



# Gem & Mineral Journal



The Official Publication of The Gem and Mineral Society of Lynchburg, VA Inc.

June 2007

Volume 16 Issue 6

## Presidents Message:

Hello to All,

What can I say about the last two weeks other than they were wild! The DMC field trip went over without a hitch due to the great planning by Dave Callahan and a lot of hard work by many other members. I saw a lot of great specimens collected, even I found a large pocket filled with some pretty Zeolite crystals, almost as good as a nice specimen collected by Zach McKinney of Victoria, VA. These will make a nice addition to both of our collections.

As I write this, the day after the Uncle Billy's Day Festival, the sunburn and sore muscles are still very fresh. But I'll have to say the Day was a great success. The Gem Sluice performed without flaw and everyone had fun playing in the water, customers as well as club members. A big thank you to Dave Callahan for his idea and planning for the new Gem Sluice and to all that worked on the project and helped with the many workshops to prepare for this festival. We couldn't have done it without you. Also many thanks to everyone who worked so very hard all day to make this a successful fund raiser for the GMSL. Maybe now we can take a break from workshops, until September, and focus on our first

love, field trips. I think we have several trips planned this summer to a number of places we haven't collected in before. So keep your eyes and ears open you don't want to miss any of these trips.

Over the past couple of months we have had a lot of new members join our club, and I attribute this to several things. Our news letter is a written record of our clubs activities and shows our love and enthusiasm for our hobby, thanks Natalie for a job well done and thank you to all who write articles for our award winning news letter. Also we have a number of members who share their many faceted hobbies with others on a daily basis. Their enthusiasm and knowledge of Rock Hounding is a great catalyst to get people started in a new experience in their lives, whether it's rock collecting, jewelry making, cabbing, faceting or wire wrapping jewelry, these can be learned at our field trips or workshops. Keep up the good work and I hope we can continue to have fun for years to come. That's all for now, I hope to see you at the June 20<sup>th</sup> meeting.

Keep Looking Down,  
John Haskins

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## From the First VP:

Did you know that uranium goes through a radioactive decay sequence that ultimately ends up as lead? One of the elements in this decay sequence is radon, which is a gas. Since uranium can be in the rocks around us, radon gas can also be given off by the rocks around us. So now you know.

Our thanks go to Phillip Bosen, Fink's Jewelers, for an excellent presentation at the May meeting. I hope you picked out your favorite jewel, I know I did.

For June's meeting, we have invited Dale Phelps from DP Enterprises to speak about radon gas. DP Enterprises is in Forest, Virginia. Mr. Phelps does instrument testing for radon gas and radon remediation. Let's give Dale a warm welcome.

The ugly rock contest will be postponed for June for revitalization. Please keep reading this journal for further developments.  
Abeo-ire-ii-itum Laetus-a-um  
Stevel

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JoAnn Mason &amp;

Ralph Torning

**COMMITTEE****CHAIR PERSONS:****Field Trips-** David Callahan**Hospitality-** Ann Torning**News Articles-** Natalie Darling**Silent Auction-** Warren Darling**Special Events-** Dee Tinsley**Swap for Rocks-** Frank Midkiff &  
Warren Darling**Website-** Adelaide Lee**Workshops-** Dave Woolley**FRA Adult Liaison-** Shannon  
Bondurant

## May Meeting Minutes

**Meeting:** 7:00 PM, Wednesday,  
May 16th**Attendance:** 32**Hospitality:** was provided by many members who signed up the previous month. This was very enjoyable, and thanks to all who participated.**On Time Drawing:** winners Steve Boylan and Don McIntyre won specimens of Calcite and quartz.**Old Business:** After welcoming the group and drawing for the on time door prizes, John informed the members that all were invited to the Region 4 picnic at Lake Anna on June 9<sup>th</sup>. Details were posted in the May 2007 Journal. John also talked about the workshop projects and that more work needed to be done on Sat. the 19<sup>th</sup> to complete everything for Uncle Billie's Day.He reminded everyone we need volunteers for May 26<sup>th</sup>, DMC trip to Mt. Athos.**First Vice President:** Steve Boylan stated we have Phillip Bosen from Fink's to speak to us tonight. Additional programs: June a speaker on Radon; July a video; August another segment on Crystallography; and in Sept or Oct - Collector's night**Second Vice President:** Dave Callahan reported on the DMC trip and the committees needed and set up. Please come and help host this great event. There are 33 clubs in the Dixie Mineral Council.

We are hosting them this year. Dave also stated he was working on field trips to: Nelson County to find rutile, to Glasgow, and the "Cotton Patch" for gold panning. Dates will be announced at meetings and in the newsletter.

**Treasurers Report:** Franklin Midkiff reported we had a balance of \$ 4696.33 in the treasury. Outstanding bills totaling \$598.00, so this will leave about 4000.00 when paid.**New Business:** John Haskins reported that anyone wanting a magnetic tag please sign the sheet. These are nametags easier to wear while on field trips, especially the DMC trip as our guests need to be able to identify the "host members". We are researching prices and will finalize the list at the June meeting.

Dave Woolley reported that the trip to Franklin NJ was great. They had new material to search through and found lots of keepers.

Dee Tinsley brought some Kentucky Geodes to show and also some fossils found during the trip.

The meeting was adjourned and Phillip Bosen of Fink's presented our program.

**Respectfully Submitted:**  
**Dee Tinsley**

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

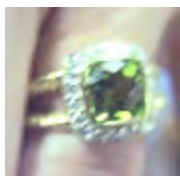
**The Gem and Mineral Society of Lynchburg VA, Inc.**  
**Meets on the third Wednesday of each month,**  
**From 7:00pm- 9:00pm**  
**In the auditorium of the Parks and Recreation Building**  
**301 Grove St. Lynchburg, VA 24501**  
**Public is invited, Please join us!**

## FINK'S & PHILLIP BOSEN

### "an extraordinary find"

Article submitted by Dee Tinsley

Photographs by Don McIntyre



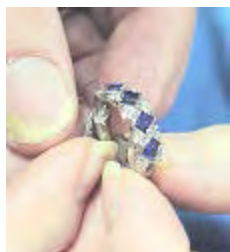
Phillip Bosen from Finks Jewelry graciously accepted Steve Boylan's invitation to speak at the regular meeting of the Gem & Mineral Society of Lynchburg on May 16, 2007. Both his presentation and his humor were exceptional. Mr. Bosen brought with him beautiful specimens of many of his fine pieces. He explained where they were found, the designers who did the magnificent artwork around each piece and the "cut". He also shared his knowledge on the importance of the cut and the framing of that cut. We saw extraordinary diamonds, topaz, peridot, citrine, sapphires, emeralds, pearls, and many others, each capturing a different heart. I felt very fortunate that he brought the rings in "just my size". I even volunteered to model any time for him!

Phillip Bosen has been in the jewelry business for 25 years. He buys, travels, understands and appreciates that his customers want the finest pieces he can offer. These are the traits everyone expects and wants in a jeweler when they are buying "that special piece".

Phillip is also quite a hiker. He told us that he was delighted we met in a "dry" place! The reason: he had been on a big hike earlier today and been soaked by the downpour we had, gotten quite cold, and had to sit in the sun when the storm passed to get warm! We are glad he got warm and "dry".

Although he is 37 now, he got an early start working in his father's shop in Roanoke. He, as he said, "fell in love with rocks". It has paid off. We held, tried on, and otherwise oooed and ahaed at many beautiful rings, necklaces, and bracelets.

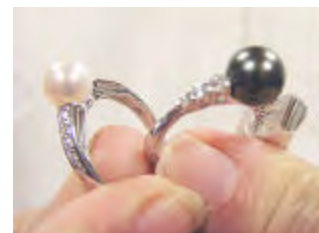
He also told us "WALMART is the largest jeweler in the world right now".



*Guest speaker Phillip Bosen with program chairperson Steve Boylan at the May 16<sup>th</sup>, 2007 meeting.*



Many thanks go to Phillip Bosen for his time, expertise and willingness to share this with the people he meets. Also many thanks go to Steve Boylan, First Vice President for asking Mr. Bosen to speak to us.





# Field Trip Report

Article and Submitted by  
 Dave Callahan~ photographs submitted by  
 Dave Callahan, Dee Tinsley  
 and Don McIntyre.

## OUR 4<sup>TH</sup> DIXIE MINERAL COUNCIL FIELD TRIP

Saturday, May 26, 2007

Boxley Materials Company, Mt. Athos Quarry  
 Campbell County, Virginia

I would like to thank all of the Club members that helped make this a safe and enjoyable event. I would also like to thank the Boxley Corporation for their generous and full support and corporation for this field trip. Special thanks go to Elisha Hall, Hunter Moore, Josh Wilson and his son, Caleb and many employees behind the scene for their help, support and assistance in making this a successful event. Some of the major things Boxley provided for this event were clear and safe areas on the quarry floor, away from the high walls, with plenty of material piles for us to scavenge. Two portable toilets for our use, clearly marked unsafe areas, traffic cones and signs directing us into and out of the quarry. They even arranged a "shot" the day before but the rain was a few hours late to wash the dust from the freshly blasted rock.

The weather was clear, sunny and rather warm in the afternoon. The hot chicken BBQ, snacks and cold drinks served by Natalie and her crew just hit the spot. About 4PM everyone had departed and it looked like a storm was building, so we packed up and cleared the quarry just before the rain started.

We will never know what lay beneath all the dust on the freshly blasted rock but we did find lots of beautiful rocks and minerals. I personally saw many excellent specimens of Epidote, Chalcopyrite, Bornite, Ilmenite, Feldspar, Pink Marble, Pyrite, Calcite, Actinolite, Sphene, Byssolite, Tremolite, Magnetite and Heulandite. I'm sure that there were more that I did not observe.

The attendance was down a little from what we had expected but I'm sure that the Memorial Day weekend and \$3.00 plus gas prices contributed somewhat. There were 47 that signed our club sign up sheet and there may have been a few more that didn't sign. We had one lady who drove up from Jacksonville Florida, several from the Atlanta, GA area and several from various areas of North Carolina.



*Our host, Elisha Hall, gives the safety training to out group prior to leading us into the quarry.*

*Many club members manned the registration table, headed by Don McIntyre.*



It was a memorable weekend and everyone had a great time. Thanks again to Boxley Materials Company for making their quarry available and all the Club's team leaders that did their part in making this a successful and safe event.

*Additional photographs on next page and on page 15 for electronic viewers.*

# OUR 4<sup>TH</sup> DIXIE MINERAL COUNCIL FIELD TRIP

*Photographs contributed by Dee Tinsley, Dave Callahan, & Don McIntyre*



Our Host Elisha Hall ↑



Mt Athos Quarry



Ralph Torning



MAY 26 2007



← Our food and refreshment area.



MAY 26 2007



MAY 26 2007



Derek Gordon



Steve Gordon and John Haskins



Dave Woolley



MAY 26 2007

↑ Don McIntyre and daughter Nancy.



↑ Specimen presented to Elisha by Lynchburg Club member Ken Conway.



# Up Coming Field Trips

For further information on field trips, contact David Callahan,  
540-297-1853  
Email [dbc11@aol.com](mailto:dbc11@aol.com)

## Combined Lynchburg and Roanoke Clubs Field Trip Saturday, June 23, 2007

We will explore an old quarry in Nelson County and hopefully be able to collect some massive rutile, ilmenite, feldspar and blue quartz. This material is hard and will make beautiful specimens and will take a good polish.

We will meet Saturday morning at the Jumbo Family Restaurant on US 460 East at 8:45 A.M. and depart from there promptly 9A.M. The drive to the site should take about 30 to 40 minutes. Be sure that you are fueled up and ready to leave at 9 A.M. Dress for the weather that day and be sure to bring food, water and bug spray. Wear boots, gloves, long pants and safety glasses. Hard hats will not be required but wear a hat to keep the sun off your head.

Be on the lookout for poison ivy and snakes in the quarry, as they like hot rocky places. Bring a hoe or something to turn rocks and watch where you put your hands and you will be OK.

Bring a hammer and chisel to break rocks and newspaper to wrap any delicate specimens you might find. We can drive into the quarry unless you have a low-slung car. There is no age limit but children must be supervised.

More information will be available at our next meeting as well as samples of what you can expect to find.

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

540-297-1853 [dbc11@aol.com](mailto:dbc11@aol.com)

Royce Wickham, Field Trip Leader, Roanoke Valley Mineral & Gem Society

540-427-1424 [rklandsc@rev.net](mailto:rklandsc@rev.net)

## July 2007

We are trying to make contact with a quarry in Rockbridge County and hopefully will have a field trip there on July 21st. More information will follow as it develops.

## August 3 thru the 5th, 2007 Spruce Pine, North Carolina Weekend Field Trips and Gem Shows

If you want to share a campsite as we have in the past, please let me know so that I can reserve a group site.

More information will follow as it is finalized.

## DMC Program of the SFMS Field Trip Committee An Official Field Trip of The Middle Tennessee Gem & Mineral Society (HOST) An Official Field Trip of the Gem and Mineral Society of Lynchburg, VA Inc Saturday, July 14, 2007 Columbia Mines, Marion, Kentucky FEE SITE

**WHERE:** The Columbia Mines of Marion, Kentucky but meet at the Clement Mineral Museum

**WHEN:** Saturday, July 14, 2007

**TIME:** Day dig 9:00 A.M. CDT and night digs 8:15 P.M. CDT

*Complete details on page 13.*



### Mission Statement

Future Rockhounds of America is a nationwide nonprofit program within the American Federation of Mineralogical Societies that develops and delivers quality youth activities in the earth sciences and lapidary arts in a fun, family environment. Our underlying goals are to foster science literacy and arts education through structured activities that are engaging and challenging and by which kids- and the adults who mentor them- learn while having fun.



**Congratulations  
Graduates!**

# Rock Raiders

## TIME FOR JUNIORS

by Bill Gilbert, BEAC Chair



This month I would like to write about getting juniors involved with your bulletins and competing in the annual EFMLS Bulletin Contest. I am very certain that the discussion of getting young people involve with the club's activities has been a frequent occurrence. I wish I had the secret to this problem. It has been apparent by the number of entries from juniors in the EFMLS Bulletin Contest. Certainly, we, the leadership of our club's need to promote and encourage the juniors to write, draw, or develop a neat game/puzzle/poem for their club bulletin.

Do the juniors in your club know they can contribute to their club's bulletin? Do they know that their contributions can be submitted for competition in the Eastern Federation's annual bulletin contest? We need to tell them at our club's meetings and functions.

There are several categories that the juniors can participate in. The first category is 'Junior Articles'. Junior articles are written articles that are submitted to the club's bulletin. The length can range from a few paragraphs to possibly a page or more.

The next category they can enter is 'Junior Feature Drawn'. Junior Feature drawn are items that don't fit the traditional written format. They can include drawings, puzzles, and other items.

There are also 'Junior Poems'. This would include junior originally composed poems that are hobby re-

lated. If you are interested looking up the criteria for the junior categories, please go to the EFMLS webpage <[www.amfed.org/efmls.beac.htm](http://www.amfed.org/efmls.beac.htm)>.

There is another good reason for juniors to participate in the EFMLS Bulletin Contest. The top three entries for Junior Articles (ages under 12 and 12 to 17 years old) and Junior Poems are sent on to the American Federation (AFMS) for competition in their annual Bulletin Contest. Competing in the AFMS Bulletin Contest means competing with junior authors from the entire United States. The judges in both AFMS and EFMLS provide positive feedback on how to make future contributions better.

I would like to challenge each club in the Eastern Federation to promote and encourage juniors to participate in their own club's bulletin. Offer them help in how to write the article or possibly how to do research on a rock related subject. Lead by example and also submit articles/poems to your bulletin and show them it isn't that hard.

It is really rewarding when the club looks at a face of a junior who has received a certificate/award and is recognized for the effort they did. This is just one aspect of our club's effort to share our knowledge and experience through supporting the juniors in the club.

*Reprinted from May 2007 issue  
of EFMLS News*



# Uncle Billy's Day 2007

June 2<sup>nd</sup>, 2007

Article submitted by Dee Tinsley with photos by Don McIntyre

Early, very early in the morning the members of the Lynchburg Gem & Mineral Society loaded their vehicles and headed off to Altavista. It was Uncle Billy's Day 2007. Tents had to go up, equipment and tables had to be put into place and with much work to be done arrival time was 6:30 AM.

Arriving around 9 AM the folks were already coming in and things were starting to take off for us. You see a few months ago Dave Callahan had a dream of a "water sluice". He put it on paper and then with the help of many good people our men put it together. It was "Up



*Above folks lined up to check out our gem sluice. Jack Curtin and John Haskins were among the members on hand to assist in sluice operations and customer service.*

and Operating" for the first time and it really did bring in the crowd. I saw a young man who had to stand on a bucket and be helped looking for treasures and I saw adults alike getting excited over their finds. We sold buckets of sand laden with gems for \$5, \$10 and \$20. It was the hit of the day. This yielded \$685.00 for our very first run!

We also had our "geode cracker" set up and operating. It has always been a fascination to young and old alike to pick out a geode, and then watch the cracker open it for them and be the first person "to ever see what's inside"!

The club also had the beautiful "Travertine Candles" made from the cave onyx collected recently on our "field trip to Onyx Hill Virginia. We had Soapstone candles, and birthstone "gem trees" as well as big gemstone trees. The table boasted a beautiful selection of wire wrapped pendants, bracelets and earrings. There were gold and silver neck wires, hand crafted by our members, and Bolo ties for the gents. All items were hand made by our members.

As we watched with glee the thrills of so many people getting excited over our hard work, we relished in the sound the cash register made every time we made another sale. Our grand total was \$1450.00 at this show.

A very big "Thank You" goes to Dave Callahan for the sluice, to John & Nona Haskins, Franklin and Jean Midkiff, Natalie & Warren Darling, Bill Livingston, Ralph Torning, Jo Ann & Fred Mason, Siglinde Allbeck, Lynn & Tom Powers, Don & Nell McIntyre, Nancy McIntyre, Jack Curtin, Dave Woolley, Steve Gordon and his son Derek and Dee Tinsley. There were others who helped at the workshops and a "Big Thank You" goes to them as well.

Uncle Billy's Day was a success and we are all looking forward to the next show at the Apple Harvest Festival in Amherst, VA October 20, 2007.

*Additional photographs available for electronic viewers on page 16.*





## Radon Gas

### A Short Introduction to Radioactive Decay

*By Stephen Joseph Boylan*

Lynchburg has a great history and connection with nuclear chemistry. And since June's meeting will feature radon gas, the following is offered as background for the meeting.

We will start with a little nuclear chemistry. Atoms are made of protons, neutrons and electrons. The neutrons and protons are in the nucleus of the atoms. The electrons spin around the nucleus. The number of protons is the atomic number and determines the element. The elements are represented by letters. For example, if the atom has 92 protons it is uranium represented by the letter U. If the atom has 86 protons it is radon represented by the letters Rn. And if the atom has 82 protons it is lead represented by the letters Pb.

The number of protons plus the number of neutrons is the atomic weight of the element. For example if a uranium atom has 92 protons and 143 neutrons, it has an atomic weight of 235 and is called uranium 235. Uranium 235 can be represented by U235. The same element often has different numbers of neutrons. For example if a uranium atom has 92 protons and 146 neutrons it is uranium 238 represented by the symbol U238. Atoms of the same element with different atomic weights are called isotopes. Uranium comes in many isotopes such as U233, U235, U236 and U238. Why are we interested in all this counting of protons and neutrons? Because the number of protons and neutrons in the nucleus determines whether the atom is stable or unstable. Unstable atoms go through nuclear decay. Stable atoms do not go through nuclear decay.

Let us look at uranium. Uranium is found on the surface of the earth in many different minerals. One of the uranium minerals is pitchblende, which contains about four pounds of uranium per ton of ore, reported as an oxide. The uranium minerals contain different amounts of each of the isotopes of uranium. Usually natural uranium contains about 0.711 weight percent U235. So one hundred pounds of natural uranium would contain 0.711 pounds of isotope U235. The other 99.289 pounds is mostly isotope U238. Uranium 235 is not a stable isotope and goes through a radioactive decay sequence. A radioactive decay sequence is a series of nuclear reactions where an unstable isotope proceeds to become

a stable isotope. At each nuclear reaction the atomic nucleus changes and the atom gives off energy in the form of radiation. For uranium 235 the radioactive decay sequence is:

U235 ---> Th231 ---> Pa231 ---> Ac227 ---> Fr223 ---> Ra223 ---> Rn219 --->  
Po215 ---> Pb211 ---> Bi211 ---> Tl207 ---> Pb207 ---> Pb207(stable)

The letters represent different elements. The numbers are the atom weights. And the ---> represents the reaction. There are twelve nuclear reactions in this sequence. That's a lot of reactions. *Cont. pg. 12*

#### Refreshment Sign up list for the June 20<sup>th</sup> 2007 Meeting

2-Liter Drinks:

Cola: Natalie Darling (2)

Decaf: Jean Midkiff

Diet: Natalie Darling (2)

Other:

Veggies:

Tray: Tom Powers

Fruit: Steve Boylan

Meats:

Cheese:

Cheese ball; Jean Midkiff

Sliced:

Cubed:

Other: Pimento Cheese Sandwiches

Natalie Darling

Deserts:

Cookies:

Cake: Natalie Darling

Cup Cakes:

Crackers: Jean Midkiff

Chips:

Dip:

Bread:

Other:

If you did not sign up and would like to bring something, please use this list as your guide.

**Thanks for your continued  
support!**

# Schedule of Events

**June 23<sup>rd</sup>-** LGMS and RVMGS field trip. Meet at Jumbo Restaurant at 8:45 AM for a trek into Nelson Co. in search of massive rutile, ilmenite, feldspar and blue quartz. For more information see page 6.

**June 29<sup>th</sup>-July 1<sup>st</sup>-** Treasures of the Earth Show Waynesboro, VA  
[www.toteshows.com](http://www.toteshows.com)

**June 30<sup>th</sup>-July 1<sup>st</sup>-** Nittany Gem and Mineral Show Mt. Nittany Middle School, State College, PA

**July 14<sup>th</sup>-** Columbia Mines, Marion KY, DMC Trip. See page 6.

**July 14<sup>th</sup>-15<sup>th</sup>-** Gem, Mineral, and Fossil Show sponsored by The Gem and Mineral Society of Syracuse, NY Verizon Center of Progress Bldg, NY State Fairgrounds, Syracuse, NY.

**July 25<sup>th</sup>-28<sup>th</sup>-** Franklin NC Gem and Mineral Show. Community facilities Building, Highway 441 S. Contact Fred Leasner at 888-348-4224 or Franklin Chamber of Commerce at 828-524-3161 or [www.franklin-chamber.com](http://www.franklin-chamber.com)

**August 3<sup>rd</sup>-5<sup>th</sup>-** Annual field trip to Spruce Pine, NC. Details at the monthly meetings and in the field trip section of this newsletter as plans are finalized.

**August 4<sup>th</sup>-5<sup>th</sup>** Annual Gem and Mineral Show sponsored by the Gem, Lapidary, & Mineral Society of Washington, DC. State Ridge School, 9101 Rockville Pike, Bethesda, MD

## June 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
<b>Fathers Day</b>			<b>Meeting 7PM</b>			<b>Field Trip</b>
24	25	26	27	28	29	30
			<b>Woolleys Workshop 7PM</b>			

## Program for the June Meeting

Radon Remediation and Instrument Testing  
by Dale Phelps, Radon Free DP Enterprises,  
([www.radonfree.net](http://www.radonfree.net))



*There was no board meeting held this month due to the extensive hours spent in workshops, Uncle Billy's Day and Hosting our DMC Trip. Rest up!!!*

## ON POMPEY'S KNOB

by Steve Weinberger

The first time I went to Wildacres was in 1976. The present Dining Hall was open for the first season and the North Lodge was just being started. We all lived in a 1920's wooden hotel which had it's charm, but also had paper thin walls, drafty windows, and mysterious creaks whenever anyone walked around. The experience was unique to say the least.

Today all the buildings at Wildacres are modern and although you still can hear heavy footed folks walk around on occasion, the loudest noise you hear is that of laughter, birds, Katy-dids and people having fun. The view from the porches, patios and meeting rooms remains the same tranquil one that welcomed us in 1976, although some of the trees have definitely grown a bit.

It's the "Wildacres Spirit" that always encourages many of us to return each year. If you've never been, you're missing quite a treat. I encourage you to take a week of your time and come to Little Switzerland this September (10-16) to join in the fun. Full information can be found on the EFMLS Wildacres website <[www.amfed.org/efmls.wildacres.htm](http://www.amfed.org/efmls.wildacres.htm)> We've included an application in this issue for your convenience.

Tuition is \$330 for the entire week. That includes your room and board plus talks by our Speaker in Residence for the session, Dr. Steve Chamberlain. What a bargain! What a wonderful place to meet and learn with fellow rockhounds! What a place to learn a new skill or reinforce an old one!



Reprinted from May 2007 Issue of EFMLS News.

## PALEOPHILES AND MINERAL ENTHUSIASTS

by Marge Collins, AFMS Program Competition

Your help is needed! Newcomers to the Earth Science hobby want to learn more about all the aspects of this hobby.



Why not share and explain your special interest to others in a presentation? First, you can show it to your Club and others that aren't far away. Then share it with a wider audience - across the country - by entering AFMS Program Competition.

You can inspire and inform current and future generations of neophytes about your favorite fossil or mineral species, about a classic location, a special museum, a notable field trip, etc. There are so many stories to share! You make the choice! First, make an outline to organize your thoughts, then start taking pictures to illustrate your "story" with that new digital camera whether still or video (or a good 35mm camera). If you've gone digital, you don't have to use a "professional" software program - you can simply make a collection of images on a CD with a written script. (35mm slides and a typed script are still acceptable.)

Just two warnings: first, if you use presentation software, don't be tempted to use transitions, animation, etc. An audience watching an otherwise boring business presentation might appreciate some of those gimmicks for variety, but engaged viewers find them distracting. Second, don't overload the audience with images or information. You don't need to show every image and tell "everything" you know. The goal is to whet viewers' appetite, and inspire them to search for more information on their own. In other words, a relatively short presentation - 35 to 40 minutes is good.

There are a few more tips and suggestions that can lead to a prize winning presentation. They're listed on the AFMS website <[www.amfed.org](http://www.amfed.org)> as are deadline, entry form, etc. You can also contact your Regional Program Librarian or AFMS Program Competition Committee c/o Marge Collins phone: 269-695-4313 or email: [margaret@qtm.net](mailto:margaret@qtm.net) (If you don't receive a prompt reply, phone - gremlins can mysteriously snag email!)

Sharing your passion for our hobby can lead to many rewards: a cash prize, recognition and best of all, the satisfaction of knowing you are inspiring others.

## Chesapecten Jeffersonius, Virginia's Official Fossil

Article submitted by Dee Tinsley, as taken from [www.geoworld.org/virginia](http://www.geoworld.org/virginia)



Virginia's official fossil, *Chesapecten jeffersonius*, belongs to a group of familiar sea creatures. It is a scallop.

Scallops are bivalves like clams and oysters, with two shells, or valves. Unlike smooth clam shells, scallop shells have heavy ridges, or ribs. These ribs make the shells stronger, helping to protect scallops from their enemies, including fishes. They also give the edges of the shell a wavy appearance. Like oysters, scallops typically lie with one valve up and one down.

Unlike clams and oysters, scallops have well-developed eyes that can be seen along the edges of the open shell. Scallops are also different in that they can swim. Scallops swim by clapping their shells together, as if biting the water.

Just as there are several extinct snails called *Ecphora* (Maryland's state fossil), so are there several extinct scallops named *Chesapecten*. Their fossils are found from New Jersey to Florida. But they are especially common in the Chesapeake Bay area of Virginia and Maryland.

*Chesapecten* fossils, which are found south into Florida, take us back more than five million years to the Miocene Epoch. Miocene Epoch *Chesapecten jeffersonius* was around about 4 ½ to 5 million years ago and died out about four million years ago in Virginia. Other species survived another million years ago during the Pliocene Epoch.

*Chesapecten* scallops lived along the continental shelf at shallow to moderate depths. Virginia's climate was warmer during the Miocene Epoch. Walking along a sandy beach, you might have encountered sea turtles or crocodiles. Mastodons, rhinoceroses, and horses roamed the woods.

During the Pliocene Epoch, the climate became cooler. Like the *Ecphora* snail honored by Maryland, *Chesapecten* scallops probably became extinct because of this change in temperature. This doesn't prove they could not adapt to lower temperatures, however. The animals they preyed on may have been affected by the change in climate. Or perhaps a dangerous scallop predator or a hardier competitor thrived in cooler waters.

The name *Chesapecten* (genus name) honors Chesapeake Bay. *Jeffersonius* (the species name) honors Thomas Jefferson. Jefferson was a naturalist from Virginia who served as a president of the United States. He was one of the first Americans to study fossils.

Its name makes *Chesapecten jeffersonius* a fine symbol of Virginia. There is another reason it was adopted as Virginia's official fossil, however. It was the first North American fossil to be pictured and described in a book, in 1687.

Today, scallops are among the most popular so shells. Their striking appearance makes them popular in art. Many scallops are harvested for food.

Next to gastropods, bivalves are the most common mollusks. There are between 15,000 and 20,000 living species, most of them living in the sea. Bivalves are so named because their shells consist of two halves, or valves. Many bivalves are harvested for food. Familiar bivalves include clams, oysters, and scallops. Kentucky's official fossil, the brachiopod, is also a bivalve.

## Radon Gas...continued from page 9

But what is really significant for us is the overall reaction sequence. Uranium 235 starts out as an unstable isotope in the solid form, goes through a sequence of nuclear reactions and ends up as a stable isotope of lead (Pb207). One of the intermediate isotopes is radon and radon is a gas. We are concerned with this radon gas.

After all of that we have finally arrived at the thesis of this article. The overall process can be described as: Uranium 235 (solid) ---> Radon (gas) ---> Lead (stable solid)

So the solid uranium, which is in some of the minerals around us, produces the radon gas as an intermediate isotope in the process of radioactive decay to the final product of stable lead. Yippee!

The most amazing aspect is that the solid, uranium, turns into a gas, radon, and then back into a solid, lead. There are many other isotopes and elements that also go through radioactive decay sequences but our main concern is with radon gas.

So now you know.

References:

1. El-Wakil, M. M., Nuclear Power Engineering, McGraw-Hill Book Company, Inc., New York 1962
2. Benedict, M., Pigford, T. H., Levi, H. W., Nuclear Chemical Engineering, McGraw-Hill, Inc. 1981.

## Marion, Kentucky Field Trip

Continued from page 6

**COLLECTING:** Fluorite, smithsonite, sphalerite, cerussite, galena, hemimorphite, hydrozincite, quartz, & pyromorphite. Calcite is by far the most common mineral found, and all other minerals require some digging in the dump to locate.

**FEE:** The daytime digs will cost \$20 and is limited to 30 persons. The nighttime digs will be \$30 and is limited to 20 persons. The fee entitles you to one five-gallon bucket of specimens additional buckets may be purchased. Admission to the Ben Clement Fluorite Museum is \$5. You will be required to sign a waiver for this hunt. You may download the reservation, waiver and information at the following link.

<http://www.marionkentucky.us/clementmineralmuseum/index.htm>

All reservations for the digs will be handled through the Ben E. Clement Mineral Museum at [www.MarionKentucky.us](http://www.MarionKentucky.us). Or call 270-965-9257, or write Ben E. Clement Mineral Museum, 205 North Walker Street, Marion, Kentucky 42064. Information on campgrounds, lodging, and bed and breakfasts can also be obtained from Clement Mineral Museum.

While the primary purpose of this trip is to accommodate SFMS members, the secondary purpose is to help the Ben E. Clement Mineral Museum fund its efforts in maintaining a world-class fluorite collection and making it available to the public.

**WHAT TO BRING:** Other than standard collecting equipment, bring plenty of water, snacks, camera, and you will need a portable ultraviolet light. Daytime collectors will need a way to check fluorescence too! Black light boxes or whatever suits you. Nighttime collectors will need a standard flashlight to travel to and from their cars. The time of the month was chosen because it is the dark of the moon! Short wave and broad-spectrum ultraviolet lights are best. Most collectors will share their lights, but do not count on it, after all someone will need to bring a light.

**MINE HISTORY:** The mines where the dig is to be conducted are located on the Commodore fault system and date back to 1901. Mine shafts on the property have produced fluorite, smithsonite and sphalerite. Other minerals that have been found in the mine dumps include: cerussite, galena, hemimorphite, hydrozincite, quartz, & pyromorphite. Calcite is by far the most common mineral found, and all other minerals require some digging in the dump to locate.

The most common fluorescent mineral is calcite, which glows a soft to bright pearly white. There are colors other than white, but they are fewer in number. Of particular note are specimens of sandstone, which glow a coral pink to a bright red in either short wave or broad-spectrum ultraviolet light. There are also specimens that glow various shades of pale yellow and bright blue. Please note: that included in the spoil are fragments of mortar and concrete, which will also fluoresce. The concrete and mortar was made from rock from the mine.

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**Websites to visit:** Lynchburg Gem and Mineral Society:

[www.lynchburgrockclub.org](http://www.lynchburgrockclub.org)

The SFMS Newsletter, the Eastern Federation Newsletter, and the AFMS Newsletters are available for all members

to read on line at the Federation Websites:

[www.amfed.org/sfms](http://www.amfed.org/sfms), [www.amfed.org](http://www.amfed.org) and [www.amfed.org/efmls](http://www.amfed.org/efmls)

Interested in **Wildacres** or **William Holland** workshops?

Log on to the federation websites for complete details and registration forms.

## FOR SALE:

### **FUND RAISER FOR NEW LOCATION FOR J.M.U. GEOLOGY MUSEUM**

During our clubs recent field trip to James Madison University Geology Dept, we were very pleased to be given a tour of the new proposed location for the Geology Museum, in Memorial Hall, by Dr. Lance Kerns. More than a dozen large displays cases need to be purchased for the Museum. Dr. Kerns is offering for sale his collection of **The Mineralogical Record Magazines, Volume 1 thru 36 from years 1970 to the present for \$1400.00 for the complete set.** The set consists of over 210 volumes with a few extra publications from each year. I think the going price on E-Bay is over \$2000.00. If interested please contact any club officer or Dr. Lance Kerns at J.M.U. 540-568-6421; or [KEARNSLE@JMU.EDU](mailto:KEARNSLE@JMU.EDU).



## **Gem & Mineral Society of Lynchburg, VA Inc Membership Application**

*(All information for official club use only)*

Date \_\_\_\_\_

Print Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Additional Members Names:

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Other \_\_\_\_\_

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**Dues: First Person: \$15.00 per year,  
Each additional family member \$3.25**

**Mail To:**

**P.O. Box 2348**

**Lynchburg, VA 24501**

## **The Gem & Mineral Society of Lynchburg, VA Inc.**

Natalie Darling, Editor

211 Chesterfield Rd.

Lynchburg, VA 24502 [www.lynchburgrockclub.org](http://www.lynchburgrockclub.org)

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

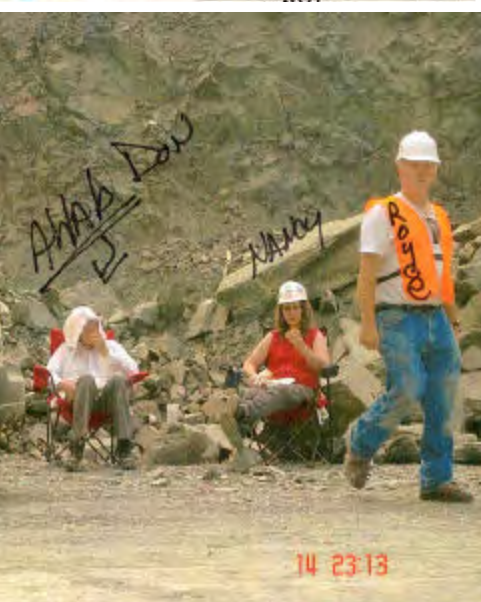


Lynchburg Rock Raiders is the official FRA association of The Gem & Mineral Society of Lynchburg, VA INC



# MT. ATHOS - DMC FIELD TRIP MAY 26, 2007

Photo collage submitted by Dee Tinsley



# Uncle Billy's Day, 2007

*Photos submitted by Don McIntyre, Dave Callahan, and Dee Tinsley*

