

# GEM & MINERAL JOURNAL

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

APRIL 2016

VOLUME 25~ ISSUE 4

## President's Message:

Hello To All,

Spring has sprung and so have the allergies, colds and Flu. Please remember to keep your hands washed and good luck. On a lighter note I received an E-mail from the EFMLS Region IV V.P. Jean Charsky, announcing there will be a Region IV pot luck picnic and rock swap/sale on June 18<sup>th</sup> 2016 sponsored by the Southern Maryland Rock & Mineral Club. More details will be forthcoming at the April-June meetings as well as in our news letter, I hope you can attend and show your support for our Club as well as the EFMLS. I also received an E-mail from Dr. Steve Lenhart about a sneak peak at the almost finished new Museum of the Earth Sciences at Radford University on April 23<sup>rd</sup>.

There will be details and directions at the April GMSL meeting. This is a once in a life time special invitation and I hope you will attend.

I received a voice mail from Laurine of the Altavista Chamber of Commerce today, and she wants to know if we will be attending the Uncle Billy's Day Festival this June? I think this is going to be a decision for the Society to make. We will discuss this at the April meeting. Things are looking good for future field trips in the coming months, Dave Callahan has been working hard to secure some new places for collecting. I hope you all will be available to make these successful Field Trips.

That's all for now. I hope to see you at the April 20<sup>th</sup> meeting.

Keep Looking Down,  
John Haskins

## From the First V.P.

Greetings All,

It seems like Ole Man Winter is finally losing his grip on us. About time, huh? Sure would like to feel temperatures the calendar says should be coming our way. Have you heard the latest Virginia geological news? Yes, Dr Steve has his museum coming along rapidly at Radford, but we have still more news. Nelsonite has been declared our official Virginia State Rock. For sure. An article giving details follows, as well as another article describing Nelsonite for those of us less familiar with it.

<http://wtop.com/virginia/2016/04/nelsonite-to-become-virginias-official-state-rock/>

RICHMOND, Va. (AP) — Virginia will soon have an official state rock thanks to a group of community college students.

The News & Advance reports (<http://bit.ly/1RDBm3O>) Nelsonite, named after Nelson County, officially will become the state rock July 1. Gov. Terry McAuliffe signed the bill into law Friday.

Michelle Stanislaus and her classmates at Piedmont Virginia Community College worked to help convince legislators to name Nelsonite the state rock.

The project was collaboration between PVCC political science and geology classes.

The newspaper reports the speckled tan, black and white rock was mined near Piney River and other areas in the 1900s as a source of both titanium used in paint pigments and steel alloys, as well as calcium phosphate used in artificial teeth and agricultural fertilizer.

Information from: The News & Advance, <http://www.newsadvance.com/> continued on page 15



## March Meeting Minutes

**Meeting:** Wednesday, March 16th, at 7:00PM

**Attendance:** 40 members

**Host:** Jean and Franklin Midkiff were hosts for the March meeting, Pam and Eric Routon will host the meeting in April.

**On Time Drawing Winners:** Bill Livingston, Deak Childress, Mary Childress, Thom Noble, John Stevenson, Gabby Routon, Siglinde Allbeck, Pam Routon & Jean Midkiff.

**50/50 drawing winner:** Rebecca Couture

**President - John Haskins-** NewBusiness: Announced the club has purchased a collection from an estate and items will be available for sell to members at upcoming auctions.

**First VP:** Jack Curtin- announced Dr. Steve Lenhart will open Radford Rock Museum on April 23, 2016. He will contact Dr. Lenhart to arrange a possible field trip and private showing for club members.

**Second V.P. – Dave Callahan:** Upcoming field trips: 3/26: Faber Mine; 4/23: American Rutile; Dave also encouraged group to watch the series “Great Human Race” in which the star of the show took classes from his brother Errett Callahan.

**Treasurer:** Frank Midkiff- the current balance of \$5477.90

**Program:** A video presentation  
**Minutes submitted by Linda Noble, Secretary**

Walter  
Baumgardner  
from  
Leonardtown, Md

Jewel  
Bolakas from  
Altavista,  
VA

### 2016 ELECTED OFFICERS

**PRESIDENT - John Haskins**  
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**Second Vice President**  
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[DBCALL1@aol.com](mailto:DBCALL1@aol.com)

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**Treasurer - Frank Midkiff**  
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[midkiffsm1@gmail.com](mailto:midkiffsm1@gmail.com)

**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

The program for our March meeting was a video. No information is available at this time on the April program. Please join us on Wednesday, April 20, 2016 at 7:00PM.

## BenchTips by Brad Smith

"Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" & "Broom Casting for

### GRIPPING SMALL DRILLS

Drilling small holes can be a problem. With drills that are less than 1 mm (18 gauge or .040 inches), some chucks will not tighten down well enough to hold the drill securely.

The problem is easily solved in either of two ways - with a chuck adapter or by buying your small drills with a 3/32 inch shank size. Either way you have a large shank to be gripped in your drill press, Foredom or Dremel, so changing bits is fast and easy.



### PRE-MADE BEZEL CUPS

As a general rule of thumb I assume it's going to take me 15 - 20 minutes to make a bezel for an ordinary cabochon, so for some projects buying pre-made cups can save a lot of time. But if you go this route, keep in mind three things. First, try to get cups made from fine

silver, not sterling. Fine silver is softer and burnishes over the stone more easily.

Second, you may have trouble matching the shape and size of the stone with the shape and size of the bezel cup. Purchased cups can only be found in a limited number of standard sizes. You may have to adjust your choice of gemstone to match the cup. The other consideration is that pre-made cups often have fairly low side walls. While these are fine for low-dome stones, they're not dependable for stones with steep side walls.

Lastly before setting, check the fit of your gemstone in the cup, particularly around the bottom. The bottom corners of a stamped cup are much more rounded than a bezel you would fabricate yourself. This causes a problem with stones that have a sharp edge around the bottom. Burnishing the bezel over one of these stones will place a lot of stress on the stone and may cause it to crack. To avoid this, I round off the bottom edge of the stone with a diamond file (or use sandpaper on soft stones).



## FIELD TRIP REPORT...



### COMBINED MINERAL COLLECTING FIELD TRIP

**THE GEM AND MINERAL SOCIETY OF LYNCHBURG, VA, INC.  
THE ROANOKE VALLEY MINERAL AND GEM SOCIETY, INC.**

**Saturday, March 26, 2016  
OLD FABER MINE, ALBEMARLE COUNTY, VA.**

We had a pretty good turnout for our March 26<sup>th</sup> trip to the old lead mine in Albemarle County. There were 13 members attending about equally divided between the two clubs. Bill Livingston and I were the only people that had been there before so the experience there was new to all others. Even Gracie, age 6 had a great time so that was quite an age spread from 82 to 6. The weather was dry, a little cool but very pleasant so no bugs or other critters were un-earthed to my knowledge. Everyone found some examples of the

major minerals present I believe. That would be shiny silvery galena (lead), shiny dark red to black sphalerite (zinc) and white to purple fluorite. Also present were milky quartz, white calcite and occasional mica, pyrite and garnet.

This is a beautiful site and relatively untouched since the early 50's when an evaluation was made to determine the feasibility of re-opening the mine. It was determined to have no economic value in today's market....so there is sits in silence for us to enjoy today thanks to a compassionate land owner.

Contact Information  
for Field Trips  
David Callahan,  
Field Trip Chairman

Home phone: 540-297-1853

Cell Phone- 540-874-5201

E-mail [dbcall1@aol.com](mailto:dbcall1@aol.com)

### APRIL FIELD TRIP

**The Gem & Mineral Society of Lynchburg, VA. Inc.  
The Roanoke Valley Mineral & Gem Society, Inc.  
Combined Mineral Collecting Field Trip  
Saturday, April 23, 2016  
9:15am to 1:00pm at the quarry**

**Sign-up required. Call me, email me or sign up at the meeting.**

**We may need to carpool and or limit the size of the group due to the private nature of this site and respect for the landowners living there.**

*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 [dbc11@aol.com](mailto:dbc11@aol.com)**

*continued from page 4*

We will explore an old rutile quarry in Nelson County and will be able to collect some massive and crystal rutile and ilmenite also massive aplite feldspar and blue quartz. Some beautiful 1/2" and smaller rutile crystals have been found here before. This material is hard and will make beautiful specimens and will take a good polish. In addition to personal specimen collecting, please help the Lynchburg Club in its quest to collect hard solid material to make bookends, clock faces, rock candles spheres and other products for sale at our fund raising events.

We will meet in Amherst, VA, Saturday morning, at the Hardee's Restaurant on US 29 business, no later than 8:30 A.M. We will decide if we need to carpool and we can leave cars here if needed. We will depart from there promptly 8:45 A.M.

From Lynchburg and Roanoke, follow US Rt. 460 east / US 29 north by-pass several miles east of Lynchburg. Take the new US Rt. 29 north by-pass across the James River and proceed north to the Amherst US 29 business exit. The Hardee's is in the Ambriar Shopping Center at this exit. Come early and have a bite to eat. From this point, it should take about 20 minutes to arrive at the quarry. Be sure that you are fueled up and ready to leave at 8:45 A.M. If you are coming from the north, the US 29 business exit will be about 2 miles south of the US 60 exit. If you live in Lynchburg, it might be closer to just follow US 29 business thru Madison Heights to Amherst. The Hardee's will be on your left at the new US 29 bypass interchange, just before you arrive at the town of Amherst.

If you will be driving in from the north, let me know and I will send you an alternate meeting area.

Dress for the weather that day and be sure to bring food, water and warm clothing. Wear boots, gloves, long pants and safety glasses. Hard hats will not be required. SAFETY NOTE...DO NOT CLIMB UP OR DOWN THE QUARRY WALL. THIS IS UNSTABLE, UNSAFE AND THE QUARRY IS FULL OF WATER. DO NOT WONDER

OFF BY YOURSELF. TAKE SOMEONE WITH YOU. STAY IN SIGHT AND EAR SHOT OF OTHERS. THE SITE IS OVERGROWN AND YOU WOULD BE HARD TO LOCATE IF YOU NEEDED HELP. IF YOU LEAVE EARLY, LET YOUR LEADER OR A CLUB OFFICER KNOW.

Bring a hoe or something to turn rocks and watch where you put your hands. There may be a surprise waiting underneath. Hopefully the kudzu has not overgrown everything this early in the year. If you plan to collect BIG rocks, then a hand truck, wheelbarrow or wagon will come in handy.

Bring a hammer and chisel to break rocks, buckets and newspaper to wrap any delicate specimens you might find. Digging tools and a sledge may come in handy. We will be able to drive into the quarry through the rear gate this year. This access road is mostly level so any vehicle should be able to make it. Four wheel drive vehicles are always best though especially if you have a load. It may be slick and muddy if there has been a recent rain and we will cancel the trip if it is raining the morning of the trip. There is no age limit but children must be supervised. There are NO restroom facilities at this site.

I will have maps and examples of the material you will likely find available at the meeting place that morning. We must arrive together but you will be free to leave at any time.

For more information contact: David Callahan, Field Trip Leader

Lynchburg Gem & Mineral Society Inc.  
[www.lynchburgrockclub.org](http://www.lynchburgrockclub.org)

Roanoke Valley Mineral & Gem Society Inc.  
[www.rvmgsoc.org](http://www.rvmgsoc.org) (new web site)

Home Phone 540-297-1853 any time

Cell Phone [540-874-5201](tel:540-874-5201) day of trip only please (If I don't pick, let the phones ring and leave a message please)

Email [dbc11@aol.com](mailto:dbc11@aol.com)

*Up Coming  
Field Trips*



**Upcoming Dixie Mineral Council Field Trips**

I will have complete information at the meeting or if you plan to attend, email me and I will forward you the complete information.

**Saturday, April 23, 2016**

**Jackson Crossroads Amethyst Mine  
Wilks County GA.**

**8:00 AM**

**Fee:\$20.00 per adult, Under 16, \$10.00**



**Friday, May 20, 2016**

Vulcan Quarry and visit the Lapidary Mineral Museum

NO QUARRY COLLECTING...lecture on minerals and visit mine.

Hendersonville, NC.

Free.

**Saturday, June 4, 2016**

Thermal City Gold Mine  
Union Mills, NC.

8:30AM

Fee: Prices vary greatly depending on your activity (\$10.00 and up)

**Saturday, May 21, 2016**

Treasure Valley and the former Lookadoo Gold Mine (late 1800's and early 1900's)

Nebo, NC.

Pan in creeks for gold.

Fee: \$35.00 per adult



### Invitation from Dr. Steve Lenhart

After four long years of ultimately frustrating construction, the Radford University Museum of the Earth Sciences will open its doors for a SNEAK peek preview for anyone interested. Actual construction of the museum facility is just now being completed and my challenge to turn the space into a finished museum has just begun. It will take all spring and summer to complete the displays. Nonetheless, some of the larger displays will be all but completed by April 23rd, and I invite you all to a sneak peek preview, if you're interested in seeing what has dominated my life for the past four years.

### Driving instructions from Roanoke and Lynchburg:

**From Lynchburg:** Take 460 West into Roanoke and then right on US-220 Alt N/ Cloverdale Rd. Go to I-81 South and get off at Exit 109 (Radford Exit).

**From Roanoke:** Go to I-81 South and get off at Exit 109 (Radford Exit).

**For either travelers:** After taking Exit 109 (Radford Exit), go to the fourth traffic light (Main Street; US 11) turn right and then right at the first traffic light into a parking area. This parking area is directly adjacent to the new Center for the Sciences building and the museum inside. There is open parking on Saturdays anywhere on campus except in Handicapped spots or otherwise indicated No Parking spots. If that lot is full, return to Main street and turn right at the very next light into another parking lot. If there is no luck there, use the campus map to locate any Red Parking lot.

There is no admission charge, but be aware that the museum will not be completely finished.

*Thanks, guys.*

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*Stephen W. Lenhart  
Dept. of Geology  
Radford University  
Radford, VA 24142*

540 831-5257

**UPCOMING EVENTS**

*April 2016*

**April 23-24-** Franklin NJ annual show. NJ Earth Science Association, Franklin-Ognsdenburg Mineral Society and the Sterling Hill Mineral Museum. Super Dig- Saturday, April 23rd, Rain or Shine.

**h t t p : / / [sterlinghillminingmuseum.org/superdig/index.php](http://sterlinghillminingmuseum.org/superdig/index.php) 4-8 -**

**MAY 4-8-** Gem Shows-in the Franklin NC area. Wholesale and retail shows, something for everyone! <http://www.xpopress.com/north-carolina-gem-mineral-fossil-jewelry-shows-schedule.html>

**May 14-** Southern Penn Rock Swap and Sale sponsored by the Central Pennsylvania & Franklin Rock and Mineral Clubs. South Mtn. Fairgrounds, West of Arendtsville, PA on Rte. 234. For GPS use address 615 Narrows R. Biglerville PA 17307. Gen. Admission \$1.00 per person, table for swappers:\$5.00 per table. For info. email [tsmith1012@comcast.net](mailto:tsmith1012@comcast.net)

**May 21- 27th** annual Chesapeake Gem & Mineral Show presented by the Chesapeake Gem & Mineral Society. Roll Armory, York Rd. at Baltimore I-695, Tonson, MD. Info: [www.chesapeakegemandmineral.org](http://www.chesapeakegemandmineral.org)

**May 27-29-** Treasures of the Earth Gem, Mineral, Jewelry, Fossil and Bead Show and Sale- Salem Civic Center in Salem, VA. [www.toteshows.com](http://www.toteshows.com) for details.

**June 24-26-** Treasures of the Earth Gem, Mineral, Jewelry, Fossil and Bead Show and Sale- Fishersville VA at The Augusta Expo Center. (I-64, exit 91) [www.toteshows.com](http://www.toteshows.com) for details.

SUN	MON	TUES	WED	THURS	FRI	SAT
					1	2 Workshop
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20 Meeting 7PM	21	22	23 Field Trip
24	25	26	27	28	29	30

**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



## Word Search Pet Words

**INSTRUCTIONS:**

FIND AND CIRCLE THE PET WORDS IN THIS PUZZLE. WORDS MAY BE FOUND ACROSS, DOWN AND DIAGONALLY.

**PET TIP:**

PETS CAN BE WONDERFUL FRIENDS IF YOU RESPECT THEM AND GIVE THEM LOTS OF PROPER CARE. BE GOOD TO YOUR PETS AND HAVE FUN WITH THIS PET PUZZLE!



T	K	U	B	P	K	B	Z	F	K	W	G	P	E	W
U	S	V	I	Z	U	I	E	R	O	I	A	B	J	K
L	G	S	R	M	E	P	P	D	A	T	T	T	L	I
I	K	Y	D	Z	K	I	P	V	D	B	C	T	E	T
Z	G	E	R	B	I	L	F	Y	F	I	B	A	E	R
A	S	P	C	A	V	U	T	K	F	O	N	I	T	N
R	M	G	R	A	L	E	A	S	H	Z	O	G	T	Z
D	O	B	W	J	R	O	K	K	V	K	P	D	H	E
W	U	G	U	W	G	E	A	T	Q	D	Z	I	A	X
F	S	Z	H	N	D	O	G	F	U	I	G	T	M	E
E	E	F	R	K	N	C	L	Q	H	V	F	R	S	R
R	N	L	I	A	P	Y	P	A	R	R	O	T	T	C
R	F	E	V	S	T	R	A	I	N	I	N	G	E	I
E	Q	P	R	T	H	T	R	E	A	T	S	A	R	S
T	K	N	T	T	C	O	L	L	A	R	H	C	S	E

- |           |            |             |              |
|-----------|------------|-------------|--------------|
| 1. DOG    | 7. HAMSTER | 13. COLLAR  | 19. BIRD     |
| 2. PUPPY  | 8. GERBIL  | 14. TREATS  | 20. FISH     |
| 3. CAT    | 9. FERRET  | 15. BEDDING | 21. EXERCISE |
| 4. KITTEN | 10. RAT    | 16. WATER   | 22. CARE     |
| 5. BUNNY  | 11. MOUSE  | 17. FOOD    | 23. TRAINING |
| 6. RABBIT | 12. LEASH  | 18. PARROT  | 24. LIZARD   |

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## Safety Matters- Master of the Obvious

by Ellery Borow, AFMS Safety Chair

Reprinted from April 2016 AFMS News

I have, from time to time, been called Master of the Obvious. Well, I have been called a lot worse so I will accept that title. Actually, I kinda like it. Master of the Obvious— yes, it can work for me. Why is this a topic or a Safety Matters article? I'm glad you asked. I am, after all, more than just a pretty face, which is not one with much movie star potential, especially the photo that usually accompanies these Safety Matters articles.

I do indeed at times try to be a master of the obvious because the obvious is all too frequently overlooked or forgotten in the heat of rockhound excitement. Permit me to cite some examples of missing the obvious. Let's say one is furiously digging out that just-visible pocket or bug full of crystal treasures. Is that person aware of the increasing overhang of the dirt and rock over their position? How about the collector who is feverishly hammering that rock outcrop on the wall of a positively sweltering rock quarry. Why is that profusely perspiring person not responding to their body's plea for water? Indeed if one is feeling thirsty it means the body is already experiencing dehydration. How are those obvious hazards being missed?

All though the rock and mineral and fossil hobby passion and excitement exudes through every pore of our being. Those passions sometimes overrule our physical well being. Consider if you will the following situations:

-One awakens early, drives 4 1/2 hours to a dig and once there immediately races up the mountain to the excavation site. There is no rest time, there is no stretching of stiff and cramped muscles, no having a drink of water before heading up-hill. There could easily be problems with this approach to this collecting if...

- One has been gem grinding for hours and is getting close to where they want to be in the process...so very close. They need better visibility- the safety glasses are laid to the side, their hearing protection is not comfortable so that too is laid aside. Their front is splashed with water but they are not drinking a drop

of water...so very close to finishing. There could easily be problems with this approach to lapidary. One may be enjoying one's hobbies in those situations but can you imagine what their bodies are telling them? We all have limits to what we can do. Sometimes we can, with all due consideration and planning, ignore those limits. Sure we can race up the hill with a full pack of rock collecting tools, and we can make our way back downhill with an even fuller pack, but tomorrows aching muscles may pay a price- unless that is we are in good physical shape and are well exercised for the trip.

Being the Master of the Obvious to what one's body is telling them can be a good thing. Tempering the passion and excitement rock hounding can be a good thing if it keeps us safe and well. Then again, if one plans, brings their meds, gets plenty of sleep ahead of time, keeps hydrated, exercises modestly yet regularly, dresses appropriately for the hike to the pit, and otherwise masters the obvious needs of the body and the adventure, those masteries become second nature. Having a thing become second nature can take care of ones 1s first priority- the health and safety of the body and of the enjoyment of our hobby.

I don't know about you, but I'm going to enjoy my new title of Master of the Obvious. Take good care of yourselves and the hobby.

Please be safe-Your Safety Matters.



## Smithsonite

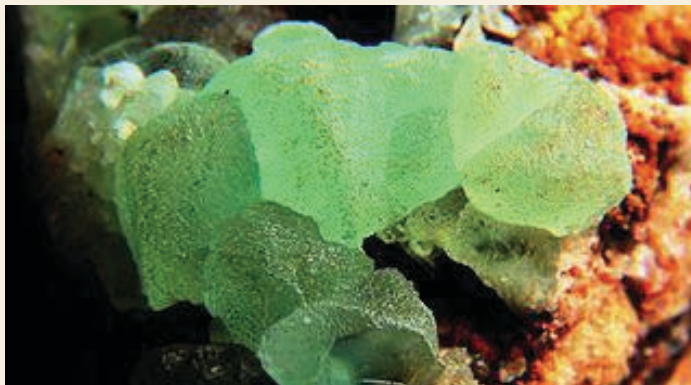
by **Bob Farrar**, reprinted in part from  
*The Rostrum*, March 2016

Smithsonite consist of zinc carbonate,  $ZnCO_3$ . It crystallizes in the hexagonal system. Distinct crystals, however, are uncommon. More typically, it occurs in layers in botryoidal masses, stalactites, and crusts. When crystals do occur, they are usually rhombohedral, or rarely, scalenohedral. Smithsonite varies in color from white to yellow (from cadmium), green or blue (from copper), to pink (from cobalt). Yellow material is sometimes known as “turkey-fat ore”, while porous white material has been called “dry-bone ore”. The obsolete name “calamine” has been applied to smithsonite, as well as to hemimorphite (zinc silicate) and other minerals. Physical properties include a hardness of 5, specific gravity of 4.3, and rhombohedral cleavage. Smithsonite can be identified as a carbonate by fizzing in heated acid. A chemical test for zinc may be necessary to distinguish it from other carbonates. Some botryoidal blue specimens may resemble blue hemimorphite, but hemimorphite does not fizz in acid.

Smithsonite occurs in the weathered zone of zinc deposits, usually in the presence of limestone (a source of carbonate). Among the most famous localities are those in the southwestern United States. For example, the Kelly Mine in Magdalena, New Mexico is famous for beautiful blue-green botryoidal material. Several localities in Arizona, including Bisbee, the Silver Bill Mine, and the 79 Mine have produced good smithsonites. The Cerro Gordo Mine in Inyo, CA is also well known. Numerous localities in Mexico have produced smithsonite, including Santa Eulalia, Chihuahua, and Los Mochis, Sinaloa. White to yellow crusts have been found in Rush, Arkansas. Many worldwide localities produce smithsonite. Particularly noteworthy are the well developed crystals found at Tsumeb and Berg Aukas, Namibia. Large masses of yellow material are found in Sardinia, Italy. Cadmium-Riga smithsonite is found in Co. Clare, Ireland. Other worldwide localities include Russia, Australia, Greece, and Morocco.

Smithsonite is sometimes abundant enough to be mined as an ore of zinc. Examples of such deposits include Leadville, Co, the Berberoth Mine in Lehigh Co, PA, and the Long-keng Mine in Burma.

Due to its interesting forms and often bright colors, smithsonite is popular among mineral collectors. Occasionally, colorful material has been cut and polished, but smithsonite is not used in significant amounts as a gemstone. Finer specimens can be pricey, but smithsonite is common enough that nice specimens can be had for a reasonable price.



**Smithsonite** form Tsumeb, Namibia. Image by Lech Daeski and reproduced under Creative Commons Attribution-Share Alike 3.0 Unported license. Image is available at Wikimedia Commons.

## Wales, Wales, Wales ~ Some Assembly Required

by Jim Steadman, reprinted from  
*The Rostrum*, April 2016

**Spoiler alert: This article is NOT about fossils, but it still features SKELETONS**

The lion's share of the Smithsonian Institution's treasures are not on public display, but, rather, reside behind the scenes. That was very evident on the tour I recently took of the Paul E. Garber Facility in Suitland, Maryland, which stores the National Museum of Natural History's rich and diverse collection of cetacean skeletons. These skeletons are part of the Museum's Marine Mammal Collection that has more than 6,500 cetacean specimens. Though what we saw were almost exclusively the skeletal remains of modern cetaceans, it was a wonderful opportunity to place in context the few fossil cetacean bones and teeth I have found along the Calvert Cliffs (e.g. "so that's where the tympanic bulla is housed in the skull")

This behind-the-scenes tour for volunteers who work in the Museum's Fossil Lab was conducted by Nick Pyensan, Smithsonian Curator of Fossil Mammals. As Pyensan made clear, a key role of modern museums is to slow down the inevitable decay that specimens undergo. It was also evident from the tour that this material is not simply being housed and preserved, but



is being actively studied to address the myriad questions about cetaceans yet to be answered.

Upon entering the facility, what initially caught my eye were the incredible arrays of whale vertebrae lined up in a stocked shelves that run the length of the enormous hangar-like facility (left). The space of this facility has enabled scientists to lay out skeletal remains and more easily make side-by-side comparisons of specimens.

Many of the larger whale skulls are counted on vertical racks that can be rolled to facilitate such comparative analysis. The massive blue whale skull pictured is on such a rack. (above) one which reaches almost to the ceiling. This particular skull is from a 78-foot long whale collected in Newfoundland in 1903 that served as the basis upon which the first full (external) model of a blue whale was created, a model shown at the St. Louis World's Fair of 1904.

*Continued on next page*



## Wales, Wales, Wales ~

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That certain whale species may live for at least one or two centuries enhances the value of collecting these skeletal remains. Pension likened them to time machines because they offered the opportunity to study the impact on the DNA and other aspects of specific individuals of the broad sweep of changes that happened over their lifetimes. From the influx of pollution into the oceans to climate change.

The part of the facility containing the smaller cetaceans offered many additional prizes. The Museum has one of the worlds largest collection of beaked whale specimens.

I was particularly impressed with the row of killer whales (orca) skulls sporting particularly savage teeth.(right) Many other skeletal elements in this portion of the collection are protected in rows of white metal cabinets. Nick Pyensan slid open a cabinet drawer to reveal an array of tusks from that most enchanting of whales, the narwhal. With those tusks laid out before us, our magical mystery tour had come to a fitting end.

*Photos by the author.*

**Additional information on the Museum's Marine Mammal Collection can be found at:**

[http://vertebrates.si.edu/mammals/mammals\\_.html](http://vertebrates.si.edu/mammals/mammals_.html)

**More information on the 1903 blue whale can be found at:**

[http://www.mnh.si.edu/onehundredyears/profiles/whales\\_si.html](http://www.mnh.si.edu/onehundredyears/profiles/whales_si.html)



## Last call for May...Invite for September

by *Steve Weinberger*, reprinted from  
*April 2016 EFMLS News*

As I write this, the spring EFMLS Workshop at Wildacres is a mere seven weeks away and the excitement is building! Scheduled for May 9-15, the session will feature world renown glyptolgrapher (gem engraver), Helen Serras-Herman as the featured "speaker-in-residence."

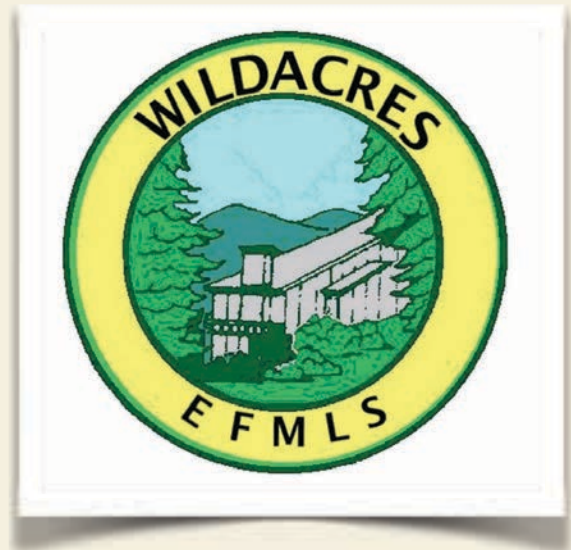
Knowledgeable, and talented, Helen will take us on a journey that includes talks about carved gems, Maya jade, opals, the famous copper trails of Arizona and Mexico, natural vs enhanced gem materials (must information for the jewelry lover), and peaks at fabulous artifacts in famous museums and sites.

Have we peaked your interest? There's still time for you to register! A registration form is on page 8 of the April addition of EFMLS News <<http://www.amfed.org/efmls/newsletters.htm>>, and class descriptions can be found on page 5 of the same issue.

If you cannot attend the May session, consider attending the September 5-9 session when Alfredo Petrov will be the Speaker-In-Residence. He's a world traveler who has recently had a new mineral (Alfredopetrovite) named after him.

Classes for Fall are shown on pages 6&7 of the EFMLS April newsletter (link above). As in spring, our instructors are carefully selected so as to give you the best possible learning experience.

Have we whet your whistle? Tuition for the week, including room and board is \$400. per person. Where else can you get away for a full week of talks and classes for only \$400 per person? Your only additional expense will be for the materials you use in class or classes you take during the week. You'll have a choice of either one class that lasts the entire week or two classes, each lasting 1/2 the session. For more information visit the EFMLS Wildacres website <[efmls-wildacres.org](http://efmls-wildacres.org)>



In addition to the talks given by our speaker, we'll have an activity day where you can go "off the mountain" to explore the lovely Wildacres area or join an organized field trip to a local collecting area, an afternoon tailgate session, a few talks by our attendees, a show and tell at the end of the weekend and an evening of fun and merriment as we round out the week. And all this for \$400. per person! Take a few minutes to look over the class list and send in your registration fee so that you don't miss out!

## From the First V.P.

continued from page 1

[http://varockshop.com/pochtecas/product\\_info.php?rock\\_minerals\\_id=13&products\\_id=240](http://varockshop.com/pochtecas/product_info.php?rock_minerals_id=13&products_id=240)

Nelsonite is composed principally of ilmenite and apatite. Ilmenite,  $\text{FeTiO}_3$ , is a black, opaque, metallic and slightly magnetic mineral that is composed of 36.8 percent iron, 31.6 percent titanium, and 31.6 percent oxygen. Apatite, a light-colored, non-metallic mineral, is composed of calcium, phosphorous, oxygen, and fluorine or chlorine; its composition may be expressed by the formula  $\text{Ca}_3(\text{F,Cl})(\text{PO}_4)_3$ .

Nelsonite is named for Nelson County, Virginia where it was first found near Roseland. It occurs in Nelson and Amherst counties in dike-like bodies that are as much as 2000 feet long. It is also present in eastern Roanoke County. Deposits of nelsonite were a major source of ilmenite in Virginia. The titanium dioxide that was recovered from ilmenite was used in the manufacture of paint pigments. This specimen was collected in the late 90's from near Bryant, Virginia.

Nelsonite - (igneous rock)

"Amherst and Nelson Counties-Apatite makes up from 3 to 30 percent of the rock called nelsonite in a 13-mile long and 2 1/2 mile wide belt that extends from north of Bryant, Nelson County to Piney River on the Amherst-Nelson County Line and in the vicinity of Lovingston, near Davis Creek (Ross, 1934)."

[from: Dietrich, R. V., 1990, Minerals of Virginia]

"A second important and new occurrence of rutile is found in the Amherst-Nelson counties area, Virginia, as dike like bodies of an even-granular, ultrabasic igneous rock (nelsonite<sup>6</sup>) composed essentially of the ore minerals ilmenite and apatite with sometimes rutile as the dominant mineral."

[from: Watson T. L., Mineral Resources of Virginia (1907)]

"Named for Nelson County, this rock is composed of minerals that contain the element titanium. Nelsonite was an important commercial source of



titanium several years ago. Titanium is a metal that is noted for its strength, lightness and toleration of high temperature. Nelsonite is an igneous rock that is found around the community of Bryant, near Roseland, Virginia."

[from: the Keith Frye Memorial Rock Exhibit description flyer ]

"Nelsonites have a characteristically high concentration of Ti, which results in the formation of ilmenite, Ti-rich magnetite, or both. They are also apatite rich, often with 30–50 percent of this mineral. In addition, they are usually associated with anorthosites\* (intrusive igneous rocks that are almost entirely plagioclase feldspar, usually labradorite). Nelsonites are magmatic in origin. It is believed that the iron-titanium-phosphorous-oxide magmas from which they crystallize result from liquid immiscibility within a silicate magma, intense fractionation of some parent magma, or partial melting of Fe- and P-rich rocks in the earth's crust"

[from: Nelsonite & Kiruna-type Deposits paper by Rakovan, J. (2007) ]

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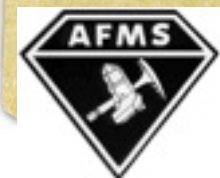
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Lynchburg Rock Raiders is the official Future Rockhounds of America association of the The Gem & Mineral Society of Lynchburg, VA. Inc.



*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!*