



Gem & Mineral Journal



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

January 2008

Volume 17 Issue 1

Presidents Message:

What can I say but that another year has come and gone and I will always remember the good rock hunting experiences of this past year. I have a couple of spots I want to return to and a couple of new ones yet to be explored. I hope that all of you are as eager to get going again as I am. We do have an indoor trip planned for January 19th to the JMU Geology Dept. I hope you can bring a specimen to be identified and enjoy the new Geology Museum. Also there are plans for a trip to Washington, DC in February.

Now I would like to say a big thank you to all of the members of the GMSL Executive Committee. My job is made a lot easier with all the hard work and good ideas by this group, and the club would not be as interesting or successful without them all. As you know all of the members of the Executive Committee will be returning again this year, except for one, I would like to welcome Tom Powers as the new Member-At-Large. I look forward to working with

them in the new year of 2008.

Question? What do you want to receive from the club? What would you like to see the club do that is new and different? If you have an idea or plan for an activity please let us know. This is your club and you have a say in what we do, how we do it and where we go on field trips. Let your voice be heard.

We had two successful festivals in 2007, Uncle Billy's Day and the Apple Harvest Festival; I feel we should do them again in 2008. We have enough material on hand to take to Uncle Billy's Day in June and with a couple of workshops we should be able to prepare for the Apple Festival. You know we want to buy or build a large diameter rock saw for club use and this could be funded by the end of the year with a little hard work and planning. This would enable us all to cut large geodes and slabs for cabs etc. I feel it will

Continued on page 14

From the First VP:

Did you know that the earth's core contains mostly iron and some nickel (5 to 15%)? The evidence for an iron core comes from cosmochemical, geochemical and geophysical studies. The core is considered to have a body-centered cubic structure. And now you know.

Since this is the beginning of a new year, I will make three resolutions for 2008. First, to follow a principle from Dale Carnegie's *How to Win Friends & Influence People*, become genuinely interested in other people. Second, to always label the rocks and minerals I collect. And third, to never turn down and always consider any and all suggestions for meeting programs. Have you made any new years resolutions?

January's presentation will be Earth Science Education in Today's Society and the new Museum of Earth Sciences presented by Steve Lenhart from Radford University. Dr. Lenhart has extensive knowledge and interest in geology and paleontology. This will be a great meeting to get all your geology and paleontology questions answered. Let's give Steve a big welcome. (See program announcement on page 3)

Hurry! Get your ugly rock in the Ugly Rock Contest. Entries are now free! And votes are free. The winner and his or her rock will be featured prominently in the next issue of this journal.

Cheers,
Steve

2008 ELECTED OFFICERS**John Haskins - PRESIDENT**

(434) 525-8430

JMHaskins1@netzero.net**Steve Boylan****First Vice President**

(434) 534-6108

boylansj@yahoo.com**David Callahan****Second Vice President**

(540) 297-1853

DBCALL1@aol.com**Dee Tinsley- Secretary**

(434) 221-0864

FlyDeeTin@gmail.com**Natalie Darling - Editor**

(434) 941-1899

gmseditor@comcast.net**Frank Midkiff- Treasurer**

(434) 239-8329

midkiff@aol.com**Members At Large-**

JoAnn Mason &

Tom Powers

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

December Meeting Minutes

Meeting: 7:00 PM, Wednesday, November 21st**Attendance:** 41 members and guests.**Hospitality:** the members who signed in on the hospitality sheet totaled at least 17, and the food was not only plentiful but also delicious.**On Time Drawing:** Won by Sherry Gaeta, Deana Doughery, Nicholas Smith, and Nell McIntyre**Old Business:** John Haskins asked that each member get their name tag from the table out front and keep it. Each member is to be responsible for wearing it to every meeting.

He also announced that Ralph Torning has made new membership fliers, new renewal forms, (to be filled out and submitted with annual membership renewals) and new brochures. Thanks to Ralph for his hard work and dedication.

First Vice President: Steve Boylan did a review of the 2007 programs and announced that the January program will be by Dr. Steve Glenhart of Radford University, speaking about the new Earth Sciences Museum they

are putting together.

Second Vice President:

Dave Callahan reported The January field trip would be to JMU to the Museum. Lab instruments will be available and specimen identification on site. There will also be surplus items, (specimens) micros, etc on hand to purchase. The proceeds will go to the museum. Feb 23, 2008 is the current scheduled date for combined trip to the Smithsonian. Please let Dave know ASAP if you wish to attend as there are only 54 seats on the bus and Roanoke members get first choice. Dave also named 24 field trip places we could go and asked the membership to let him know where they wanted to go this coming year. If you have a preference, please get in touch with Dave.

Treasurers Report: Franklin Midkiff reported a balance on hand in our treasury of \$3990.47. He stated we collected \$474.00 on the auction in November.We received a check for \$300.00 from the Roanoke Club for the Fluorescent booth we had at their November show. *Continued on page 15*

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!

The December meeting of the Gem and Mineral Society of Lynchburg was our annual Christmas covered dish dinner and social gathering. Great food and friendships were enjoyed by all in attendance, and a gift exchange was conducted for all interested members. Elections were also held, and it was by unanimous vote that the following officers were voted in for 2008:

President: John Haskins
First VP: Steve Boylan
Second VP: Dave Callahan
Treasurer: Franklin Midkiff
Secretary: Dee Tinsley
Editor: Natalie Darling



2008 GMSL Officers. Not pictured is new member at large Tom Powers.

Members-At-Large:
JoAnn Mason and Tom Powers

Photos submitted by Don McIntyre.

Additional photos on pg. 15 for electronic viewers.



Program Announcement for January Meeting

Prepared by Steve Boylan

"Earth Science Education in Today's Society" and the new Museum of Earth Sciences presented by Stephen W. Lenhart, PhD, CPG. Dr. Lenhart is Associate Professor of Geology and Department Chair at Radford University and has a B.S. from the University of Louisville and an M.S. and Ph.D. from the University of Kentucky.

Radford University Museum of the Earth Sciences

The Museum of the Earth Sciences, a component of the Department of Geology and the College of Science and Technology, serves as an educational resource for earth science related themes for the University, for K12 communities, and for the general public. Encompassing the earth science related fields of Geology, Oceanography, and Physical Anthropology, the Museum of the Earth Sciences attempts to foster an appreciation of the Earth, its past, present, and future, and its interaction with mankind. In doing so, it seeks to foster a broad based educational experience.

The following are some typical courses taught in the Geology Department. These look like some interesting courses. Sometimes I wish I could go back to school.

GEOL 212 - Mineralogy Introduces students to concepts and techniques involved in the study of minerals, both on a macroscopic and microscopic scale. Study of mineral formation, major mineral groups, their crystallography, compositions, structures, classifications, identification and environmental aspects. Techniques include microphotography and automated, digital image analysis of minerals. Introduction and demonstration of the X-Ray Diffractometer, Scan-nine Electron Microscope and Electron Microprobe as instruments for mineralogical analysis.

GEOL 312 - Petrology Introduction to composition, texture, classification, origin, evolution and distribution of the major rock groups based on established field relationships and experimental determinations. Laboratory emphasis on hand samples and thin-sections.

GEOL 335 - General Paleontology Study of fossil plant and animal phyla; emphasis on principles of paleontology as well as the taxonomic classification, principal morphologic characters and general evolutionary development of important fossil groups.

Field Trip Report

Articles and photographs Submitted by
Dave Callahan, Field Trip Chairman

POTENTIAL FIELD TRIP OPPORTUNITIES FOR THE 2008 SEASON.

This is an opportunity for your voice to be heard. Let me know your desires on field trip collecting sites, both new and old favorites and I'll attempt to obtain permission for a visit.

Here are some of the sites that I am considering for the 2008 season. Call me, Email me or let me know in person which of these you would like or dislike and please suggest new ones. As you can see there are more than we can cover in 12 months so your input will count. Those weekends that we will be out of town, I'll try to set up a local field trip for those that can't attend.

- * **James Madison University** (Scheduled for January 2008)
- * **Bus trip to Smithsonian** (Possibly February 2008 with very limited space available, 1 day trip).
- * **Chestnut Ridge** for quartz crystals
- * Our 3rd Annual **Kentucky Geode Adventure** (Probably in May this year, 3 day trip)
- * **Franklin, New Jersey** (world class fluorescent minerals, last weekend in April, 3 day trip)
- * **Spruce Pine Weekend** (the first weekend in August, 3 day trip)
- * **Diamond Hill Quartz Mine** in South Carolina, (3 day trip)
- * **Fairy Stone Park**
- * **Boxley Quarry, Beckley WVA** for fossils.
- * **Boxley Quarry, Mill Point, WVA** for red coral and fossils.
- * **Boxley Quarry, Blue Ridge, VA** for calcite, pyrite, celestite and fossils.
- * **Boxley Quarry, Mt. Athos, VA** for a wide variety of minerals.
- * **Martin Marietta, Hickory Quarry, Hickory, NC.** For calcite, stilbite and others, 2 day trip.
- * **Faber Lead Mine**
- * **Barger Quarry**
- * **American Rutile Quarry**
- * **Morefield Mine**
- * **Liggon Mine**, Amelia County for beryl, tourmaline, mica and star quartz (strict dress code)
- * **Kyanite Mining**, Willis Mountain for Kyanite.
- * **Enterprise Mine** for manganese.
- * **Standard Minerals**, Glendon, NC for pyrite. Open house usually in April and October.
- * **Vulcan Stone**, Manassas, VA. Usually prehnite and calcite.
- * **Staunton Lime Quarry**, calcite
- * **Dixie Mineral Council digs** that are available to us each month. Most will be overnights.
- * There are others but this will give you some food for thought.



Dave Callahan

Fluorescent minerals from Franklin, NJ



Daylight



UV light



Amazonite, Morefield Mine

All photos in this article are specimens collected by club members on recent past field trips.



Fossil, Mill Pt. WV



Quartz, Diamond Hill SC

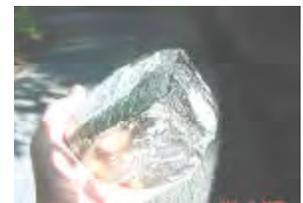


Kentucky Geode



Fossil Red Coral, WV

Giant Pyrite Crystal, Standard Minerals, NC





For further information on field trips, contact David Callahan,
540-297-1853
Email dbcall1@aol.com

**JANUARY 19, 2008 weather permitting
(9AM until NOON)
JAMES MADISON UNIVERSITY
GEOLOGY DEPARTMENT and MINERAL MUSEUM
Combined Lynchburg and Roanoke Club Field Trip**

We will all provide our own transportation and meet in the JMU parking lot in the front of the new facility, Memorial Hall (The old High School) promptly at 8:45 AM. If you need transportation or any other information, please call or e-mail me for assistance. This is Dr. Kearns only available date. If the weather is bad, use your own best judgment before driving.

JMU has a fully equipped geology lab with state of the art equipment. Dr. Kearns is well known in his profession and has generously allowed us to visit his lab, museum and dedicate this Saturday morning to our clubs.

If you have any minerals that you need to identify, bring them along. We should have time to run five or six specimens thru the x-ray diffraction equipment. There will be microscopes available and other equipment for testing and viewing. Dr. Kearns also has a large fluorescent mineral collection for our viewing pleasure. Dr. Kearns will also have some surplus mineral books, specimens, miniatures and micros for sale to benefit the museum, be sure to bring cash or your checkbook. This material will be first class.

NORTH BOUND ON I-81 DRIVING DIRECTIONS TO JMU HARRISONBURG, VA.

- * I-81 to Harrisonburg, VA. (About 2.5 hours driving time from Lynchburg and 1.5 from Roanoke).
- * Exit 245 (Turn left on Port Republic Road)
- * Proceed to S. Main Street (Rt. 11) and turn right at the light.
- * Proceed northward on S. Main Street to the third traffic light and turn left on to Cantrell Ave.
- * Proceed over the bridge to the traffic light on South High Street (RT. 42).
- * Memorial Hall (the old Harrisonburg High School) is directly in front of you. Go straight into the parking lot on your left. We will gather here at 8:45 AM.
- * To enter the Geology Department, walk around the building to the left (Grace Street Side)
- * When you enter the building, go down the flight of stairs on your left. Enter the double doors and you are in the Geology Department. Walk around to your right, and the mineralogy lab will be open.
- * The new Mineral Museum will be open so be sure to spend some time here. As you enter the building, turn right and walk to the end of the hall. The Museum is on your right.

**THE SMITHSONIAN INSTITUTE MUSEUM OF NATURAL HISTORY, WASHINGTON, DC
February 23rd, 2008**

You must contact me prior to Feb. 20th (our meeting night) to reserve your seat. After that date, any unsold seating will be offered to other clubs and the public. We must fill the bus!!!

We will depart from the Wal-Mart parking lot in Bonsack, Va. (Rt. 460 and 220A) promptly at 6AM. You can leave your car here. We should return around 11:30PM that night.

This is a field trip sponsored by the Roanoke Valley Mineral and Gem Society, and the Lynchburg Club has been invited to attend to fill any un-reserved seats. There will be a nominal fee charged. In the past it has been \$10 per seat but with the higher fuel cost this may have to be adjusted. The seating will be strictly on a first come, first served basis. Complete details will be published in the February newsletter, announced at the January and February meetings and by e-mail broadcast (if I have your e-mail address)

Contact: David Callahan, Field Trip Chairman, Phone 540-297-1853 E-mail dbcall1@aol.com

The Southeast Federation of Mineralogical Societies, Inc

The Friendly Federation - Founded in 1976 to serve.

DMC Program of the SFMS Field Trip Committee An Official Field Trip of The Rome Georgia Mineral Society (Rome, GA)(HOST)

Patty Construction Quarry Summerville Lace Agate, Chattooga County, GA February 16, 2006 ~ 9:30 AM EST

MEET: At the site, on US 27 in Chattooga Co. Ga. This is in the NW corner of the state of Georgia.

WHEN: February 16, 2006

TIME: 9:30 AM EST

Directions: From Summerville, Ga. follow US 27 South for 2.20 miles. The site will be on the right between the county owned waste dumpsters and the US Forestry office. Coming north from the Rome area, the site will be on the left side of US 27, and approximately 3.0 miles beyond the intersection of Gore Subligna Rd.

Tools: Eye protection is a must for anyone wishing to break apart material with a rock hammer, or sledge. Chisels would be valuable, as would small ground shovels and rakes. A small cart or hand truck may be useful for hauling larger pieces of take home material. Much of the material is covered with a chalky white chert, and a pail of water is sometimes handy for dipping and identifying the better material.

Other: Bring plenty of fluids. This is a good site for children. Any pets **MUST** be on a leash at all times.

Special: THIS IS AN ACTIVE QUARRY. NO ONE WILL BE ALLOWED ANYWHERE NEAR ANY OF THE MACHINERY ON THE PREMISES. ANY VIOLATION OF THIS RULE JEPORDIZES THE FUTURE OF THIS SITE.

Weather: The field trip will be cancelled if there are any winter weather advisories (watches or warnings) issued for Chattooga Co., Ga. by the National Weather Service 12 hours in advance of the meeting time, or for the date of the trip.

DMC CONTACT: Jeff Deere, Rome Ga. Mineral Society Field Chair - Home: (770) 386-5447 E mail: wjdeere@comcast.net

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

DMC Program / SFMS Field Trip committee's purpose:

To collect field trip information from it's member societies; schedule and coordinate field trip dates; disseminate field trip information to all member clubs so that each member society may publish this information as one of their "official" scheduled field trips.

2007 Field Trip Recap

Submitted by Dave Callahan

January 27th James Madison

University and Onvx Hill Quarry

February -No field trips due to unstable weather

March 3rd Smithsonian Institute Museum of Natural History

March 24th Morefield Mine

April 7th Onyx Hill Quarry

April 20-22nd -2nd Annual Kentucky Geode Adventure

April 28th Standard Minerals Quarry, Glendon, NC.

Mav 26th Our Dixie Mineral Council field trip to Mt. Athos Quarry

June 23rd American Rutile Quarry

July 21st Cotton Patch Gold Mine in NC.

August 3-5th Annual Spruce Pine, NC. Gem Show and field trips

August 25th Staunton Lime Quarry

September 22nd Kyanite Mining, Willis Mountain Quarry

October 13th James Madison University Mineral Museum

October 20th Standard Minerals Quarry, Glendon, NC.

Nov. 23-25th No field trips due to our Salem Gem Show participation

December No field trips due to unstable weather.



Executive Board Meeting Minutes

The Executive Board met at the home of Natalie Darling on January 9, 2008 at 7:00 PM.

▶ John Haskins president opened with the information found in the EFMLS News regarding IRS Filing Requirements. In order to keep our non-profit status, we must make three changes/additions to our by-laws.

The first change is to add "public" to the article that states: Purposes that are educational in nature with the **public** invited to all educational meetings.

The second states: Statement that the organization will not aid or oppose candidates for public office. (This must be added) And finally, "Statement that the organization will not to a substantial degree attempt to influence legislation. These three articles will be revised by the board and presented for the membership at our next meeting.

▶ Membership renewal forms are ready and will be sent out at renewal time. Ralph stated we currently have 166 members; 155 paid and 11 having dues due at this time.

▶ Region IV Picnic: We discussed several dates to be considered, and will attempt to reserve the shelter for one of those dates. The dates were carefully considered as not to conflict with other club functions, such as Uncle Billy's Day in June. The Lynchburg Club will provide the cost of the Shelter, the BBQ and the paper and plastic products. All participants will be asked to bring their own lawn chairs, drinks and a dish to share. The money received from the Federation for this event will be put back into the Lynchburg Club's treasury to help cover these expenses. More about the picnic to follow.

▶ Franklin Midkiff stated he had paid the dues to the Federation for the Club and that at this time he had no other bills.

▶ Dave Callahan announced that his brother, Errett Callahan might be offering a "flint knapping class" this summer. This is a result of a request from some of the Roanoke Club members. The cost will probably range from \$75-100.00, and space is very limited. If you are interested, contact Dave Callahan and get your name on the list.

▶ Dave Woolley suggested that we consider giving our speakers from Geology Departments a larger amount than the normal \$35.00 for speaking. This money could be used to defray driving costs and help their department.

▶ Dave Woolley also gave the club his informative booklet on "Geology Concepts" to publish it and sell it in book form or on CD. We will let you know when these are available.

▶ Steve Boylan announced that he would have Dr. Stephen Lenhart, Geology Professor at Radford University speak to us at this months meeting. Since Radford is building a new museum and expanding their mineral collection he asked that we donate fist sized specimens that are native to Virginia and bring them to Dr. Lenhart at the next meeting.

▶ Due to the time it will take Dr. Lenhart to travel, we will change our format so that he can speak immediately after the "on time drawing" and then we will have refreshments and our regular meeting will be the final event.

▶ Don McIntyre will install the officers during the business meeting.

The meeting was adjourned.

Respectfully Submitted
Dee Tinsley Secretary

Stages of knife manufacture-
courtesy of Dr. Errett Callahan's
flint knapping demo in 2005.
Photo by Don McIntyre



SEDIMENTS INTO SEDIMENTARY ROCK *By Dave Woolley, January 2008*

Note that all sediments may consolidate into sedimentary rock.

Coarse-Grained to Fine-Grained Sediments:

BRECCIA

Sediments are sourced from *in-place* fault **crushed and broken rock**, or from fragments gravity transported down a steep slope. Poorly sorted particle sizes, usually of a unique rock type, are very angular and non-spherical.

BOULDER, COBBLE, or GRAVEL CONGLOMERATE

Mixed-rock-type particles are derived from *nearby* sources **moved and deposited by high-velocity water**. With increased travel-distances particles are abraded smaller, becoming better size-sorted with a higher degree of roundness (rounder edges), and becoming more spherical (equal dimensional).

IMPURE SANDSTONE

GRAYWACKE

Sediments are derived from *nearby* metamorphic (or rarely basaltic) rock sources, typically deposited adjacent to a metamorphic (or basaltic) rock terrain near the edge of a small ocean basin, an inland sea, or a large lake. Sand with clay and silt sediments plus small **metamorphic or basaltic rock fragments** are often *micaceous*, dark colored, and are poorly size sorted because of a lack of winnowing currents.

ARKOSE

Sediments are quartz sand with clay and silt plus **feldspar and small rock fragments**, often lighter colored and micaceous. Sediments are derived from *nearby* granitic rock sources typically deposited adjacent to fault-generated steep slopes at the edge of a large lake or an inland sea. Particles are poorly size sorted because of a lack of winnowing water currents.

SANDSTONE (also called *arenite* or *psammite*)

White or light colored **quartz sand** from granitic terrains is derived from *distant* igneous, metamorphic, and sedimentary sources. Feldspar and mica particles are reduced by abrasion and weathering to silts and clays. Sand, well sorted to nearly one sand-sized particle, may be washed clean of silt and clay by continuing currents. Typical deposits of ocean beaches and dunes, sand and sandstones may contain or rarely be composed of other resistant granitic minerals such as garnet and rutile. Olivine, augite and other sands and sandstones occur *in* basaltic terrains: such basalt mineral particles do not survive great distances of transport.

SILTSTONE is composed predominately of silt sized sediments.

Silts and clays comprise MUDSTONE (massive) and SHALE (layered). (also called *argillite* or *pelite*)

CLAYSTONE is composed predominately of clay sized sediments.

Some particles are barely discernable without magnification: a variety of light to dark colors derived from various rock and sediment sources. Silts and clays are winnowed beyond coarse-grained sediments by decreased water velocity; typical deposit of *far-offshore* inland sea and ocean environments.

Uniquely Sourced Sediments and Sedimentary Rock:

LIMESTONE

Organically precipitated calcite and aragonite as shells, corals, bryozoans and the like, and /or chemically precipitated calcium carbonate, **calcite and aragonite mud**, are often mixed with continental sediments; marine (salt water) and rare aquatic (fresh water) environments. Particles consolidate into limestone: shells, etc., persists as fossils.

DOLOSTONE

Dolostone, usually an altered limestone, is composed at least in part of the mineral dolomite. Fossils are lost as the calcite and aragonite alters to dolomite.

GLACIAL DEBRIS

Glacial debris consists of glacially ground boulder-to-clay mixtures. The sedimentary rock, tillite, and drop stones from ice burs, plus some layered lake clays and loess, air deposited silts and clay, are of glacial origin.

Continued on page 14

Schedule of Events

January 2008

Shows and Trips

February 13, 2008 General Mineral Miner Certification in Thornburg.

Training lasts about 7 hours and certification will allow access to more mines in VA. Contact Jeffrey Stewart at 434-951-6315

January 19th- Lynchburg Gem and Mineral Society Field Trip to James Madison University Geology Department and Mineral Museum. Details on page 5.

January 26th & 27th- Venice Fl. Gulf Coast Mineral Fossil and Gem show. Contacts: Ralph & Eileen Marble 914-922-2135.

February 22nd-24th- Eastern Federation Convention in Jackson Mississippi. Details on page 11, or on the EFMLS website www.amfed.org/efmls

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Happy New Year! 		1	2	3	4	5
		8	9	10	11	12
13	14	15	16 Meeting 7 PM	17	18	19 JMU Field Trip
20	21	22	23 Woolleys workshop 7PM	24	25	26
27	28	29	30	31		

2008 SFMS Workshop Registration Time for Wildacres in Little Switzerland, NC and William Holland in Young Harris, GA.

Dates:

June 8-14 (William Holland)
August 18-24 (Wildacres)
September 15-21 (Wildacres)
October 12-18 (William Holland)

Some of the dasses offered: Beading, Cabochon making, chain making, enameling, glass fusing, lampwork, opal cutting, scrimshaw, silver smithing, wire wrapping, faceting, lost wax casting, jewelry photography, PMC, seed beading, raku pottery, gem identification/ appreciation, & metal smithing.

Cost for lodging and week of classes is \$310.00
There are also campsites at William Holland, and Day Student rates available. For complete information visit the SFMS website: www.amfed.org/sfms.

Do you have a new e-mail address?

If so, please share your new e-mail address with the club to allow us to send newsletters and special notices to you at the lowest cost. We do NOT share your e-mail address with any outsiders.

Should you have a new e-mail service or if you are not sure that we have your current one, simply send a brief message to:

lynchburgrockclub@yahoo.com. Please give your full name so that we can verify & correct your member record.

December Meeting Feast

By Anne Torning

Wow! What a feast we had at the December meeting. At least 12 members brought food and drinks and loaded up the hospitality table.

From cheesecake to cookies, to Steve Gordon's annual special home-made beef barbeque, there was an abundance of food and drink! If anyone walked away hungry from the hospitality table, it clearly was by his or her own choice.

A special "thank you" to all members who made the refreshment break at the December meeting such an overwhelming success.

Just one more reminder to be sure to sign your name on the "contributors' list" when you bring food or drink to the meetings. We want to recognize your contribution by including your name on the list that will be read by 1st V.P. Steve Boylan to the membership. It is the least we can do to recognize your generosity.

And don't forget to sign up during the break for making a donation to next month's meeting. Signing up is surely not a "legal" commitment on your part to follow through with your promise, but it helps us to get an idea about the kind of food we can expect at the next meeting. This list will be published in our newsletter that you will receive before the next meeting. You can then see what has been promised already, and if you like, you can bring something different to the meeting.

Judging by the amount of food and drink we have had at recent meetings, it is clear that we have many very generous members. If you have not yet donated food or drink to any of monthly meetings, please make it a point to bring something to the January meeting. You will feel good about it!

Happy New Year!

Anne.



Anne & Ralph Torning

January is a major dues expiration month

There are 21 primary members whose dues expire by the end of January. Some of these primary members also hold family memberships for spouses and children. Please check your GMSL membership card or name tag to see if you are one of the members who should renew their membership this month. This information is also on the upper right corner of your address label if you receive a paper newsletter. Email notification will also be sent.

To ensure that we have your latest address, phone number, and e-mail, please complete a "membership renewal form" and submit that with your dues by mail or at the January meeting. You can download the form from the GMSL web site www.lynchburgrockclub.org (go to the bottom of the Membership Information page), or pick up a copy at the monthly meeting.

The Club has a new mailing address

Please change the club's mailing address in your address book:

**GMSL
PO Box 11975
Lynchburg, VA 24506-1975**



January meeting refreshment sign ups:

Sodas: John Haskins, Natalie Darling, Anne Torning, & one unidentified donor.

Fruit: Jean Midkiff

Meats: Anne Torning

Cheese: Shirley Pettygrew

Desert: Natalie Darling

That's the list- if you didn't sign up and would like to bring something, you can use this as a guide. We would be happy to have your contributions.

Thank You!

Rock Raiders



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.

For information and more fun go to:

<http://www.sdnhm.org/kids/minerals/games/index.html>

This is a website of Mine Games and they are fun!

kids korner!

Submitted by Dee Tinsley

Kids Korner is designed for Kids
By a Kid at Heart!

MINERALS IN YOUR BATHROOM:

What minerals did you find in your toothpaste?

What kind of tooth fillings do you have?

_____ or _____

What is in your sunscreen? Was it _____?

Did your tub have porcelain?

Answers on page 12



Ammonite Facts

By Jordan Tinsley

Most ammonites lived from 2 to 4 years. If they were lucky they could live up to 6 years. Some fed on plankton, and sea lilies. They lived in the sea, searching for a place to stay for the night. They look like a funnel curving around. Its head has tentacles, and they help when they catch their prey.

Mineral Quiz

Circle your answer

1) Which of these minerals is the hardest?

Pyrite Diamond Quartz

2) This mineral exhibits more colors than any other gemstone:

Malachite Beryl Tourmaline

3) Tetragonal is:

A rock band
A crystal system
A musical instrument

4) A Rhombohedron is:

A six-sided prism
A crystal system
A rock band

5) Quartz is:

Very Rare
Very Common
Part of a gallon

Answers: Diamond, Tourmaline, A Crystal System, A six-sided prism, very common

Smithsonite $ZnCO_3$

By Natalie Darling

I have been somewhat intrigued by this mineral for several years, ever since my daughter Shannon, started pointing it out at shows, and it was always a different color. Well, the collecting began, as did the research. In summary, this is what I found:



- ▶ **Smithsonite $ZnCO_3$**
- ▶ **Hardness:** 4-4.5
- ▶ **Streak:** White
- ▶ **Colors:** shades of green, blue, purple, orange, yellow, tan, white, brown, colorless, gray, pink, and red (I don't own one of every color yet, but I'm working on it)
- ▶ **Primary Use:** Zinc Ore and specimen collecting
- ▶ **Fractures:** uneven, but cleaves perfectly in three directions forming rhombohedrons
- ▶ **Associated Minerals:** hemimorphite, cerussite, wulfenite, limonite, mimetite, dolomite, hydrozincite, aurichalcite, calcite.
- ▶ **Where it's found:** New Mexico, Colorado, Utah, Arizona, Idaho, Mexico, Greece, Poland, Belgium, and Namibia
- ▶ **Best place to get it:** look for it at local shows. You will be surprised how many affordable specimens are available. My favorite dealer: Broken Back Minerals at the Roanoke Gem Show.

Smithsonite is a form of zinc carbonate, and comes in a wide variety of colors. It gets its name from the founder of the Smithsonian Institution, James Smithson. Mr. Smithson is credited with distinguishing this mineral from hemimorphite.

The botryoidal crystals of Smithsonite have a pearly luster. The crystals form from central attachment points and grow outward toward each other. This is what gives a specimen the rolling, rounded clusters that are commonly seen. Some Smithsonite specimens (especially those from Namibia) have different crystal structures, more similar to the habits of calcite. These specimens also have a wider, deeper color range due to trace amounts of cobalt present. The wide variety and availability make this a very affordable, desirable mineral for the average collector.



Sunshine News

We are asking that you keep the following members in your thoughts and prayers: JoAnn Mason, who is recovering from a virus. Also Gina Hatcher and Ralph Torning, as both of these members have ill mothers.



Osbornite, Mineral from Wild Comet

By Don Kauffman, CPRMC

Article reprinted from November 2007 edition of *Rock Buster News*,
Publication of the Central Pennsylvania Rock and Mineral Club Inc.



Last year NASA's Project STARDUST became the first ever space probe to return commentary particles to Earth for analysis. Results of preliminary findings are already turned forgone beliefs into myths.

Initial study of first samples appears to indicate comets were not formed out of cold and inert materials such as ice and interstellar dust particles. Instead new information suggests mixed material of inner solar origins somehow reached the outer limits of our solar system and coagulated there almost 4.5 billion years ago. Then it was returned to our system by a taxing comet. (1) This theory revision was greatly aided by an other than worldly mineral found on earth, osbornite.

Osbornite is a non-radioactive mineral that may accompany two other minerals formed at very high temperatures, olivine and pyroxene. Exo-geologists are not quite certain as to how this material forms but regardless belief is that this mineral may be the key to unlocking mysteries of interstellar origins.

According to a spokesman from Livermore National Laboratory osbornite was found with meteorite debris only in Russia. (2) This claim is disputed by another source indicating the type locality occurrence in remote India. George Osborn sent pieces of the Bustee meteorite from India to London and eventually the new mineral was named after him.

Osbornite was recognized as a valid mineral species by the IMA in 1959 when it was actually discovered and described 111 years earlier. (3) This mineral falls into a class category of metallic/pre-metallic mineral mixes occupied by carbides, nitrides, phosphides and silicides. Included in the Osbornite-Sinoinite Series of compounds is quite a list of other associate minerals of extra-terrestrial origin.

Osbornite is a rarity on Earth because it is not a native component of terrestrial rocks. Essentially only stony meteorites contain this compound. (4) At least seven other earth-bound minerals arrived by meteorites.

Troilite, first noted by Italian Domeico Troili, was found at a meteorite fall in Albarete, Italy in 1766. Cohenite was noted in Magura iron meteorite find in Sianica, Slovak Republic in 1844 followed by schreibersite at the same locality in 1847. The year 1862 brought recognition of oldhamite in Pradesh, India where the Bustee meteorite was discovered followed by osbornite in 1870 at the same location. A meteorite found in 1891 lead to discovery of type locality nierite with the Indarch meteorite of the Murtar Republic, Azerbaijan. Sinoinite was discovered in a grouping of meteoritic minerals in 1964. Carlsbergite was found in the Cape York iron meteorite Savilsoak, Greenland in 1971. So we may note that osbornite is not an unusual visitor from outer space but the first mineral actually captured and carried to earth by our research spacecraft. (5)

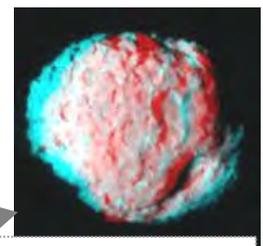
Should you discover a meteorite how do you know if osbornite is present? Keep in mind that any material would be very oxidized by its journey through our atmosphere. Look for material as a bronze to golden yellow color but don't expect to find massive amounts. Osbornite may be difficult to identify due to its opaque granular crystalline habit. Usually only use of a microscope can sort out this mineral from other associates and may appear as an inclusion of other minerals.

Osbornite has a hardness of 7 to 8.5 depending upon our reference and is of above average density for similar metallic minerals with a specific gravity of 5.3 to 5.4. (6) Both factors offer survivability of this rarity in making the journey to earth by meteoric taxi.

Hundreds of scientists are just beginning to unlock secrets of materials and minerals returned to earth by Project STARDUST and Comet Wild. Discovery of presence offers a challenge to be tested by continuing analysis of other project extraterrestrial particle treasures.

Sources:

- (1) Chang, Alicia "Study: samples of comet dust show a mix" AP story, San Francisco www.smconnect.com
- (2) Stark, Anne M. "Comet particles tell a new story about the birth of the solar system"
Livermore national laboratory News Release December 14, 2005 www.llni.gov 12/17/06
- (3) www.mindat.org 12/17/06
- (4) The mineral osbornite, www.galleries.com Minerals Galleries 12/17/06
- (5) www.mindat.org 12/17/06 (6) www.galleries.com 12/17/06



Red/green stereo anaglyph of Comet Wild 2 from
<http://stardust.jpl.nasa.gov/news/news110.html>



EASTERN FEDERATION OF MINERALOGICAL AND LAPIDARY SOCIETIES, INC



The **Mississippi Gem and Mineral Society**, in Jackson, Mississippi, will host the **Annual convention of the Eastern Federation of Mineralogical Societies February 22nd-24th, 2008.**

This will be the **50th anniversary** of this Charter Society, and their **49th annual show**. This alone should prove to be worth the trip. The show will be held at the Trade Mart Building at the State Fairgrounds, on High Street, Exit 96-A off I-20, on Saturday and Sunday, with the **EFMLS annual auction** being held at 2:00 PM on Saturday.

The host hotel is the **Regency Hotel and Convention Center**. Double room rate is \$89.00 per night for a double room. The hotel address is 400 Greymont Avenue, and you should mention the Mississippi Gem and Mineral Society when reserving your room. Please call the hotel before January 21st, 2008 at 601-969-2141 to make your reservations. The Banquet, Editors Breakfast, Cracker Barrel and registration packets will all be at the host hotel.

The **schedule of events, registration forms, and additional information** can be found on the **EFMLS web site** <www.amfed.org/efmls>
Hope to see you in Mississippi!

Presidents Message ...continued from pg. 1

add a whole new dimension to our club workshops.

The Blue Ridge Astronomy club will have as their guest speaker, our own club member David Vanaman, who will give a presentation on meteorites January 31st at the Forest Public Library beginning at 7:00PM. I hope all of you that are interested in astronomy will attend, and the Blue Ridge club will return the favor of a program for the GMSL later in the year.

There will be some additions to our By-laws & Constitution to be voted on at our January 16th meeting. I hope to see you there.

Keep Looking Down,
John Haskins

SEDIMENTS into SEDIMENTARY ROCK... continued from page 7

VOLCANIC DEBRIS Boulder-to-clay size particles of all compositions may be contained within all other sediments and subsequent sedimentary rocks except fault breccia.

EVAPORITES As ocean-water evaporates salts and minerals like gypsum and anhydrite form to be eventually contained within younger sediment layers. Borate and other minerals form evaporates in inland sea basins.

PHOSPHATES Much phosphate as collophane and apatite is derived from organic sources such as the bone and teeth of terrestrial and marine animals, deposited in certain marine sediments.

CHERTS Many sedimentary environments allow minor amounts of chert to form: masses of microscopic quartz crystals often trap other materials that offer color and texture to the mix. Some chert is composed of skeletons of microscopic silica-bearing animals, protozoa, and plants, algae.

IRON SEDIMENTS Two types are recognized the iron and chert deposits in North America of Precambrian age and more modern iron deposits found in quartz sandstones and finer grained sedimentary rock.

GLAUCONITIC SEDIMENTIS The mineral glauconite replaces clays rich in aluminum, potassium, and iron in certain marine sediments.

COAL From peat, to lignite, bituminous, and anthracite: terrestrial organics are compressed and altered from heat and the pressure of deposited overlying aquatic and marine sediments.

December Meeting Minutes

Continued from page 2

New Business: Don McIntyre closed the nominations for 2008.

They were:

Pres. John Haskins

1st VP – Steve Boylan

2nd VP – Dave Callahan

Treas. Frank Midkiff

Sect. Dee Tinsley

Editor: Natalie Darling

Members at Large are:

JoAnn Mason

Tom Powers

The motion to accept the officers as presented was made by Bill Tinsley and seconded by Fred Mason. The motion carried. Officers will be installed at the January meeting.

John Haskins asked that we remember Marcus Beale who passed away this month. Marcus was a long time member of our club and a dear friend to Dave Woolley. We all will miss him. A Sympathy card was sent to his son's home and addressed to the family from our membership.

Break was made for dinner.

The silent auction was closed and everyone went home full and happy!

*Respectfully Submitted: Dee Tinsley,
Secretary*

Free Online Gemology Course

Reprinted from Rockhounder Jan 2008-(publication of the Gem, Lapidary, and Mineral Society of Montgomery County, MD by way of Salinas Valley Rock and Gem Club Newsletter.

If you are interested in learning about gemology from a scientific rather than a commercial or artistic viewpoint, then you might enjoy this website. Included there is a series of lessons developed by Barbara Smigel, PhD, GG, and Emeritus Professor at the College of Southern Nevada. You don't need to register to use the materials contained on the site, however you can opt to register and take the full distance learning, online course for college credit. Web Lectures include the following lessons:

Lesson 1: Basic Terms

Lesson 2: Naming and measuring Gems

Lesson 3: Physical Properties of Gems

Lesson 4: Optical Properties of Gems

Lesson 5: Magnification and What it reveals

Lesson 6: Optical Phenomena in Gemstones

Lesson 7: Gem Fashioning

Lesson 8: Gem Enhancement

Lesson 9: Synthetics and Simulants

Lesson 1: Gem Formation

Also included on the site are Web Essays- one topic, pictorial essays that enrich the web lecture for each lesson and include information on specific rocks and minerals. You can follow a link to "Ask The Teacher" specific questions and actually receive an answer in response. There's also an audio pronunciation guide, and A-Z Survey of Gemstones downloadable as a power point presentation, and suggested textbooks and reading assignments if you're interested in learning more simply visit <http://www.bwsmigel.info/> to check it out.

Attention Members,

mineral collectors, field trip enthusiasts...

Here is your chance to have a specimen that you collected considered for placement in the new Museum of Earth Sciences at Radford University.

Our January 16th Program Speaker Dr. Steve Lenhart is looking for fist sized, Virginia specimens for the museum. Please bring your labeled specimen to the meeting and we will present these samples to Dr. Lenhart.

Now is the time to go through your collection and pull out a specimen or two and help get this museums display off to a great start, and help them show others some of the many beautiful mineral specimens that can be found in our area.

Wishing You and Yours A Happy, Healthy New Year!



Answers to quiz on page 10.

1. Fluorite
2. Gold or Cinnabar
3. Zincite
4. Feldspar

The Gem & Mineral Society of Lynchburg, VA Inc.

Natalie Darling, Editor

211 Chesterfield Rd.

Lynchburg, VA 24502 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



