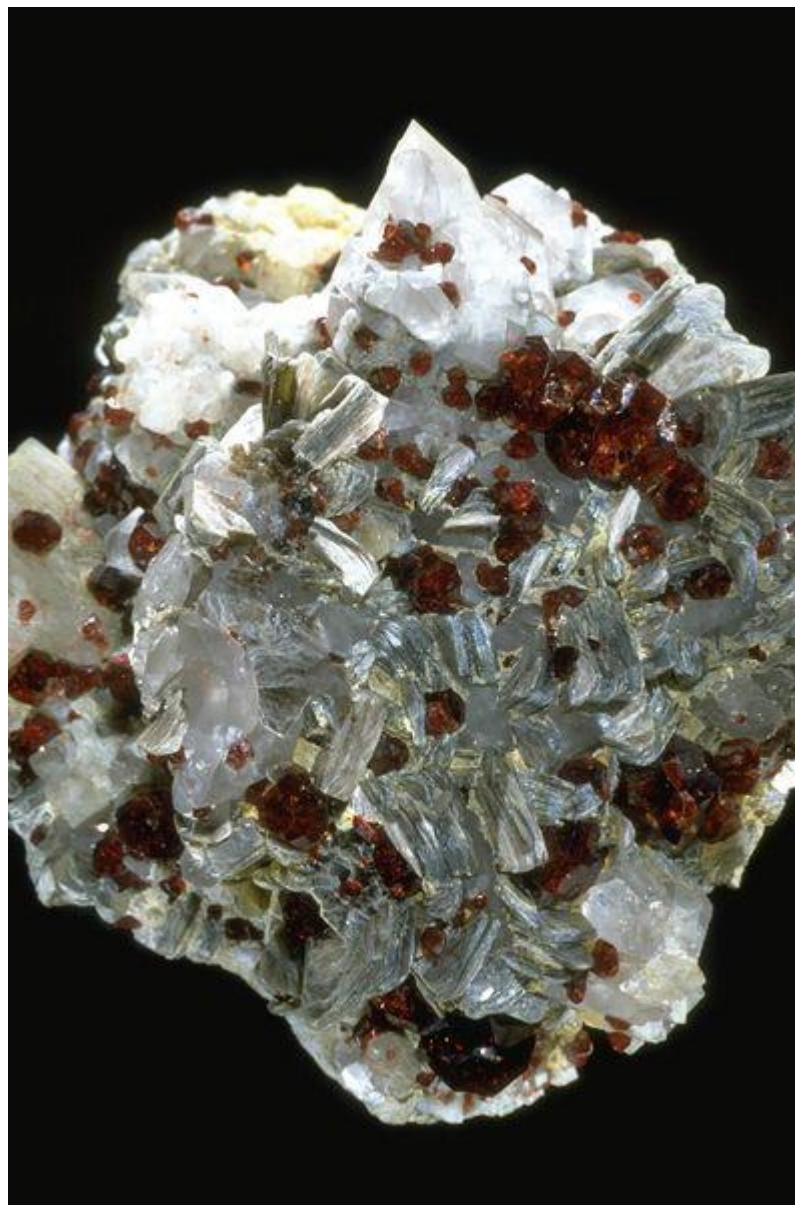




# The Mineral Newsletter

**Meeting: October 24    Time: 7:45 p.m.**

Long Branch Nature Center, 625 S. Carlin Springs Rd., Arlington, VA 22204



Volume 57, No. 8

October 2016

Explore our [Website!](#)

## October Program:

**Geologic History of the Valley and Ridge**

### In this issue ...

Mineral of the month: <b>Spessartine</b> .....	p. 2
October program details.....	p. 3
The Prez Sez .....	p. 3
September meeting .....	p. 4
Club officer elections coming up .....	p. 4
Holiday party coming up .....	p. 5
<b>25<sup>th</sup> Annual Mineral Show—Volunteers needed!!</b> .....	p. 6
Sad news about Fred Schaefermeyer .....	p. 8
Road trip coming up.....	p. 9
EFMLS: Safety matters .....	p. 9
AFMS: Code of Ethics .....	p. 10
The Estes Quarry in Maine .....	p. 11
Webelos Scouts learn geology .....	p. 12
African stone types .....	p. 13
Upcoming events .....	p. 15

**Spessartine**  
garnet on muscovite

*Smithsonian National Mineral Collection. Photo: Chip Clark.*



## Mineral of the Month

### Spessartine

by Sue Marcus

Lovely spessartine can't seem to keep a name. This member of the garnet family was always known from the Spessart Mountains of Germany, although Martin Klaproth originally named it *granatförmiges Braunsteinerz* ("granite-shaped manganese ore") in 1797. The name became "manganesian garnet" in 1823 before François Sulpice Beudant, in 1832, bestowed its current name of spessartine, for the original locality.

Spessartine can be found in all major rock types—in metamorphic and igneous rocks as a primary mineral. In sedimentary rocks, it erodes from the other rock types and is deposited in the sediments.

As part of the Garnet Group, spessartine shares elements with a spectrum of others in the group, such as pyrope and almandine. All may form gem-quality materials. A mixture of pyrope and spessartine called Malaya garnet (an unofficial name), from Tanzania and Kenya, is used in jewelry. Malaya garnets occur in unique and rare colors, like pink-orange, red-orange, and yellow-orange.

A different rare hybrid of spessartine and pyrope is reported by gemselect.com. This variant changes color, depending on the light source. The hybrid is not truly pleochroic, because "pleochroic" applies only to doubly refractive minerals and these garnets are singly refractive.

China has been a recent source of beautiful spessartine specimens. The bright orange-red spessartine crystals stand out against white albite. The pegmatites of Afghanistan, Brazil, and Pakistan are also significant spessartine producers. An orange variant is found in Madagascar; closer to home, violet-red spessartines come from Colorado and Maine. San Diego County, CA, has been the main spessartine producer in the United States, with an estimated 40,000 to 50,000 carats of faceting-grade rough material mined between 1956 and 1994.

A challenge for collectors is knowing when the garnet you found is spessartine. It is usually impossible to tell without extensive and often expensive analysis. My rule of thumb—and it is no more than that—is to find well-referenced literature on the collecting locality and go with what is given there. That may be

## Happy Halloween!



### Northern Virginia Mineral Club members,

Please join our October speaker, Professor Shelley Jaye, for dinner at the Olive Garden on October 24 at 6 p.m.

*Olive Garden, Baileys Cross Roads (across from Skyline Towers), 3548 South Jefferson St.  
(intersecting Leesburg Pike),  
Falls Church, VA  
Phone: 703-671-7507*

Reservations are under Ti Meredith, Vice-President, NVMC. Please RSVP to me at [ti.meredith@aol.com](mailto:ti.meredith@aol.com).

the wimpy route—you may have found something new for your locality, though getting it verified as such may be difficult.

Technical details (source mostly Mindat (2016)):

Chemical formula .....  $\text{Mn}_3^{2+}\text{Al}_2(\text{SiO}_4)_3$  (good luck printing that one!)

Crystal form ..... Isometric

Hardness ..... 6.5–7.5

Density ..... 4.12–4.32 g/cm<sup>3</sup> (measured)

Color ..... Usually deep or dark red, to slightly purplish red, brown, less frequently orange

Streak ..... White

Cleavage..... None

Fracture ..... Subconchoidal

Luster ..... Vitreous

While looking at sources for this article, I noticed that even high-level dealers like John Betts listed many of the garnet specimens as "Almandine-Spessartine," presumably because it was somewhere along that part of the Garnet Group spectrum. Garnets are relatively easy and fun to find, so happy and safe collecting! ↗

### Sources

GemSelect. 2016. [Spessartite garnet gemstone information](#).

GemSelect. 2016. [Pleochroic gemstones](#).  
Laurs, B.M.; Knox, K. 2001. [Spessartine garnet from Ramona, San Diego County, CA](#). *Gems and Gemology* 37(4).  
Mindat. 2016. [Spessartine](#).  
Minerals.net. 2016. [The mineral spessartine](#).  
Wikipedia. 2016. [Spessartine](#).

## **The Geologic History of the Valley and Ridge (as Recorded in the Rocks of Corridor H, WV) October 24 Program**

**P**lease join Professor Shelley Jaye for a fascinating exploration of the geologic history of the Valley and Ridge Province, as exposed in the rocks of Corridor H in West Virginia. If you've missed Shelley's field trips along the corridor, here's your chance!

Shelley began her exploration of the geosciences at a community college in suburban Detroit, MI. She attended Wayne State University in downtown Detroit, where she received both her B.S. and her M.S. degrees in geology. She conducted field research studying early Paleozoic metasediments and metavolcanics on the island of Spitsbergen in the Svalbard archipelago, north of Norway.

After graduating, she took a position with the U.S. government as a program manager in what is now the National Geospatial Intelligence Agency. That career was exciting and rewarding but also stressful and time intensive.

By the late 1990s, with two small children, Shelley decided to change careers. She began teaching Earth Science at Potomac Falls High School in Sterling, VA. After a move to the Norfolk, VA, area, Shelley began teaching geology at Tidewater Community College. One step back into the community college environment and she knew that she found the perfect second career.

Shelley is now at the Annandale Campus of Northern Virginia Community College teaching mineralogy as well as physical and historical geology. She is always trying to find opportunities for students to conduct real research. ↗

**Note: To avoid any conflict with Thanksgiving, next month's meeting will be on November 14.  
Mark your calendar!**

## **Smithsonian Photos Have Changed**

*Hutch Brown, Editor*

Cover photos for *The Mineral Newsletter* typically show specimens in the Smithsonian National Mineral Collection. In case you wondered, the Smithsonian has revised its online collection of photos; the photo on page 1, for example, is no longer in the online [Smithsonian Mineral Gallery](#).

The Smithsonian might be simply updating its records. George Loud pointed out that "the Smithsonian stibnite shown on page 1 of the May newsletter is the same specimen pictured on a Smithsonian postcard, which no longer exists (it was dropped and shattered)." The lost stibnite is shown below.



## **The Prez Sez**

*by Bob Cooke*

**W**e're in the final countdown. The club's 25<sup>th</sup> Annual Gem, Mineral, and Fossil Show is almost upon us! Please, please, please sign up to volunteer at: <http://signup.com/go/RzFiiS>.

This show is the one fundraiser that provides the monies for all other NVMC activities. We need it to come off without a hitch. And this year we're without some of the key personnel we had in prior years. Do I sound desperate, frantic and worried? I am. We need everyone to pitch in!





In addition to the Mineral Show in November, we have lots of other club activities. There's a field trip to the Vulcan quarry in Manassas on the October 15; and we're invited to a GLMS-MC field trip to the National Limestone Quarry on October 29.

The October meeting will feature a presentation by Professor Shelley Jaye on the geologic history of the Valley and Ridge, as displayed along Corridor H in West Virginia. With a little luck, we will get Shelley to lead us on a field trip to this area, which is only 2 hours away. She can explain firsthand the complex rock strata shown in roadcuts, documenting the assembly of the Pangaea supercontinent (the mountain-building event that created the Appalachian Mountains) as well as the ultimate breakup of Pangaea. ➤



### **September Meeting Minutes September 26, 2016**

*by David MacLean, Secretary*

**P**resident Bob Cooke called the meeting to order at 7:30 p.m. at the Long Branch Nature Center, Arlington, VA.

The minutes of the June 2016 meeting were approved as published in the September 2016 newsletter. The president recognized guests Alanna, Alexander, and William Anise.

### **Old Business**

Tom Taafe, annual club show chairman in November, said that only five people had signed up online to help at the show. He said NVMC needs many more people to sign up. We need people to set up the show on Friday evening, November 18; to run the show on Saturday and Sunday, November 19–20; and to take down the show on Sunday evening. Cards with information about the show were offered to club members to distribute.

### **New Business**

By motion duly made and seconded, the members approved the board-recommended addition of \$400 to the 2016 budget to support the club representative who represented NVMC at the summer 2016 AFMS annual meeting in Oregon.

To avoid conflict with Thanksgiving, the club's November meeting date has been moved to the 14<sup>th</sup>.

## **CLUB OFFICER ELECTIONS COMING UP!**

It's that time of year again!

At the December club meeting, we will elect club officers for 2017. We need candidates for president, vice-president, secretary, and treasurer.

As chair of the nominating committee, I am asking club members to step forward to help. We need a mix of long-term club members and newer members in officer positions so we can both offer ... *and* develop ... the leadership we will need for the future. It goes without saying that former club officers are willing to mentor new officers as needed.

Self-nominations are welcome, as are nominations by friends! So please step up, folks!

Send all nominations to me at  
[d8olite@fastmail.fm](mailto:d8olite@fastmail.fm).

Wayne Sukow  
Chair, Nominating Committee

### **Announcements and Recognitions**

A field trip to Manassas quarry (for diabase minerals such as prehnite, apophyllite, calcite, and zeolites) will begin at 7 a.m. on Saturday, October 15. Full safety gear is required.

Walter Cox broke his leg at Wildacres in September and is recovering at Goodwin House.

Club members enjoyed the multiclub field trip on September 17 to the Willis Mountain kyanite quarry near Dilwin, VA. It was a "good experience!"

A card for Fred Schaefermeyer, originator of the club's Fred C. Schaefermeyer Scholarship Fund, was circulated for signatures and well wishes. At the time of the meeting, Fred was in the hospital in Denver, CO.

By motion made and seconded, the business meeting adjourned, with the September club auction to follow.

### Auction

The fall auction was the second for the year; each year, the NVMC conducts two auctions (in spring and fall) of minerals, fossils, lapidary material, and jewelry. The 15-percent NVMC commission on all sales goes into the Fred C. Schaefermeyer Scholarship Fund.

The most noteworthy item on sale was an old dark woodframe student analytical balance, with pans and weights in the drawer. From its appearance and design, the balance might date to before 1930. There was also a historic Ward's catalogue.

Bidding overall was lively, and all items received bids, including minerals, jewelry magazines, and pamphlets. ↗

### Annual Holiday Party



Our 2017 Holiday Party will be held on Monday, December 19, at the Long Branch Nature Center. As in previous years, this will be a joint event with our sister club, the Micromineralogists of the National Capital Area.

Due to the Christmas holidays, we have moved the date forward one week from the usual fourth Monday (which would have been the 26<sup>th</sup>). The club has budgeted \$350 for the party, and we need volunteers to convert money into a party.

In previous years, Sue Marcus has served on the committee, and she has generously agreed to share her experience and knowledge with this year's committee, but she is not able to be the Committee Chair. If you can assist in planning this year's event, please contact Bob Cooke at [rdotcooke@verizon.net](mailto:rdotcooke@verizon.net).



*Scenes from the fall auction ... thanks to Sheryl Sims and Ti Meredith for the great photos!*





## Club Show Coming Up! November 19–20, 2016

by Tom Taaffe, Show Chair

The NVMC holds its 25th Annual Gem, Mineral, and Fossil Show on November 19 and 20 at George Mason University. The show site will again be the Hub's Ballroom. Setup is Friday evening, November 18, starting at 5:30 p.m.

### SHOW VOLUNTEERS NEEDED !!

We will need a host of club volunteers over the course of both show days to perform tasks and fill positions. We encourage volunteers to sign up for shifts of at least 2 hours—more, if you can manage it. We are very grateful to all the volunteers who so generously helped out at past shows, and we hope that many of you return to help us again at the 2016 show.

We need volunteers for the tasks and activities summarized below. If you can volunteer or have any questions, please contact Tom Taaffe at [rockcllectr@gmail.com](mailto:rockcllectr@gmail.com) or call me at 703-281-3767; you can also text me at 571-345-5310. In addition, you can volunteer by contacting NVMC President Bob Cooke at [rdotcooke@verizon.net](mailto:rdotcooke@verizon.net).

**Friday Night Setup (A):** Volunteers bring materials from the club's storage unit to the Hub, arriving by 5–5:30 p.m. Materials include exhibit cases, heavy-duty electrical cords, table coverings, and miscellaneous supplies; mineral specimens for the auction and for the Kids' Mini-mines, plus materials for the kids' activity room; and campus directional signs. This task typically requires 2 to 3 vehicles and their drivers, depending on the size of the vehicles. The club storage unit is conveniently a few miles from GMU.

**Friday Night Setup (B):** Starting about 5:30 p.m. at the Hub Ballroom, volunteers arrange the exhibit room layout and put up the exhibit cases. They also set up the kids' activity room with all the tables, quizzes, Mini-mines, and workstations. Other tasks include arranging and securing heavy-duty electrical cords in the ballroom and making sure that the table floor plan is accurate.

**Admission Desk:** Volunteers greet show attendees, collect admission, and issue door prize tickets. You

### Annual Gem, Mineral, and Fossil Show Participating Dealers

Alan's Quality Minerals—Ewing, NJ  
Arrowwood Minerals—Richard Ertel, Lexington, VA  
John Culberson, Arlington, VA  
Jon Ertman, Rockville, MD  
Robert Farrar, Bowie, MD  
The Garnet Group—Casper Voogt, Sterling, VA  
Geosol Imports—Rob Evans, Hawley, PA  
Hartstein Fossils—Newark, DE  
Dave Hennessey, Woodbridge, VA  
Jan Minerals—Jehan Sher, Stafford, VA  
KBT Minerals & Fossils—Tom Taaffe, Vienna, VA  
George Loud, Hilton Head Island, SC  
The Mineral House—Tom & Pam Kottyan, Bucyrus, OH  
The Prospector Shop—Marianne Cannon, Ligonier, PA  
Barry Remer, Reston, VA  
Mike Shoemaker, Manassas, VA  
Wayne Sukow, Fairfax, VA  
Yinan Wang, Arlington, VA  
Williams Minerals—Rio, WV

can sign up for slots on Saturday from 10 a.m. to 5:30 p.m. and Sunday from 10 a.m. to 3:30 p.m.

**Kids' Activities:** Volunteers administer mineral- and fossil-related quizzes, manage the Mini-mines, and enhance learning opportunities. Hours are Saturday from 10 a.m. to 6 p.m. and Sunday from 10 a.m. to 4 p.m. Peak times, when help is needed most, are Saturday from 11 a.m. to 5 p.m. and Sunday from 12 p.m. to 3 p.m.

**Silent Auction:** Volunteers organize donated specimens, create bid slips, monitor 1 hour of the actual auction, collect winning bids, and distribute specimens. Hours are Sunday from 1 to 2 p.m. We usually need three to four volunteers.

**Floaters:** Volunteers attend the show and help as need arises. Often, the kids' activity tables or admission tables get overwhelmed, and our floaters step in



to help out during the rush. When things calm down, they go back to enjoying the mineral show.

**Door Prize Announcer-Manager:** A volunteer pulls hourly winning door prize tickets for kids as well as for adults, announces the winners, escorts winners to the door prize table, and supervises prize selection.

**Floater/Security:** Volunteers attend the show and rotate from room to room to make sure everything is running smoothly and that exhibits, activities, and demonstrations are not being overrun and volunteers are not overstressed. We ask for up to 4-hour shifts (half a day) for these trouble-shooting positions. For example, you might work on Saturday from 10 a.m. to 2 p.m. or from 2 to 6 p.m., but we will happily accept whatever a volunteer can do.

**Sunday Takedown:** This is the reverse of the Friday night setup, starting at 4 p.m. at the show's close on Sunday. Volunteers carefully take apart exhibit cases and packing them away, gathering up all club materials: The Mini-mines and Kids' specimens, the heavy-duty electrical cords, and everything else. Volunteers deliver these items to the club's storage unit and put them away. Additionally, we need someone with a vehicle to gather all the campus directional and shuttle signs and make them ready for returning to the club's storage unit. Sunday night takedown goes pretty fast if numerous people help and volunteer their vehicles for the return trip to the storage unit. You don't need a vehicle to help out, but a few (perhaps three) people with vehicles will be needed. ↗

## Diamonds Are a Girl's ... and Boy's ... Best Friend

*by Sheryl Sims, Club Photographer*

**T**ana Clymer, a 14-year-old Oklahoma teenager, found a 3.85-carat canary diamond at the Arkansas Crater of Diamonds State Park. The park is located on the surface of an ancient volcanic crater. It is said to be the only diamond-bearing site that is open to the public.

After 2 hours of digging, she found what she thought was a piece of foil from a candy wrapper. Fortunately, the park has a "finder's, keeper's" policy, so she gets to keep her beautiful diamond.

The same holds true for a 12-year-old boy named Michael Dettlaff, from North Carolina. He found a 5.16-carat diamond in the same park last August. It was the 27th largest diamond found in the park since 1972. ↗

## Source

Ng, C. 2013. [Oklahoma teenager finds 385-carat canary diamond](#). 21 October. ABC News.

## Vandals Destroy the "Duckbill," a Sandstone Formation in Oregon

*by Sheryl Sims, Club Photographer*

**T**he Duckbill rock formation was a well-known landmark at Cape Kiwanda, located in a coastal park in Oregon. For some reason, a group of people took it upon themselves to destroy it.

You have to ask yourself, "What is wrong with people? Why do people have to be so destructive?"

What must have taken years and years to form naturally, a group of people mindlessly destroyed. The sandstone pedestal was reportedly about 7 feet tall and 10 feet wide.

Let's hope that the Oregon State Police and the State Parks officials are able to find the people who committed this horrible and senseless deed and bring them to justice. ↗

## Source

Veooz. N.d. ["The Duckbill" Oregon rock destroyed: See actual video of vandals while toppling landmark](#). Morning News USA.

## Deadline for Submissions

November 1

So we can send out the newsletter on time, please make your submission by the 1<sup>st</sup> of the month! Submissions received later might go into a later newsletter.

## Sad News About Fred Schaefermeyer

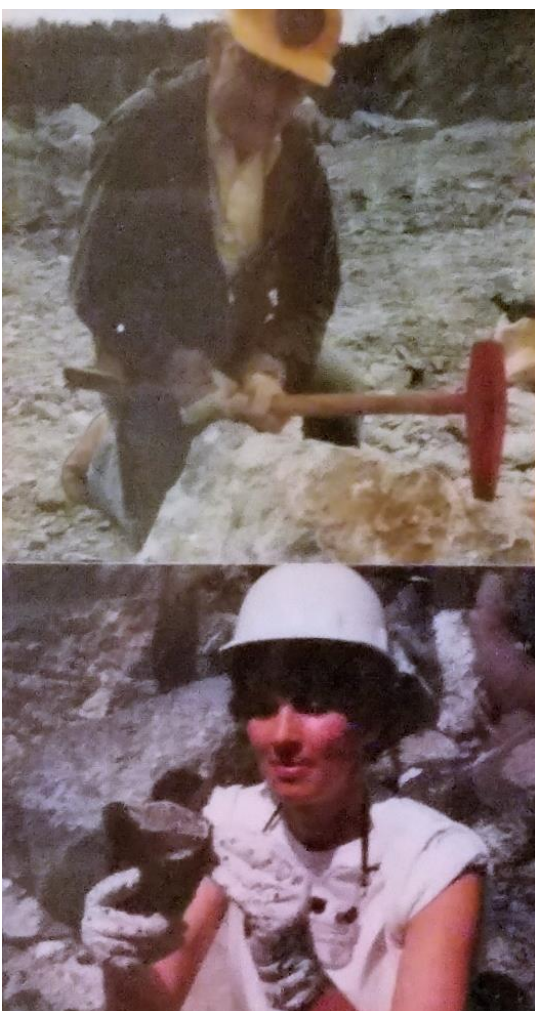
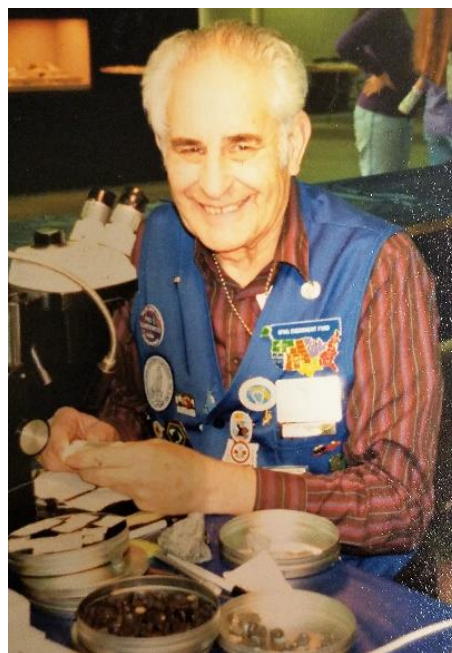
by Kathy Hrechka

I am sad to announce that our dear friend Fred Schaefermeyer passed away on October 9. At 97 years old, Fred was enduring an advanced stage of leukemia.

Fred was blessed to have Muriel with him at his hour of death. Muriel was his companion and caretaker for many years. His family members had a chance to visit him during the week of October 3. I was able to visit him as well, even though he was in a lot of pain.

I am so grateful to Fred for being my geology mentor for the past 30 years. We began our geojourney collecting garnets and mcguinnessite at the Rockville Quarry in 1985. Below are some photos of our collecting time together.

Cards may be sent to Muriel at 5930 W. 34th Avenue, Wheat Ridge, CO 80212. ➤



## Fault Whisper

Thanks to Sue Marcus for the reference!



This site in San Diego, CA, features a remote eavesdropping function, part of an interactive public art installation titled Fault Whisper located at Fault Line Park.

A shallow fault rupture from the Rose Canyon Fault System runs diagonally across the park, marked by two stainless steel spheres standing on opposite sides of the fault. The west sphere is equipped with a viewfinder showing the east sphere exactly at the center of view at the time of installation in 2015. Any future fault movement will create an offset along the sight-line, noticeable to viewers.

An accelerometer installed below the spheres deep into the fault rupture monitors the Earth's movements in real time. Its movement direction and amplitude data stream are processed into musical notes that are gently broadcast from the west sphere viewfinder.

Anyone from around the world can click the sound icon at the [Website](#) to eavesdrop on the Earth at the rupture. ➤



## Road Trip

by Bob Cooke, President

**P**rofessor Lance Kearns of the James Madison University (JMU) Geology Department has once again invited area mineral clubs to visit his facility in Harrisonburg, VA.

This is a rare opportunity to bring your treasured specimens of I-don't-know-ite for analysis with the X-ray spectrometer, Raman spectrometer, and other exotic tools that JMU can afford and we cannot. Additionally, Professor Kearns will have many mineral specimens and books for sale at prices that are too low to advertise here.

In past years, Professor Kearns has extended the visit with an afternoon tour and demonstration of JMU's scanning electron microscope. I've been three times and never been disappointed. The next trip is scheduled for Saturday, January 28. More details to follow.

λ.

and share our rockhound safety ideas. Sharing ideas and tips is part of a rockhound's nature.

What is being intimated here is that there is a benefit to sharing our ideas with others by writing the ideas down and then distributing them to our fellow rockhounds. What I would like to encourage with this Safety Matters article is the possibility of editors, club officers, and safety chairs supporting their club members' efforts to write down and share their best safety ideas with the rest of the club members and the greater rockhound community. I wish to reinforce and encourage the right to write—to share members' ideas, utilizing the power of the written word.

Please consider doing the right thing and writing down your ideas concerning safety matters in our club and regional newsletter and bulletins. Our clubs really are made of "the write stuff" ... and that right should be encouraged.

Be safe, think safety, write safe. Your safety matters.

λ.



## Safety Matters—The Write Right

by Ellery Borow, EFMLS Safety Chair

**Editor's note:** The article is adapted from EFMLS News (October 2016), p. 1.

**T**he write right could be restated as a right to speak one's mind or write one's thoughts. Rockhounds, fossilhounds, lapidary enthusiasts, beaders, and so forth are very thoughtful, caring, sharing, and safety-minded people.

Do you see where we are going with this article? Having reread what was just written, I'm not sure where this is going either.

Please, let us recompose ... key words: right to write, safety, and sharing. We ... as thoughtful folks, folks who generally have lots of good ideas, folks who are concerned about our own safety and the safety of their fellow rockhounds ... as all of these things, we might consider, as part of our sharing nature, using the ability, the right, and even the duty or obligation (being good and proper rockhounds) to write down



Source: [AP Environmental Science](#).



## AFMS Code of Ethics



A large measure of the enjoyment of our hobby consists of collecting in the field. For that reason, the members are proud to endorse the following:

1. I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.
2. I will keep informed of all laws, regulations, or rules governing collecting on public lands and will observe them.
3. I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
4. I will use no firearms or blasting material in collecting areas.
5. I will cause no willful damage to property of any kind, such as fences, signs, buildings, etc.
6. I will leave all gates as found.
7. I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.
8. I will discard no burning material—matches, cigarettes, etc.
9. I will fill all excavation holes that might be dangerous to livestock.
10. I will not contaminate wells, creeks, or other water supplies.
11. I will cause no willful damage to collecting material and will take home only what I can reasonably use.
12. I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
13. I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
14. I will cooperate with field trip leaders and those in designated authority in all collecting areas.
15. I will report to my club or federation officers, the Bureau of Land Management, or other authorities any deposit of petrified wood or other materials on public lands that should be protected for the enjoyment of future generations or for public educational and scientific purposes.
16. I will appreciate and protect our heritage of natural resources.
17. I will observe the Golden Rule, will use good outdoor manners, and will at all times conduct myself in a manner that will add to the stature and public image of rockhounds everywhere.



## **The Estes Quarry Presentation by Doug Rambo June 27, 2016**

*by David MacLean, Secretary*

**T**he Estes Quarry, located in West Baldwin, Cumberland County, ME, is a relatively new pegmatite phosphate mineral locality. Doug Rambo described the locality in the club program at the June 2016 NVMC meeting.

Doug said he started collecting rocks at age 3 and looking at them with a microscope at age 13. In 1994, he graduated from the University of the District of Columbia in geology. His senior research project involved the hydrated phosphate minerals of the Palermo Number 1 Quarry in New Hampshire.

In 1970, Doug's father George (now deceased) began collecting phosphate minerals when Doug was 12. That year, Doug bought his first microscope after the original find of the Yukon phosphates. From the 1990s until 2014, he collected mainly microminerals. He went to every micromineral conference from Pennsylvania to Virginia to sell tools for micro-mounting, including tack, loupes, and baggies. He was a popular vendor at the conferences.

The Estes Quarry is located in southwestern Maine, near the border with New Hampshire. The quarry began 30 years ago as a sand and gravel quarry; now it produces crushed rock.



*Eosphorite from the Estes Quarry in Maine. Source: Mindat; photo: Elmar Lackner, 2009.*



*Estes Quarry in Maine. Source: Mindat; photo: Peter Cristofono, 2009.*

The Estes Quarry is in the Rindgemere Formation (from the Silurian Period, 417–443 million years ago). It consists of shales and sandstones that were high-grade metamorphosed into schists and migmatite about 65–248 million years ago. The metamorphism could be related to the emplacement of the Sebago Pluton, a Carboniferous-age granite body that originated nearby about 290–354 million years ago. There are few pegmatites southwest of the Sebago Pluton.

The Estes Quarry pegmatite is, like other New England lithium–cesium–tantalum pegmatites, rich in phosphates, beryl, and columbite/tantalite and poor in boron. It is a subtype of a beryl–columbite–phosphate pegmatite, with lanthanide (rare earth) minerals. It has no gem pockets but has diabase intrusions.

The Estes pegmatite shows layering and no zoning, unlike other New England pegmatites. The phosphate minerals are formed from the alteration of lithiophyllite ( $\text{LiFePO}_4$ ).

The pegmatite was described in the November/December 2000 issue of *Rocks and Minerals* (75(6)).

Minerals found at the Estes Quarry include (among others) albite, lithiophyllite, purpurite, garnet (almandine), lollingite, pyrite, muscovite, rose quartz, sugary quartz, columbite, epidote, sphalerite, eosphorite, falsterite, fairfieldite, fluorapatite, montebasite, uranium minerals, and vivianite. Collecting is allowed by permission. ↗



## “Earth Rocks” at Webelos Scouts Camporall

by Kathy Hrechka (all photos Kathy Hrechka)

On Saturday, October 1, I took the opportunity to demonstrate geology in the fort at Camp Snyder in Haymarket, VA, for the benefit of Cub and Webelos Scouts and their families.

There were over a thousand Scouts, including family members scheduled for this STEM-themed Camporall. Representing the NVMC, I displayed fossils, mineral study boxes, the three rock types, the Mohs scale of hardness, and the uses of rocks and minerals at home and in the community.

My favorite addition to the geology stations included a poster-size periodic table of the elements, complete with photos. Parents as well as Scouts took an interest in learning how combined elements make minerals. I also featured NVMC Eagle Scout Conrad Smith's display of “Minerals in My Smart Phone” (see the photo below).

A steady stream of families came by the geology station from 9:30 a.m. until 5 p.m. About 100 Webelos earned their “Earth Rocks” pin by taking the lesson I taught. ↗



## African Stone Types

by Sheryl E. Sims

This year, I became very interested in learning about where in Africa my family roots began. Taking a DNA test answered my burning questions. I learned that I had DNA hits in Benin/Togo, Ivory Coast/Ghana, Cameroon/Congo, Senegal, Mali, Nigeria, and African Southeastern Bantu (along with 24 percent from western Europe—Great Britain, the Iberian Peninsula, and Ireland—as well as the West Asia Caucasus and Middle East.) This added new meaning to my sense of identity and to nearly forgotten souvenirs that my grandparents brought back from their visit to the Ivory Coast decades ago. But gaining that information also sparked a desire to explore other areas of interest related to Africa, such as African stone types.

Kisii stone is a Kenyan soapstone. (Soapstone, also known as steatite or soaprock, is a talc-schist—a type of metamorphic rock. It is largely composed of the mineral talc and thus is magnesium.) Kisii stone is mined in the Kisii District of western Kenya, in the highlands area that borders on Lake Victoria. A small tribe called the Abagusii has developed the skill of selecting Kisii stones, which come in an array of beautiful colors ranging from white to rose. Hand-carved pieces are turned into tableware, sculptures, chess sets, and so forth. Rough edges are smoothed and dipped in water, and then skilled craftsmen etch or paint them with African motifs. It is tradition, however, to simply apply clear wax to the soapstone pieces, which creates a beautiful finish.

Lepidolite is better known as mica. It's an ore of lithium and

forms in granitic masses that contain a substantial amount of lithium. Granular pink lepidolite, in shades varying from pink to red, is frequently used as ornamental stone accents for carving.

Verdite is a semiprecious stone found in Zimbabwe. A beautiful shade of emerald green, it has brown and green striations. It is a very hard stone.

Cobalt stone is another beautiful stone found under African skies, as is butter stone or butter jade. Found in southern Africa, butter stone dates is more than 2.5 billion years old and can contain microfossils of blue-green algae stromatolites. One of the oldest fossils known, stromatolites can date back to more than 3.5 billion years; they contain bacteria believed to be the earliest form of life on Earth.

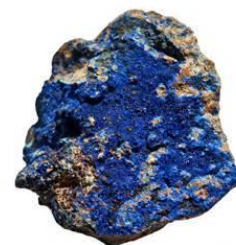
Other African stones are fruit serpentine, opal stone, rapoko stone, and spring stone. Popular minerals found in Africa include tanzanite; sapphire; red, green, and orange garnets; alexandrite, and rhodolite.

### Sources

Jones, B; Jones, W. N.d. [Gems of Africa gallery](#). Fairburn, GA.  
N.a. N.d.a. [Butterstone gemstone meaning](#). Emily Gems.  
N.a. N.d.b. [Stromatolite meaning](#). Emily Gems.  
N.a. 2016. [Lepidolite](#). Wikipedia.  
N.a. 2016. [Soapstone](#). Wikipedia.



Verdite.



Cobalt stone.



Butterstone (top); butterstone with stromatolites (bottom).  
Sources: N.a. (N.d.a), (N.d.b).



Kisii stones.



Lepidolite. Source: Wikipedia; photo: Rob Lavinsky.



## Editor's Corner Fonts

by Hutch Brown

If you know Word, you might have noticed that our newsletter doesn't use its default settings. For example, we use single line spacing, standard in desktop publishing. Word does not.

Another default setting we don't use is the font. Editors can choose from many different print styles; each style is called a font. Word uses a font called Calibri.

Calibri looks like this.

Fonts come in two major families: serif and sans serif. "Serifs" are the flourishes at the ends of many letters; for example, the letter "l" has a tiny horizontal base and a tiny handle at the top.

You'll notice that Calibri lacks those flourishes. That makes it a sans serif font, from the French word *sans*, meaning "without."

Sans serif fonts tend to catch the eye, so you often see them in headings and advertisements. Our newsletter uses Calibri, but only for short formats. It calls attention to sidebars, for example, and adds variety (see the sidebar on the lower right of this page).

For articles, we use a serif font called Times New Roman (TNR). Books, newspapers, and other publications always use serif fonts, often TNR. Why? Because serif fonts are easier to read in print. Using serif fonts is therefore standard practice in desktop publishing.

However, studies have shown (you can find one [here](#)) that what holds true for print does not hold true for online publishing. Reportedly, sans serif fonts are easier to read online. That's why e-mail and Websites are typically in a sans serif font.

If you get our newsletter by mail, you read it in print, and if you get it by e-mail, you can print it out, too. But most club members probably read it online.

Does that mean we should use a sans serif font? No, because our newsletter is still a print publication. I find published papers and books easier to read if they are in serif fonts, even if I get them in a PDF file and open them up to read online, as I usually do.

But if you have other thoughts about this, please let me know! ↗

## Did You Know?

by Sheryl Sims, Club Photographer

Some have no interest in Facebook. But I have maintained our club's Facebook page for several years now.

It's always encouraging to have people visit the page and inquire about club activities. On the page, I give information about our club and events. Visitors post questions, and I do my best to answer or direct them to someone who can.

If you have mineral or club-related messages or photos to share, please feel free to visit and post on the page! ↗

## In Your Phone, in Their Air

Thanks to Sue Marcus for the reference!

An article in *The Washington Post* (2 October 2016) traces the bit of graphite in our everyday technology to rampant pollution in China.

*At night, the pollution around the village has an otherworldly, almost fairy-tale quality.*

*"The air sparkles," said Zhang Tuling, a farmer in a village in far northeastern China. "When any bit of light hits the particles, they shine." ... [Read more.](#) ↗*



## GeoWord of the Day

(from the American Geoscience Institute)

### oil window

The temperature and pressure in the Earth where oil forms from the kerogen in shales.

(from the [Glossary of Geology, 5th edition, revised](#))



## October 2016—Upcoming Events in Our Area/Region (see details below)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 GLMSMC mtg, Rock- ville, MD	4	5 MSDC mtg, Washington, DC	6	7	8
9	10 <b>Columbus Day</b>	11	12	13	14	15 Field trip, Vulcan quar- ry
16	17	18	19	20	21	22 EFMLS Con- vention; show, Fair- less, PA
23 EFMLS Con- vention, Rochester, NY	24 NVMC mtg, Arlington, VA	25	26 MNCA mtg, Arlington, VA	27	28	29 Field trip; show, Biglerville, PA
30 Show, Be- thesda, MD	31 <b>Halloween</b>					

### Event Details

**3: Rockville, MD**—Monthly meeting; Gem, Lapidary, and Mineral Society of Montgomery County; 2<sup>nd</sup> Monday of the month, 7:30–10; Rockville Senior Center, 1150 Carnation Drive.

**5: Washington, DC**—Monthly meeting; Mineralogical Society of the District of Columbia; 1<sup>st</sup> Wednesday of the month, 7:45–10; Smithsonian Natural History Museum, Constitution Avenue lobby.

**15: Vulcan Manassas**—Field trip; 8537 Vulcan Ln, Manassas, VA 20109; meet 7 a.m.; info: Ted Carver, [jtcave@msn.com](mailto:jtcave@msn.com), cell: 571-344-4958, home: 703-754-2050.

**22: Fairless Hills, PA**—ULTRAVIOLATION (Fluorescent Mineral Show); Rock and Mineral Club of Lower Bucks County, PA; First United Methodist Church, 840 Trenton Road; 9–4; \$2, kids 12 and under free; info: Chuck O'Loughlin, 302-384-7876.

**22–23: Rochester, NY**—Rochester Gem, Mineral, Jewelry & Fossil Show & Sale and **66th Annual EFMLS Convention**; EFMLS Annual Meeting, Friday, October 21; hosted by Rochester Lapidary Society; Main Street Ar-

mory, 900 E Main St; info: [www.rochesterlapidary.org/show](http://www.rochesterlapidary.org/show).

**24: Arlington, VA**—Monthly meeting; Northern Virginia Mineral Club; 4<sup>th</sup> Monday of the month, 7:45–10; Long Branch Nature Center, 625 S Carlin Springs Rd.

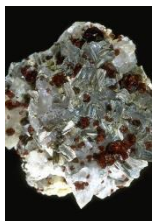
**26: Arlington, VA**—Monthly meeting; Micromineralogists of the National Capital Area; 4<sup>th</sup> Wednesday of the month, 7:45–10; Long Branch Nature Center, 625 S Carlin Springs Rd.

**29: Biglerville, PA**—South Penn Rock Swap & Sale Saturday; Central Pennsylvania and Franklin County Rock & Mineral Clubs; 8–3; South Mountain Fairgrounds, west of Arendtsville, PA, on Rte 234 (615 Narrows Road); info: [tsmith1012@comcast.net](mailto:tsmith1012@comcast.net).

**29: National Limestone Quarry**—Field trip; Mt. Pleasant Mills, Snyder Co., PA ([info and directions](#)); meet 9 a.m., quarry office; if interested, contact Bob Cooke, [rdotcooke@verizon.net](mailto:rdotcooke@verizon.net), 703-451-1540.

**30: Bethesda, MD**—Annual Sale & Auction; Gem, Lapidary & Mineral Society of Washington, DC; Woman's Club of Bethesda, Old Georgetown Rd and 5500 Sonoma Rd; info: [www.glmsdc.org](http://www.glmsdc.org).





**Mineral of  
the Month:  
Spessartine**

---

PLEASE VISIT OUR WEBSITE AT:

<http://www.novamineralclub>

---

## The Northern Virginia Mineral Club

You can send your newsletter articles to:

[news.nvmc@gmail.com](mailto:news.nvmc@gmail.com)

**Visitors are always welcome at our club  
meetings!**

**RENEW YOUR MEMBERSHIP!**

**SEND YOUR DUES TO:**

Rick Reiber, Treasurer, NVMC  
PO Box 9851, Alexandria, VA 22304

**OR**

Bring your dues to the next meeting.

### 2016 Club Officers and Others

President: Bob Cooke

[rdotcooke@verizon.net](mailto:rdotcooke@verizon.net)

Vice-President: Ti Meredith

[ti.meredith@aol.com](mailto:ti.meredith@aol.com)

Secretary: David MacLean

[dbmaclean@maclean-fogg.com](mailto:dbmaclean@maclean-fogg.com)

Treasurer: Rick Reiber

[mathfun34@yahoo.com](mailto:mathfun34@yahoo.com)

Field Trip Chair: Ted Carver

[jtcarve@msn.com](mailto:jtcarve@msn.com)

Webmaster: Casper Voogt

[casper.voogt@plethoradesign.com](mailto:casper.voogt@plethoradesign.com)

Club Historian: Kathy Hrechka

[kshrechka@msn.com](mailto:kshrechka@msn.com)

Communications: Vacant

Photographer: Sheryl Sims

[sesims4@cox.net](mailto:sesims4@cox.net)

Editor: Hutch Brown

[hutchbrown41@gmail.com](mailto:hutchbrown41@gmail.com)

Show Chair: Tom Taaffe

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

Greeter/Door Prizes: Ti Meredith

[ti.meredith@aol.com](mailto:ti.meredith@aol.com)

**Purpose:** To encourage interest in and learning about geology, mineralogy, lapidary arts, and related sciences. The club is a member of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS—at <http://www.amfed.org/efmls>) and the American Federation of Mineralogical Societies (AFMS—at <http://www.amfed.org>).

**Dues:** Due by January 1 of each year; \$15 individual, \$20 family, \$6 junior (under 16, sponsored by an adult member).

**Meetings:** At 7:45 p.m. on the fourth Monday of each month (except May and December)\* at **Long Branch Nature Center**, 625 Carlin Springs Road, Arlington, VA 22204. (No meeting in July or August.)

*\*Changes are announced in the newsletter; we follow the snow schedule of Arlington County schools.*