

# GEM & MINERAL JOURNAL

MAY 2014

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Official Monthly  
Publication of the Gem &  
Mineral Society of  
Lynchburg, VA, Inc  
[WWW.LYNCHBURGROCKCLUB.ORG](http://WWW.LYNCHBURGROCKCLUB.ORG)

## Presidents Message:

Hello To All,

As I sit here and try to think of what else I can write for a May 2014 Newsletter article, I am thinking that this is my Eighty something time to tell you what the Club is doing. And you know about Uncle Billy's Day festival on June 7th, and the Club workshop is on the second Saturday of each month. Then I thought that there are many in our club that have many more years of membership under their belt, like Natalie Darling has been our newsletter editor for over 13 years, Dave Callahan, our second VP and field trip chairman has done a good job forever since I can remember. Frank Midkiff, our Treasurer has kept our finances straight for over 12 years.

There are many more doing a great job for the Club, like Jack Curtin our First VP, Linda Noble our secretary who is fairly new and Thom Noble our membership Chairman (and Franks right hand man). Bernard Rivera our member at large is a great support to the club. I know Dave Woolley is a member at large, but he and Don McIntyre are very long time members and are always ready to take on any project we throw at them, usually with good results. I can't mention everyone who contributes to the

workings of the Club, but sometimes I think it is necessary to let people know what a good job they are doing and how much we appreciate them. The GMSL is lucky to have such dedicated members that contribute their time, talent and treasures to furthering the mission of our Club and inspiring rock hounds near and far to get more involved in something they love to do. A big thank you to all and keep up the good work. The G.M.S.L. is a better Club because of you. I hope I can add other names to this list in the future.

I hope to see you all at the May 21st club meeting.  
Keep Looking Down,  
John Haskins



## From the First V.P.

Dr. Steve Lenhart, Geology professor at Radford University, will present a program entitled "All About Fossils" for our May meeting. Perhaps he'll have time to identify some fossil specimens for us.

We came back from our trip to China and Hong Kong with an interesting rock specimen. It was found on Cheung-Sha beach, the southern beach of Lantau Island across the bay from Hong Kong Island. It was just sitting in the sand about 12 feet from where the waves washed ashore. The top and bottom surfaces are relatively smooth and non-porous. That is a curiosity yet

unresolved. I have identified the rock as pumicite because the vacuoles are

less than 4mm wide. It floats on water. Nearby, about a foot or so away, laid a nice piece of granite with huge crystals. So how can an extrusive igneous rock lay as close to an intrusive igneous rock? That question too remains unanswered. The following article gleaned from Geology.Com is a great source of information on pumice and answered many of my questions about it. Perhaps you have some volcanic rocks in your collections and may wish to know more about pumice.



## April Meeting Minutes

**Meeting-** Wed. April 16, 2014 @ 7:00 PM

**Attendance-** 45 members

**Host-** Frank and Jean Midkiff were the hosts for this meeting. Paul Coviello will host the May meeting.

**On Time Drawing Winners-** Paul Peter Coviello, Linwood Hoffman, Tom Davis, Joan Moore, Malcolm Parker, Bernard, Dave Callahan, Harlan Austin, Thom Noble, Joshua Farrar, Greg Lester, Marsha Engelstad, Denise Ehlers, Frank Midkiff, Jim Mizio, Judy Browning, Leigh Ethridge, Nona Haskins, and Sharon Lester.

**Old Business-** John Haskins: Open Workshop this weekend at Dave's.

Bill Livingston brought in some free material from Appomattox Limestone Quarry to share with club members.

**First V.P.-** Jack Curtin: Not present.

**Second V.P.-** Dave Callahan: Field Trips: Someone from the Roanoke Club bought the collection from the rockhound in West Virginia and is interested in selling some of the equipment. If purchased Dave Callahan could deliver.

Upcoming field trips :

April 19<sup>th</sup> - Reel Mine in Charlotte NC;

April 26<sup>th</sup> - American Rutile Quarry;

4/26 - Sterling Hill NJ;

4/26 - Millsboro, PA to Limestone Quarry;

5/17 - Walker County Alabama Fossil;

6/7 - Marion KY fluorescent

6/7 & 6/8 - Uncle Billy's Day- need club members to help

**Treasurers Report-** Balance at this time \$6,392.98

**New Business-** Jessie and Donald talked about their trip to Wild Acres and encouraged all to go.

**Mineral of the Month-** Dave Woolley gave a nice presentation on Opals.

**Program:-**Caddisfly's with Dr.. Joe Keiper

**Minutes submitted by Linda Noble, Secretary.**

### Carnegie Museum of Natural History Acquires the Bryon Brookmyer Collection of Pennsylvania Minerals

*Museum's collection now most nearly complete and comprehensive of Pennsylvania minerals in the world*

Pittsburgh, Pennsylvania...Carnegie Museum of Natural History is pleased to announce the acquisition of more than 2,700 mineral specimens from private collector Bryon Brookmyer, making the museum's collection the premier repository of Pennsylvania minerals in the world. These specimens will aid researchers in the study of Pennsylvania mineralogy, and many will be featured in the museum's Hillman Hall of Minerals and Gems.

*More information (or to read the article in its entirety) is available by calling [412.622.3131](tel:412.622.3131) or by visiting the website, [www.carnegiemnh.org](http://www.carnegiemnh.org)*

### 2014 ELECTED OFFICERS

#### PRESIDENT

John Haskins  
(434) 525-8430

[JMhaskins1@netzero.net](mailto:JMhaskins1@netzero.net)

#### First Vice President

Jack Curtin  
(434) 384 -6249

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

#### Second Vice President

David Callahan  
(540) 297-1853

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

#### Secretary

Linda Noble  
(434) 332-4869

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

#### Editor - Natalie Darling

(434) 941-1899

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

#### Treasurer - Frank Midkiff

(434) 660-1565

[midkiffsm1@gmail.com](mailto:midkiffsm1@gmail.com)

#### Members At Large-

Bernardino Rivera &  
Dave Woolley

### COMMITTEE

#### CHAIR PERSONS:

**Field Trips-** David Callahan

**Hospitality-** Monthly Volunteers

**News Articles-** Natalie Darling

**Silent Auction-** Warren Darling

**Swap for Rocks-** Warren Darling

**Website-** Casper Voogt

**Workshops-** Dave Callahan

**FRA Adult Liaison-** OPEN

**Membership-** Thom Noble



## PROGRAMS

Our program for April was presented by Dr. Joe Keiper, from the Virginia museum of Natural History. He spoke on Caddisfly's. Thank You Dr. Keiper for presenting at our meeting.

The May program will be a presentation by Dr. Lenhart on Fossils. If you have heard Dr. Lenhart speak in the past I am sure you won't want to miss this program. We hope you can join us on Wednesday, May 21st, 2014 at 7:00PM.

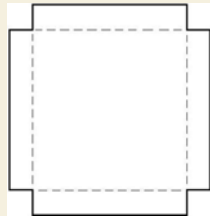
### Bench Tips by Brad Smith

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

<http://amazon.com/dp/0988285800/>

### QUENCHING

Some jewelers drop the hot piece from soldering directly into the pickle. Do you hear that little hiss? The hot piece sends small droplets of acid into the air. This can rust nearby tools and can't be all that good to breathe either. To avoid this I quench in water. A coffee cup of water at the solder station lets me cool a soldered piece before dumping it into the pickle. It's also useful for annealing metals and for cooling off tweezers.



### REVOLVING SOLDER PAD

Often when we're soldering we have multiple pieces on the pad or a single piece and would like to work on several sides of it during the same heat.

One of the ways to deal with this is to put your solder pad onto a turntable. That way you can rotate each piece into position when you need to or can rotate the pad to reach another side of a larger piece.

All you need to make one of these is a piece of aluminum sheet and an inexpensive turn table assembly. A good hardware store will have both, although you can usually find the aluminum in the scrap pile of a local sheet metal shop.

In building a turntable for my 6 inch solder pad, I used a seven inch square piece of aluminum and cut out 1/2 inch notches from each corner. Then I used a bench vice to bend the sides along the dotted lines to form a tray that cradles the solder pad. I attached the tray to the turntable assembly with a couple small machine screws and nuts.



## FIELD TRIP REPORT...

### 2<sup>nd</sup> VP Report

#### Past Field Trip

Our April 26<sup>th</sup> field trip to an old Nelson County Quarry turned out really well. The participation was good with 14. The day was clear and sunny with low humidity and no bugs and few ticks.

There were several new members and I believe they enjoyed themselves based on the rocks I saw being hauled out. Some were specimen collecting but most were after pretty yard and decorative rocks. The beautiful sky blue quartz contrasting against the white feldspar and streaks of black ilmenite, dark red rutile and gray green chlorite were beautiful.

Several members had a hard time driving out as the road in was severely rutted from the rain the day before. Those that were able to make it out found the slick road a challenge to negotiate. Those that were not so lucky were finally able to escape on level ground when the property owner finally opened the rear gate. He and I both agree that this rear gate will make a much safer and better entrance and exit point next year.

We always enjoy this annual field trip and it is a great way to start of the spring collecting season.

#### Contact Information for Field Trips

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

## UP COMING



## FIELD TRIPS...

#### UPCOMING FIELD TRIPS

I am still trying to find on a local site for our May trip but so far, no luck.

I will send out a notification by email as soon as I can obtain conformation.



**"Remember, we agreed. I'd carry the canned goods in  
if you'd carry the rocks out."**

by Ebners from Dust & Grit 2/00  
via Golden Spike News 3/00

**DMC Program of the SFMS Field Trip Committee**

**An Official Field Trip of the Georgia Mineral Society,  
Inc. - Atlanta, GA (HOST)**

**An Official Field Trip of the GMSL and RVMGS**

**This is a go-on-your-own field trip**

**10:00 AM Eastern (9:00 AM Central)**

**Saturday, May 17, 2014**

**Walker County, AL**

**Fossil Tracks and Pennsylvanian Fossils**

**WHERE:** The Steven C. Minkin Paleozoic Footprint Site in Jasper, AL. Also known as the Union Chapel Mine, this location was days away from being reclaimed when the significance of the fossils found there were realized and reclamation was halted. The site is named for the geologist who led the effort to preserve it for future study. The Alabama Paleontological Society has been instrumental in preserving the site.

**COLLECTING:** Pennsylvanian fossils, e.g. lepidodendron and calamites plus vertebrate and invertebrate tracks. An excellent field trip guide is available at the Alabama Paleontological Society's website: [http://www.alabamapaleo.org/Alabama\\_Paleontological\\_Society\\_files/Minkin%20Guide%20-%20optimized%20Apr%206%202012.pdf](http://www.alabamapaleo.org/Alabama_Paleontological_Society_files/Minkin%20Guide%20-%20optimized%20Apr%206%202012.pdf)

**IMPORTANT!!!** One of the conditions for collecting fossils here is that you must agree not to sell them. Also, some fossils may be retained by the Alabama Paleontological Society for study.

**BRING:** You will need to bring a chisel, rock hammer, small sledge, a tool for splitting shale (e.g. heavy duty paint scraper), paper for wrapping specimens, and flats for transporting specimens. Sturdy boots with ankle support (hiking boots) for climbing around rocks, gloves, and protective eyewear should be worn. There are no facilities at the site so bring your lunch, plenty of fluids, and sunscreen.

**CHILDREN:** This field trip is suitable for children but they must be supervised at all times. **PETS:** Pets are allowed if good with strangers and kept on a leash at all times. All participants must sign a form agreeing to the collecting rules.

NEW WEBSITE ADDRESS: [http://www.amfed.org/sfms/\\_dmc/dmc.htm](http://www.amfed.org/sfms/_dmc/dmc.htm)

NEW DMC EMAIL ADDRESS - [sfms-dmc@amfed.org](mailto:sfms-dmc@amfed.org)

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

**DIRECTIONS AND WHERE TO MEET:** We will be meeting at the Wal-Mart in Sumiton, AL at 10:00 am Eastern time, 9:00 am Central Time  
Approximate Coordinates: 33.744071,-87.04242

From I-20 in Birmingham:  
1) Go North on I-65 and take exit 264, 41st Ave N, (Sayreton Road or Daniel Payne Dr.)  
2) Take a left and go west for about 1 mile and turn right (north) onto Coalburg Road. Note: This area has been under construction so there may be detours.  
3) Go about 2.2 miles and turn left onto US 78 (Future I-22) and go west  
4) Go 8.5 miles and turn right (north) on OLD US 78.  
5) Go 9 miles to Wal-Mart on the right at Sumiton, AL  
6) We will meet near the gas station there (look for a white Subaru Forester with a license plate on the front that says "Run Forrest Run")

Everyone must sign in before we can caravan to the site.

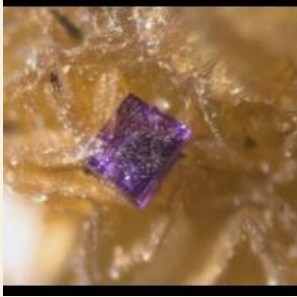
Charles Carter, GMS Field Trip Chair  
Telephone: 770-998-7949  
Cell Phone: 770-891-5947  
email: [fieldtrips@gamineral.org](mailto:fieldtrips@gamineral.org)

**IMPORTANT! Field trips are open to GMS members and invited clubs only. Failure to comply with GMS and DMC field trip leaders can/will result in immediate dismissal from the field trip site as well as potentially lead to revocation of membership.**

## A new mineral has been discovered in Australia

SCIENCEALERT STAFF

TUESDAY, 22 APRIL 2014 Submitted by GMSL member William Douglas



Meet 'putnisite', a new mineral found in Western Australia.

The new mineral is unique in structure and composition among the world's 4,000 known mineral species.

'Putnisite', described in *Mineralogical Magazine* by a visiting research fellow at the University of Adelaide, was found in a surface outcrop at Lake Cowan in central Western Australia.

After x-raying a single crystal of the mineral, Dr Peter Elliott realised it was completely unlike anything currently known.

"Most minerals belong to a family or small group of related minerals, or if they aren't related to other minerals they often are to a synthetic compound – but putnisite is completely unique and unrelated to anything.

"Nature seems to be far cleverer at dreaming up new chemicals than any researcher in a laboratory," **he said in a press release.**

Named after Australian mineralogists Andrew and Christine Putnis, Putnisite occurs as tiny crystals, no more than about 0.5mm in diameter, and is found on a volcanic rock. It appears as dark pink spots on the dark green and white rock, and under the microscope looks cube-shaped.

It's made up of an unusual combination of the elements strontium, calcium, chromium, sulphur, carbon, oxygen and hydrogen.

The researchers have yet to be determined if the new mineral will have any practical use. For now it's just wonderful to know there's still plenty left to discover in the world.

## Sunshine News



Bill Douglas informed us that his wife, Cindy Douglas passed away on Tuesday April 8. "She enjoyed being involved with the group and had great memories of the Savannah River trip."

We also learned that Franklin Midkiff is still struggling with eye problems, which required another injection. (OUCH!)

Linda and Thom Noble also had a death in their family last week.

Please keep these members in your thoughts and prayers.

Happy  
Mother's Day



Congrats  
Grads!

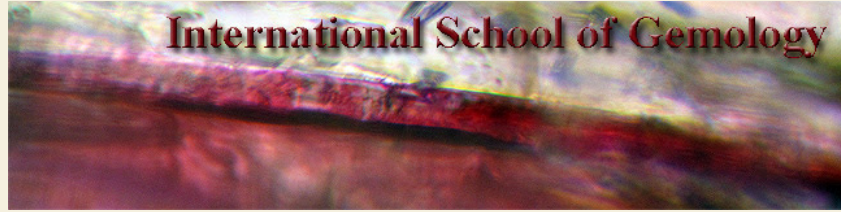


## Welcome New Members:

Adam Reynolds  
from Bedford VA

Leigh  
Ethridge  
from  
Forest VA

Joan Moore from  
Forest VA



## ISG: Proper Scientific Procedure? A publication of the International School of Gemology 7.May.2014

### *Editorial from Robert James*

On the heels of our report on the Lab Report Fantasy, the ISG was once again vilified for not following what is referred to as "proper scientific procedure" recently by a small group of "jewelry-scientists" on the industry's largest commercial internet destination. What was most interesting about this episode is that the group was more concerned about the proper use of terms like, "procedures" rather than "protocols," than they were with the issue of multi-million dollar fraud schemes perpetrated on consumers by certain members of the colored gemstone industry. The bottom line, however, was that while the ISG was correct in our research findings on a number of undisclosed gemstone treatments, we needed to once again be publicly spanked for not using what was termed as "proper scientific procedure".

With this latest ordeal, I decided to myself...."what the coprolite, let's turn the tables on these guys and put the issue on them". So....

I posted a formal request to these "jewelry scientists" to post up the formal "proper scientific procedure" in this industry for submitting any kind of problem, research or information regarding undisclosed treatments of gemstones. In other words: If they demand that we follow their "scientific procedure" then they need to spell that procedure out. Lay it down. Lay it out. Put it on the table. Put up....or shut the heck up!

Their response: Nada. Zilch. Zero. Zed. Pure silence. Not a single one could post up one sentence of exactly what is this "proper scientific procedure" that they demand we follow.

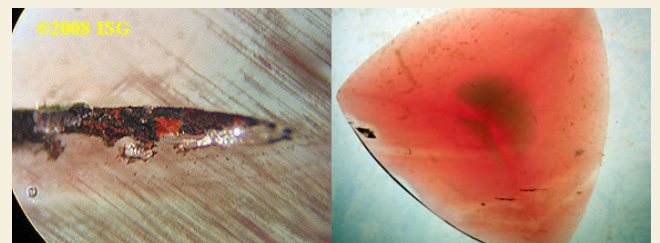
In other words....**they demand that we follow a procedure that does not exist.**

With this, I thought that today we would just take a quick look at exactly what the ISG has done over the years to try to follow any kind of procedure, and the real industry response to our efforts.

### **Tibet Andesine**

When this problem was first presented to us, it was only after the majority of consumers and jewelers had exhausted all efforts to get help with the industry "authority" organizations. When we became involved, the ISG Community invested over \$65,000.00 in research costs toward getting answers for consumers and the industry when no one else would help. I personally presented this evidence to the major colored gemstone organization that promotes itself as the industry authority in color gemstones, along with an offer to provide money and specimens to help with research....only to be turned away like some hobo at the back door asking for a hand-out. Time proved that our research was correct, but trying to follow any kind of scientific protocol with this major industry colored gemstone organization proved to be a waste of time.

In truth...there was no scientific procedure to follow.



### **Paraiba Tourmaline**

Using the scientific procedures we learned from the Tibet andesine fiasco, and once again based on consumer and dealer reports and requests, we were able to verify that tourmaline was also being artificially color enhanced. In this case, we not only provided

*Continued on page 13*

Upcoming Events

MAY 2014

**May 23-25-** Treasures of the Earth Gem, Mineral, Fossil, Bead and Jewelry Show and Sale. Salem Civic Center, 1001 Boulevard, Salem, VA 24153. Admission: adults \$5.00. [www.toteshows.com](http://www.toteshows.com)

**May 24-** 10:00 am - 4:00 PM: 25th Annual Chesapeake Gem & Mineral Show; Ruhl Armory-Towson, MD. 1035 York Rd, Baltimore, MD 21204. Free Admission, plenty of parking, top mineral dealers, original Jewelry, silent auctions, door prizes, kids area, with kids giveaways. [www.chesapeakegemandmineral.org/club-show.html](http://www.chesapeakegemandmineral.org/club-show.html)

**June 7-** Spring Mineralfest-Mineral Fossil and Gem Show sponsored by the Pennsylvania Earth Sciences Association, Macungie Memorial Park, Macungie, PA

**June 20-22-**Treasures of the Earth Gem, Mineral, Fossil, Bead and Jewelry Show and Sale- Boone NC National Guard Armory, 274 Hunting Hills Lane Boone, NC. [www.toteshows.com](http://www.toteshows.com)

**June 27-29-**Treasures of the Earth Gem, Mineral, Fossil, Bead and Jewelry Show and Sale. Augusta Expoland, 277 Expo Road, Fishersville, VA Admission: \$4.00. [www.toteshows.com](http://www.toteshows.com)

**July 12-13-** 48th Gem World Show sponsored by the Gem & Mineral Society of Syracuse. SRC Arena, Onondaga Community College, 4585 W Seneca Turnpike, Syracuse, NY

SUN	MON	TUES	WED	THURS	FRI	SAT
				1	14	15
4	5	6	7	8	9	10
	12	13	14	15	16	17
18	19	20	21 Meeting 7:00PM	22	23	24
25	26	27	28	29	30	31

ATTENTION ALL CLUB MEMBERS

Workshops will be held regularly on the second Saturday of each month at Dave Callahan's. Start time is 9:00 AM, but come anytime and stay as long as you'd like. There is a store/deli about a mile down the road if you want to break for lunch and return.

The workshops will be open format, and the purpose will be for club members to learn how to use the lapidary equipment to turn rough specimens into finished lapidary pieces for their own personal use. Experienced members will be available to help teach and assist.

We have a great set up with several sets of wheels for capping, faceting machines, saws, and much much more. From time to time there may be special class offerings, so be sure to let us know what you are interested in.

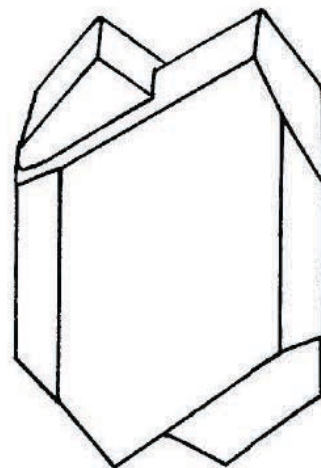
**Workshops are open to club members only, and due to liability we can not allow guests or non-members at our club workshops.** Remember, membership is just \$15.00 per year for the first family member and \$3.00 for each additional family member.



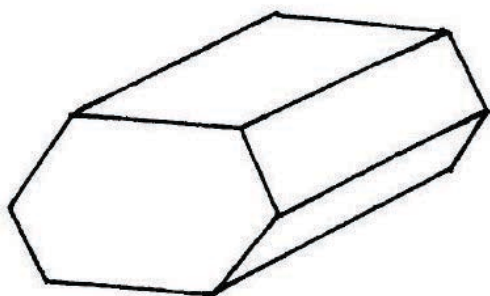
# O is FOR . . .

## . . . ORThoclase

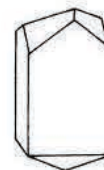
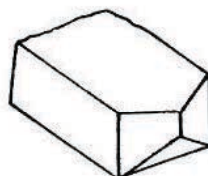
Orthoclase belongs to a group of minerals called *feldspars*. It is mixed with other minerals to make porcelain, like porcelain tea cups and saucers. Orthoclase crystals often grow together. This is called a *twinned crystal*. Orthoclase is usually white, but it can also be yellow, pink or gray.



*A "twinned" orthoclase crystal from Canada.*

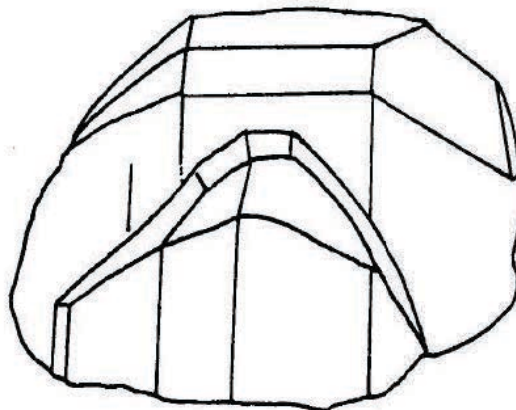


*Single orthoclase crystals from Canada.*



## . . . Olivine

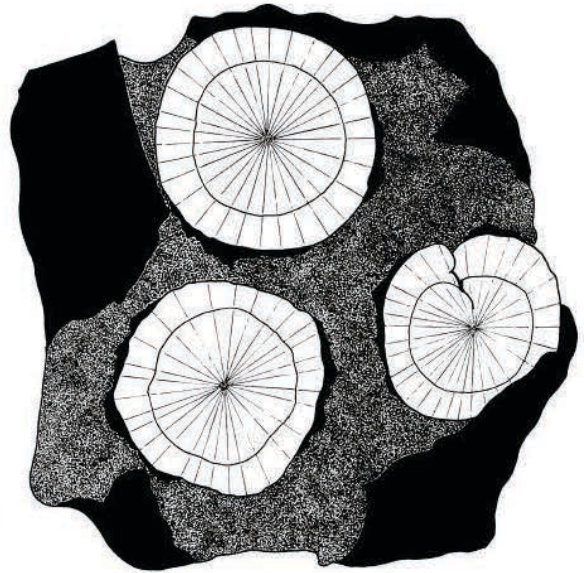
Olivine is found in igneous rocks. "Igneous" rocks are rocks that came from inside the Earth where they are so hot that they are liquid. When this liquid cools down, mineral crystals form. This olivine crystal is grass-green and is called by the special name, *peridot*.



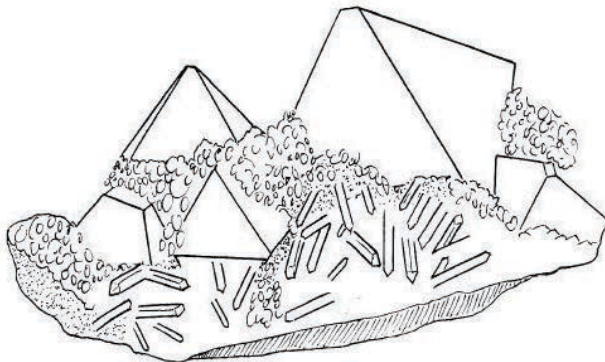
*Two unusually large olivine crystals from an island off the coast of Egypt.*

# P is FOR . . . . . . PYRITE

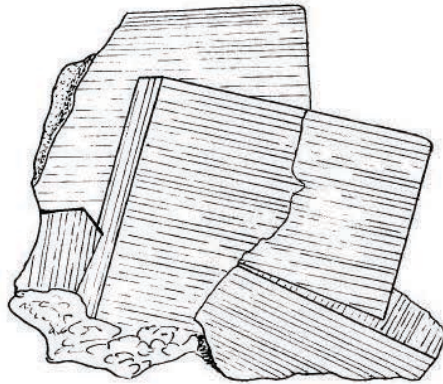
Pyrite is also known as “Fool’s Gold” because many prospectors thought they had discovered gold when they had only found . . . pyrite. Actually, gold is softer and more yellow than pyrite. Pyrite is named after the Greek word for fire because it makes a spark when it is hit with steel. Pyrite is dark yellow and has a shiny, metallic luster.



*These are called “pyrite dollars” because they look like large coins. They are from Illinois.*



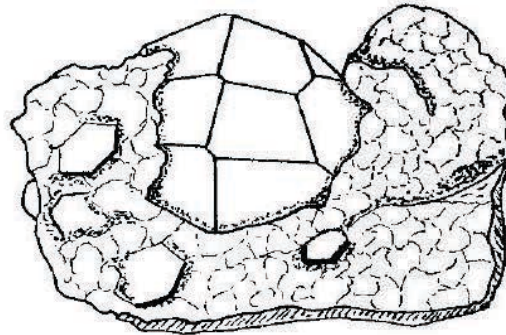
*Pyrite can form diamond-shaped crystals like these from Colorado. They are sitting on clear quartz “needles.”*



*Shiny, intergrown pyrite cubes from Colorado.*

# . . . PYROPE

Pyrope is a dark red variety of the mineral *garnet*. Its crystals are often very well-formed. It is sometimes used as a gemstone.



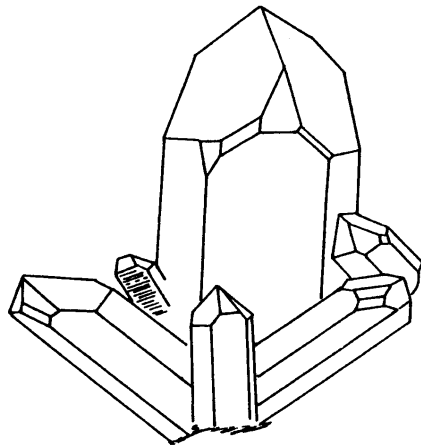
*Pyrope on gray quartz with brown mica crystals from Maine.*

# Q is FOR QUARTZ

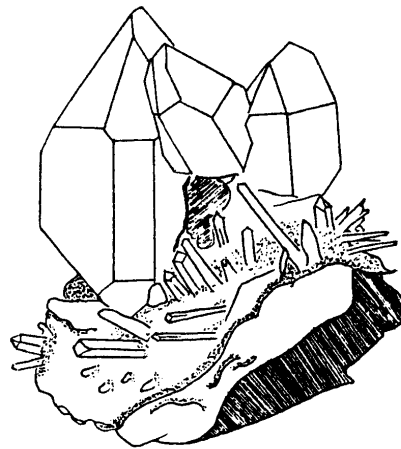


only quartz . . . and nothing but quartz

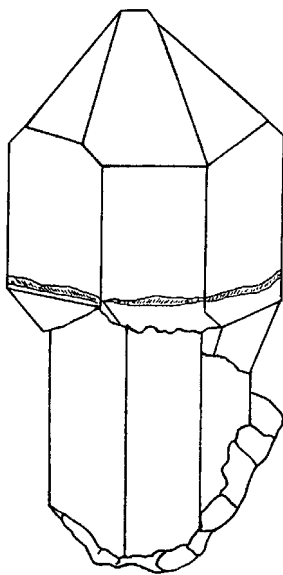
Quartz is one of the most common minerals in the Earth's crust. It is found in well-formed and often very large crystals. It comes in many colors including colorless (Rock Crystal), purple (Amethyst), brown and yellow (Citrine), black (Smoky Quartz), white (Milky Quartz), and pink (Rose Quartz). Quartz is used to make glass and jewelry. It is also used in watches and other electronic equipment.



*Quartz crystals from Arkansas.*

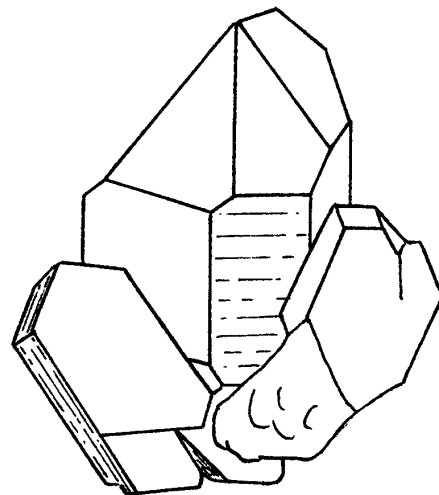


*Amethyst crystals from Mexico.*



*Quartz scepter. A scepter crystal is one in which the top is larger than the lower part of the crystal. This one is dark brown on top and black on the bottom. It is from Nevada.*

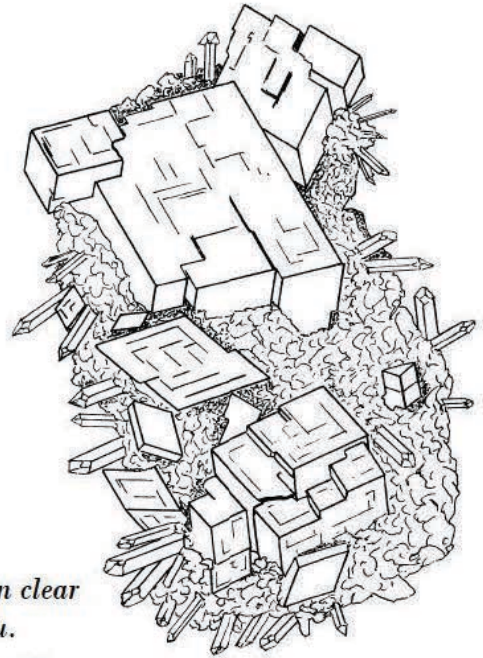
*Quartz (center) with green fluorite (right) and golden muscovite (left). From Pakistan.>*



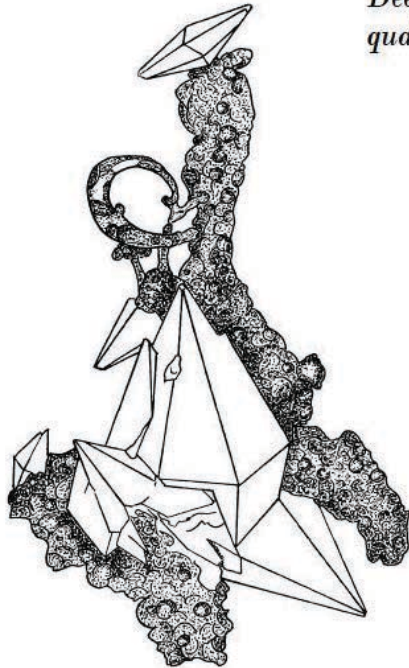
# R is FOR . . .

## . . . Rhodochrosite

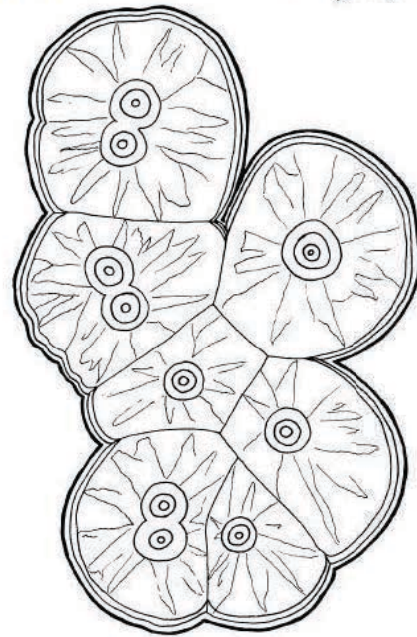
Rhodochrosite forms pink to deep red crystals. It also forms banded masses. The masses are cut, sculpted and polished. You will notice that some rhodochrosite crystals have the same “dogtooth” shape as some calcite crystals.



*Deep red rhodochrosite on clear quartz crystals from Peru.*



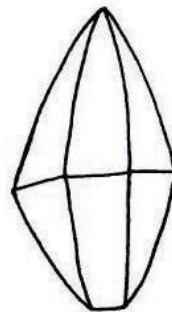
*Dark red rhodochrosite crystals on silver.  
This specimen is also from Peru.*



*A slice of rhodochrosite from Argentina.  
Each ring is a different shade of pink or red.*

## . . . Ruby

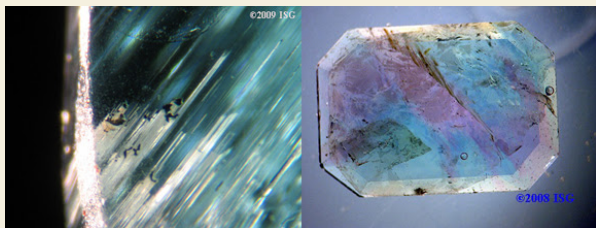
Ruby is the red gem variety of the mineral *corundum*. The only mineral harder than ruby is diamond.



## ISG: Proper Scientific Procedure?...

*Continued from page 7*

prima facie evidence of this through specimens and images like those below, we also spent over \$12,000.00 on independent scientific testing using XRF, SEM, LA-ICP-MS and other methods to verify to a scientific certainty that something artificial was being done to these tourmalines that were suddenly on the market in huge numbers and low prices. But this time, we got the "other" major organization who promotes themselves as the "industry authority" on gemology posting up rebuttal articles blaming the issues on "lateritic soil" and "radioactive liquids" that could not possibly have been the cause of these features. I was surprised not to see an article that **Death Rays From Mars** caused these tourmalines to have the anomalous colors we showed. But again, with time and the final round of LA-ICP-MS



testing...we proved that our reports were accurate.

But once again, there was no formal scientific procedure in the industry to follow.

### Tanzanite

Most recently, we received reports that off-color Pakistani zoisite was being shipped to Thailand, never to be seen again in the market. However, the Thai gem markets were selling large, nice quality tanzanite at prices below the going Tanzanian market price, and even the tanzanite "authorities" did not know where the Thai's were getting their tanzanite from. Since there is only one mine for tanzanite, and the mine operators did not know where this material in Thailand was coming from, it raised red flags here and with others. Once again, using our scientific procedure we developed with Tibet andesine, we were able to obtain specimens and proof that someone is artificially coloring zoisite to emulate tanzanite.

Owing to the amount of time I have spent tied to the whipping post of certain organizations of this industry

over the "scientific procedure" issue with our research, this time I reached out to the major industry organization who touts itself as being the foundation of the tanzanite industry. In my naivety I actually believed that this group would give us a fair and impartial hearing of the evidence, and get answers to the issues presented by the images below, which were provided to them along with specimens. But once again we hit problems. This group kept the specimens and we could not get them back, to the point that it required threats of legal action to get them back. We found that they supplied our evidence (without our approval) to the very people involved with previous gemstone fraud of Tibet andesine, and finally sent them back with literally nothing more than a note that said: "Nothing unusual". I will let you all look at the images below and see if you agree that these tanzanites from Thailand offer "nothing unusual".

Once again, there was no formal scientific procedure in the industry to follow.

Rather than any kind of proper "scientific procedure" for handling these problems by the major organizations in this industry, what we actually have is what I call the **Art of Deflection**. Deflect all problems at all costs. Don't let anything rock the boat of the market no matter how heinous or how damaging to the market or consumers. Keep the peace; keep those membership dollars rolling in.

After 6 years and just over \$80,000.00 of trying to assist consumers and the industry with these issues, I have learned three important lessons:

1. There is no oversight, no uniform standards and no effort to create either within the major organizations of this industry. When problems like Tibet andesine surface, the major organizations will spend enormous amounts of resources to quash the story and squash the messenger, rather than risk rocking the boat of the industry markets by the exposure of problems that affect consumers.
2. Gemstone dealers and jewelers need to know that faith in the major organizations to oversee the ethics and integrity of this industry...is a false hope. I have lived it first hand, on the streets and in the courts. When push comes to shove, we are on our own. The money you pay to these organizations goes toward posh office space, high salaries, fancy show designs, and little else. When asked to do the needful to get

*Continued on page 15*

## Wildacres, Spring 2014

*Submitted by Don and Jessie Dudley, Club members RVMGC*

Don and I attended Wildacres for the first time this April. We knew about it for years, and finally had the opportunity to attend.

Don chose the course in pewter working. Pewter is an alloy of mostly tin (85-99%) and copper, antimony and bismuth. Older pewters used lead to alloy the tin but this type of pewter is heavier, tarnishes quicker and becomes darker than copper alloyed pewter.

The Pewter Class at Wildacres was a 4 day class, two days before the midweek break, and two days after. 3 projects were created: a cuff bracelet, a small cup, and a vase.

Pewter is an interesting metal to work with as it does not harden. This is great while you're forming the metal but the finished item can be dented and misshapen if dropped or struck with other items.

Pewter can be welded using small pieces of pewter to fill in the planned joint. After the joint is welded it can be worked smooth with a planishing hammer and then burnished to the point that the weld does not show in the finished piece. Also the weld can be worked with the planishing hammer to create a hammered finish and the hammered finish applied to the whole project. Both techniques were used in class. Pewter can also be soldered with a lead tin alloy solder which melts at a lower temperature than the pewter and is easier rouse for some types of fabrication.

I (Jessie) chose the course in enameling. The pewter working course requires some strength and facility with a hammer and other tools which I might have been able to do before I developed arthritis in my hands, but no longer. My enameling class had no such restrictions. I did need to use round nosed pliers to bend the copper and silver cloisonné wires, but no strength was required for that.

The first day of class we learned the basics of copper enameling and safety, then began firing a piece or two. On the second day we were already working on a copper cloisonné project of our own design. This is something I had been wanting to do for some time, but had only seen videos or read about it. We finished up our copper

cloisonné project and began our silver cloisonné project in the second two day session, graduating from opaque enamels to the translucent ones. We all had several completed projects to show by Saturday evening, as did the participants in the other classes. It was amazing how much we learned and what we were all able to accomplish in the days of concentrated instruction (without TV or radios to distract).

Between the 2- two day sessions, there was a free day to do as we wished. There was a field trip to collect at the Sinkhole Mine, and afternoon of tailgating, time to enjoy the magnificent scenery from the top of the mountain where Wildacres is perched, a choice of a couple of easy projects taught by other attendees, a talk by an opal miner who attended, or the cellists. We enjoyed the performance to the two cello instructors who taught the couple dozen cellists who were sharing the week on the mountain with us. There was also a group of sculptors, who's work we did not see until Saturday.

It was a rewarding week of learning and practicing the crafts we chose, meeting a wonderful group of people in class and at meals, and getting exposure to other aspects of the lapidary and jewelry making crafts through our classes and our mineral dealer guest speaker, Leonard Himes and his wife Linda.

We are very disturbed to hear that the September session of Wildacres might be cancelled because so few people have signed up. If you have never been, talk to someone else who has. It would be a sad thing to lose the September slot permanently. Don't be deterred by the cost. Where else can you get room and board for a half day short of a week on a beautiful NC mountain top, a concentrated course on a craft of your choice, with a field trip, tailgating and an auction thrown in for \$390. plus materials cost? We can't guarantee a cello concert, but there will be another group or two sharing the mountain top while you are there, expanding your horizons.

If your interest is piqued, click the wild acres button on the EFMLS website. We plan to return and hope to see you there too.

Jessie and Don Dudley.

*Please refer to the bottom of page 15 for photographs.*



### Executive Board Meeting

May 7, 2014, 7:00 PM

Attendees: John Haskins, Thom Noble, Linda Noble, Dave Callahan, Dave Woolley, Natalie Darling, Nona Haskins and Jack Curtin.

Our By-Laws has been reviewed and changes have been made. The final copy will under go a final review and will be ready for signatures. If you would like to review the proposed changes, please refer to pages 13-14 of our March Newsletter.

John Thanked Dave Woolley, Natalie Darling and Franklin Midkiff for the research work on the projector purchased for the club.

We had a request for a program from the YMCA summer camp. Natalie, Jack, Linda, John and Dave will be presenting a program for 2 groups of children attending the YMCA Summer Camp at Sheffield Elementary School on July 9th. Any one interested in assisting for 1-2 hours, please contact any of the members above.

Uncle Billy's Day is quickly approaching. Dave Callahan discussed the need for better carrying cases for the Geodes. The group also discussed ways to display the bookends to enhance their use and make them attractive for sale at our festivals. It was suggested that they would also be good to hold DVD's or CD's.

Dave Callahan informed the group of a possibility to purchase obsidian from his brother at a good price. More to follow as we receive quantity and pricing info.

Dave Woolley will present the mineral of the month for May, and Natalie will present one in June on Meerschaum.

**Submitted By Linda Noble, Secretary**

### ISG: Proper Scientific

**Procedure?... Continued from page 13**

some serious investigation and research done, there is simply no "scientific procedure" or out there with these organizations.

3. If consumers truly knew the actual condition of this industry.....well I hate to even think about that one.

### Summation

For anyone else who ever comes to me again taunting me for not following your "scientific procedure" regarding publishing reports of undisclosed gemstone treatments....you best have (1) that procedure in your hand and ready to present, and (2) bring a few thousand dollars with you to help pay for it. If you have the procedure and the money, I will follow you straight away.

To everyone else....above all be a part of the solution, not one of those sitting on the sidelines thinking or hoping that others are taking care of the problem.

The big industry organizations want you to believe that they are somehow in control of this industry.

They are not. **You are.** Take that control and do something with it.

Robert James  
President, International School of Gemology



## Pumice

### What is Pumice?

Pumice is a light-colored, extremely porous igneous rock that forms during explosive volcanic eruptions. It is used as aggregate in lightweight concrete, as landscaping aggregate, and as an abrasive in a variety of industrial and consumer products. Many specimens have a high enough porosity that they can float on water until they slowly become waterlogged.

### How Does Pumice Form?

The pore spaces (known as vesicles) in pumice are a clue to how it forms. The vesicles are actually gas bubbles that were trapped in the rock during the rapid cooling of a gas-rich frothy magma.

Some magmas contain several percent dissolved gas by weight while they are under pressure. Stop for a moment and think about that. Gas weighs very little at Earth's surface, but these magmas under pressure can contain several percent gas by weight held in solution.

This is similar to the large amount of dissolved carbon dioxide in a sealed bottle of carbonated beverage such as beer or soda. If you shake the container, then immediately open the bottle, the sudden release of pressure allows the gas to come out of solution, and the beverage erupts from the container in a frothy mess.

A rising body of magma, supercharged with dissolved gas under pressure, behaves in a similar way. As the magma breaks through Earth's surface, the sudden pressure drop causes the gas to come out of solution. This is what produces the enormous rush of high-pressure gas from the vent.

This rush of gas from the vent shreds the magma and blows it out as a molten froth. The froth rapidly solidifies as it flies through the air and falls back to Earth as pieces of pumice. The largest volcanic eruptions can eject many cubic kilometers of material. This material can range in size from tiny dust particles to large blocks of pumice the size of a house.

Large eruptions can blanket the landscape around the volcano with over 100 meters of pumice and launch dust and ash high into the atmosphere.

The sections below give quotations from United States Geological Survey reports describing the production of pumice at two major eruptions.

### Gas and Pumice at the Pinatubo Eruption

The second most powerful volcanic eruption of the 20th century was at Mount Pinatubo in 1991. The description below explains how enormous volumes of dissolved gas powered the eruption and how a cubic mile of ash and pumice lapilli was blasted from the volcano.

"From June 7 to 12, the first magma reached the surface of Mount Pinatubo. Because it had lost most of the gas contained in it on the way to the surface, the magma oozed out to form a lava dome but did not cause an explosive eruption. However, on June 12, millions of cubic yards of gas-charged magma reached the surface and exploded in the reawakening volcano's first spectacular eruption.

When even more highly gas charged magma reached Pinatubo's surface on June 15, the volcano exploded in a cataclysmic eruption that ejected more than 1 cubic mile of material. [...] A blanket of volcanic ash and pumice lapilli blanketed the countryside.

Huge avalanches of searing hot ash, gas, and pumice roared down the flanks of Mount Pinatubo, filling once-deep valleys with fresh volcanic deposits as much as 660 feet thick. The eruption removed so much magma and rock from below the volcano that the summit collapsed to form a large volcanic depression 1.6 miles across." [1]

### Mount Mazama Eruption (Crater Lake)

"The cataclysmic eruption of Mount Mazama 7,700 years ago started from a single vent on the northeast side of the volcano as a towering column of pumice and ash that reached some 30 miles high. Winds carried the ash across much of the Pacific Northwest and parts of southern Canada. So much magma erupted that the volcano began to collapse in on itself. As the summit collapsed, circular cracks opened up around the peak. More magma erupted through these cracks to race down the slopes as pyroclastic flows. Deposits from these flows partially filled the valleys around Mount Mazama with up to 300 feet of pumice and ash. As more magma was erupted, the collapse progressed until the dust settled to reveal a volcanic depression, called a caldera, 5 miles in diameter and one mile deep." [2]

*Continued on page 17*



**Composition of Pumice** *Continued from page 16*

Most pumice erupts from magmas that are highly charged with gas and have a rhyolitic composition. Rarely, pumice can erupt from gas-charged magmas of basaltic or andesitic composition.

**Pumice Has a Very Low Specific Gravity**

The abundant vesicles in pumice and the thin walls between them give the rock a very low specific gravity. It typically has a specific gravity of less than one, giving the rock an ability to float on water.

Large amounts of pumice produced by some island and subsea eruptions will float on the surface and be pushed about by the winds. The pumice can float for long periods of time - sometimes years - before it finally becomes waterlogged and sinks. Large masses of floating pumice are known as "pumice rafts." They are large enough to be tracked by satellites and are a hazard to ships that sail through them (see images at right). [3] [4]

**Uses of Pumice**

The largest use of pumice in the United States is the production of lightweight concrete blocks and other lightweight concrete products. When this concrete is mixed, the vesicles remain partially filled with air. That reduces the weight of the block. Lighter blocks can reduce the structural steel requirements of a building or reduce the foundation requirements. The trapped air also gives the blocks a greater insulating value.

The second most common use of pumice is in landscaping and horticulture. The pumice is used as a decorative ground cover in landscaping and planters. It is used as drainage rock and soil conditioner in plantings. Pumice and scoria are also popular rocks for use as substrates in hydroponic gardening.

Pumice has many other uses. Together these account for less than a few percent of consumption in the United States, but these are the products that most people think of when they hear the word "pumice."

Lots of people have found small pumice pebbles in the pockets of brand new "stone washed jeans," and almost everyone has seen the famous "Lava Soap" that uses pumice as an abrasive. Below we list these and some of the other minor uses of pumice (in no particular order). [5]

- an abrasive in conditioning "stone washed" denim
- an abrasive in bar and liquid soaps such as "Lava Soap"
- an abrasive in pencil erasers
- an abrasive in skin exfoliating products
- a fine abrasive used for polishing
- a traction material on snow-covered roads
- a traction enhancer in tire rubber
- an absorbent in cat litter
- a fine-grained filter media
- a lightweight filler for pottery clay

**Pumice and Pumicite Production**

Pumice is produced in two forms: rock pumice and pumicite. "Pumicite" is a name given to very fine grained pumice (less than 4 millimeters in diameter down to submillimeter sizes). The word can be used synonymously with "volcanic ash." It is mined from volcanic ash deposits or it can be produced by crushing rock pumice.

About 500,000 metric tons of pumice and pumicite were mined in the United States in 2011. The total value of this pumice was about \$11,200,000 or an average of about \$23 per ton at the mine. The producing states were, in order of decreasing production:

- Oregon
- Nevada
- Idaho
- Arizona
- California
- New Mexico
- Kansas



IDr. Lenhart has answered on of my questions. He says, "You can conceivably find any kind of rock next to any other kind of rock at a beach, especially when one of them is pumice which floats and can be washed upon a beach." Why didn't I think of that?? I will bring this pumicite rock to our next meeting. It's amazing what one can stumble across.



Happy Hunting,

Jack Curtin



## From The Eastern Federation...reprinted from EFMLS News, May 2014

### **A working Vacation** By Betsy Oberheim

It sounds like an oxymoron; "working vacation", but it really describes the wonderful week I just spent in North Carolina! First the "vacation" aspect, it is truly a beautiful retreat from the hassles of life. No phone, TV, radio, etc.; instead the company of other rockhounds, lovely view of dozens of mountains in every directions, bird songs, excellent food, hiking, field trips, pleasant room, sweet roommate, (Isabella), etc. There are so many fun activities available; such as tailgating, talent (?) show,

auction, or just hanging out in the cantina. As a vacation it is well worth the price- but the "working" part is an

added treat! I took Pewter Fabrication and learned so much about working with that tricky metal. We shaped, filed, soldered, welded, and surface treated. I was so amazed at what I was able to do (with Bruce Gaber's skillful assistance).

We also had a wonderful speaker; Leonard Himes, a mineral dealer and educator. He told us about many interesting aspects of his job. I really learned a lot! I just wish more people could experience the wonderful "working vacation" that the Brandon's and I did at Wildacres!

## **WE Need YOUR Help!**

by Steve Weinberger, Wildacres Chair

You've read Betsy's lovely article about our just concluded spring session. Those in attendance had a fabulous time! Now we need your help to allow it to continue.

Wildacres has been a tremendous resource to members of EFMLS clubs. It has been a source of education, inspiration, and joy over these past 42 years.

Unfortunately, our fall enrollment numbers are currently low- too low, in fact, to justify going through with our planned fall session.

To this end, I am asking all EFMLS current and past officers (especially regional vice-presidents), committee chairmen, club officers, former attendees and anyone else who knows just what a fantastic resource Wildacres is to us to help us get the word out NOW!

If we do not get sufficient registration by early summer, we will have to do the unthinkable, namely cancel our fall session. If we do this, who knows what the future will be?

I urge you now to do everything that you can to insure that we can continue this fantastic opportunity for members to enrich their lives by attending, learning, and enjoying our two sessions at Wildacres.

Full details on cost, class selections, etc, are on our website. ([efmls-wildacres.org/](http://efmls-wildacres.org/)).

Lets be sure that we did all that we could to insure that our sessions at Wildacres did not become just a fond memory.



## 10 Most Deadly Rocks and Minerals~Part II

<http://listverse.com/2013/03/07/10-most-deadly-rocks-and-minerals/>

submitted by Dee Tinsley to be continued from our April 2014 Issue.



**#5 Arsenopyrite** is fool's gold, but with a difference. One would not just be a fool to mistake it for gold. Equally foolish would be a decision to pick up this mineral on a hike at a quarry, and proceed to use your hands to put trail mix in your mouth. Arsenopyrite is arsenic iron sulfide, which is the same type of mineral as pyrite (fool's gold, iron sulfide), but with a heavy addition of arsenic. If one attempts to heat or in any way alter the mineral, a strong garlic odor of arsenic will be produced as lethally toxic, corrosive and carcinogenic vapors are released. Just handling the mineral brings one into contact with unstable sulfuric arsenic salts. Interestingly, arsenopyrite may be identified by striking a specimen with a hammer. The powerful garlic odor of arsenic can be briefly detected as the sparks fly.



**#4 Torbernite** is the mineral from hell. The prism shaped green crystals form as secondary deposits in granitic rocks, and are composed of uranium. Formed through a complex reaction between phosphorous, copper, water and uranium, the stunning crystal displays have seduced many mineral collectors into taking a sample for a shelf collection. If the uranium decay from a pocket sized Chernobyl were not enough, lethal radon gas capable of causing lung cancer slowly releases from these hot rocks. This is one crystal to leave alone.



**#3 Stibnite** is antimony sulfide, but it looks like silver. For that reason, the huge, shining metallic crystals of this unstable compound were once fashioned into magnificent eating utensils. But the sword shaped crystals bore the powers of death to those who used them. Stibnite's **antimony** laced crystals killed a number of people before it became known that use of the mineral was causing food poisoning of the worst kind. Even in collections, stibnite samples should be handled with great caution to avoid poisoning. Hand washing is advisable after any contact.



**#2 Orpiment-** The only thing worse than arsenic itself could be a rock made from arsenic and sulfur. The **lethal** and chemically reactive orpiment crystals are found growing below the surface in mineral formations, often near hydrothermal vents. The colors are seductive, but holding the crystals in your hands may release carcinogenic, neurotoxic arsenic powder. Like cinnabar, the Chinese made extensive use of this mineral, but to far more terrifying ends. The mineral was used as a primary component of ochre paint, and likely poisoned many of the artists who used it.



**#1 Cinnabar** (mercury sulfide) is the single most toxic mineral to handle on Earth. The name of the crystal means dragons blood, and it is the main ore of mercury. Forming near volcanos and sulfur deposits, the bright red crystals signal danger of the worst kind. Cinnabar may release pure mercury if disturbed or heated, causing tremors, loss of sensation and death. Some ancient medical practitioners believed cinnabar held healing powers, and prescribed it for certain conditions.

*To read the article in its entirety and view larger images, please visit the website listed below the title of the article.*

Natalie Darling, Editor  
211 Chesterfield Rd.  
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The purpose of the Gem & Mineral Society of Lynchburg, VA is to promote education in The Earth Sciences, including: Mineralogy, Geology, Gemology, Paleontology, and



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



**MEETING LOCATION**

Lynchburg Parks and Recreation  
Fairview Center  
3621 Campbell Ave.  
Lynchburg, VA



**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