one to do in the here and now with low level noise? Because most hearing loss is gradual, indeed - very gradual, it behooves one to examine the noises in their hobbies and seriously consider acquiring and using hearing protection. Numerous lapidary and even some jewelry making operations produce noises greater than 65 decibels. Personally I like my hearing and want to keep it as long as I can. I plan on redoubling my effort to use hearing protection. Those who have seen my kitchen will attest to the fact that I even have pairs of ear plugs, dangling from various kitchen cabinet knobs, to utilize when needed with those loud kitchen noise making machines. I like my hearing that much. I hope you do to.

For this month's safety refresher, I would once again like to refer you to Bill Klose's fine article on hearing safety in the March 2007 issue of the EFMLS News, which if you do not happen to have is available on the EFMLS website at [www.amfed.org/efmls](http://www.amfed.org/efmls). Click on the "Newsletter" tab and then download the issue. It will arrive as a pdf file.

Lets all once again raise our ear protectors to a rousing cheer of "Hear Here!"

**Burning Rocks** by *Jessica Dixon,*

reprinted from June 2012 "Rock Talk"

A 43 year old mother required an unexpected trip to the hospital in May after a trip to the beach with her family.

The rocks were picked up by Lyn Hiner's children during a visit to Tresles Beach in California. The kids thought they looked interesting, picked them up, and gave them to mom. Lyn put them in her pocket, where they remained as they went back to their home.

Later in the day, while at their home, Lyn felt a hot sensation on her leg. She soon discovered her pants were on fire. The fire caused second and third degree burns on her legs.

The fire seems to have been started by the rocks picked up by her children. The rocks had been covered in phosphorus, a substance that can spontaneously com-bust when out of water.

It is not known where these rocks may have come from. The beach where they were picked up is close to Camp Pendleton Marine Base as well as San Onofre Nuclear Generating Station. Both locations deny any connection to the mysterious rocks.

If there is a lesson to be learned here, it is safe to say it is be careful what you are picking up and putting in your pocket. It could very well burn you later.

**Sources:**

<http://www.utsandiego.com/news/2012/may/18/hot-rocks-speculation-catches-fire/>

<http://gma.yahoo.com/rocks-found-beach-mysteriously-catch-fire-womans-pocket-080801909--abc-news-topstories.html>

<http://www.freerepublic.com/focus/f-chat/2890297/posts>



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***Mineral display showcases for sale***

Two glass retail cases (48 inches long, 40 high, 22 deep) with glass on four sides and working fluorescent lighting. Three wood cases (roughly 48 inches high, 38wide, and 12 deep) with sliding glass doors. One rotating display case (Timex watch store display), 72 inches high. One wall-mounted case (36 inches wide, 36 high, 4 deep) with ten glass shelves. Walnutport, PA area. Contact Rose Lorah at 610, 767-4577.

## Rock Raiders

### Mini Miners Monthly Back to School Issue



Summer is not yet over, and there is still a lot of time to get in the field and dig for mineral and fossil specimens. But fall is coming soon, and in September many of our Mini Miners will be going into 5th or 8th grades. In many school districts, 5th and 8th grades are the years that you will study rocks and minerals in science class. In order to get you started before the school year actually starts - and to help get you ahead of your class - this expanded issue of Mini Miners Monthly includes most of what you will need to know in your mineral classes.

Can you list all of the physical properties that you will use to identify unknown minerals in the laboratory? They are here in this issue. Many of our regular readers have started to look forward to the poetry, artwork or articles that Emma Fajcz contributes to Mini Miners. Her work will return next month with a wonderful article "Interview with Floyd Gressel, Mineral Collector." Much of the information in this issue will be new to most of our readers. Some of you may say, "Hey, didn't I see that page before?" Yes, we have decided to repeat a couple pages from past issues. Our goal is to present as much information as possible to get you started on a GREAT year studying minerals in school. That is why this issue is 17 pages long - a full 5 pages longer than the usual issue. So, enjoy. Learn. Use this issue as a guide to look closely at the specimens in your collection. Learn how to identify unknown mineral specimens. You are well on your way to becoming a mineralogist!!

*Reprinted from Mini Miners Monthly, volume 6, Np. 8, August 2012*

*Mini Miners Monthly can be downloaded by visiting the website or clicking on the link to the right.*

***Mini Miners Monthly is a free newsletter available online. There are many fun learning activities and "rock facts" directed at the Rock Raider age group. You can check it out by going to the link at the bottom of the page.***

To retrieve this issue of *Mini Miners Monthly*, please click the following link for the PDF file.

**[2012 AUGUST ISSUE LINK](#)**

Once the PDF file downloads, you can then save it to your computer for future use.

Thank you and best wishes to you all for a very successful year of mineral collecting.

Most sincerely,

Darryl

*aka Diamond Dan*

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## Presidents Message... *continued from page 1*

the fun. Details will be announced at the meetings and in our newsletter.

The gas powered 14" cut off saw has been repaired and we are in the process of buying a good diamond edge blade for it. We will use this to break down rocks that are too large to fit in the vise on the 24" slab saw. This will give us a chance to use some of the large rocks we have for making bookends, candles etc. Speaking of candles, Dave Callahan has ordered some oil containers that we can mount on slabs to make candles similar to the first run we made several years ago. We will need to have some help at upcoming workshops to cut, drill & attach containers to produce the finished candles to sell at the Apple Harvest Festival. Come join us, it's a good way to hone your lapidary skills. That's all for now, I hope to see you at our September 19<sup>th</sup> meeting.

"Leave No Stone Unturned" (Euripides)

Keep Looking Down,

John Haskins

## From the First VP... *Continued from page 11*

deciding on the right name for the rock, but they point to what the rock means. That's where rock identification ends and geology begins.

### **Getting Better**

The best way to take things further is to start learning the most common minerals in your area. Learning quartz, for instance, takes only a minute once you have a sample. A good 10X magnifier is worth buying for close inspection of rocks. It's worth buying just to have around the house. Next, buy a rock hammer for efficient breaking of rocks. Get some safety goggles at the same time, although ordinary glasses also offer protection from flying splinters. Once you've gone that far, go ahead and buy a book on identifying rocks and minerals, one you can carry around. Visit your nearest rock shop and buy a streak plate—they're very cheap and can help you identify certain minerals.

***At that point, call yourself a rockhound. It feels good."***

So now we know a little more about our beloved hobby, Happy Hunting! ~ Jack

## Executive Committee Meeting Minutes:

Wednesday September 5th, 2012.

### **President John Haskins:**

- Brenda Glass will not be able to fulfill the Secretary position for next year. We are seeking volunteers who may be interested in serving.
- Oct. will be our first meeting at the Fairview center, due to renovations to our current location.
- Due to our move in Oct, our annual auction will be postponed to early 2013.
- Learning workshop scheduled for 9/29, at Dave Callahan's. Open to any member who would like learn to use the equipment and make something for themselves.

### **First VP Dave Callahan:**

- Our DMC Trip will be May of 2013, and we will start planning and looking for volunteers soon.
- Tables are available at the Roanoke Show for anyone wishing to sell- contact Dave for details.
- Roger Griesenger looking for local minerals for a 6th grade program. Dave Woolley will take care of this.

### **Membership Chair Thom Noble**

- Now taking care of the roster and new membership information.

### **Second VP Jack Curtin:**

- Speaker for our Sept. meeting will be Mark Tinsley, Geology professor from CVCC.
- Working on a program demonstrating our lapidary equipment for the near future.

### **Treasurer Frank Midkiff:**

- Balance remains unchanged from last meeting.

### **Newsletter Editor Natalie Darling:**

- Proposed we organize future scholarships for club members toward the cost of Wildacres or William Holland Workshops. We will be working on a list of qualifications.
- Donations to JMU and RU geology departments will be made in the amount of \$250.00 for each.
- Meeting was adjourned.

Natalie Darling, Editor  
211 Chesterfield Rd.  
Lynchburg, VA 24502



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.



**NEW MEETING LOCATION**  
*beginning with our  
October 2012 meeting-  
Please see page 8 for details.*

**GEM & MINERAL SOCIETY OF LYNCHBURG, VA, INC.**

[WWW.LYNCHBURGROCKCLUB.ORG](http://WWW.LYNCHBURGROCKCLUB.ORG)

### **Things *YOU* can do for your club this year:**

- 1. Call Someone you haven't seen at meetings lately**
- 2. Volunteer to present a program.**
- 3. Send your editor some news.**
- 4. Come to each meeting and bring a guest, and or a member who cannot drive.**
- 5. Come to the meeting ready to help others learn and allow others to listen.**

*Re-printed from Rock Buster News, August 2012*

