



The Mineral Newsletter

Meeting: September 26 Time: 7:45 p.m.

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



[Smithsonian National Mineral Collection](#). Photo: Chip Clark.

**Volume 57, No. 7
September 2016**
Explore our [Website](#)!

**September Program:
Fall Club Auction**

In this issue ...

Mineral of the month: Spodumene	p. 2
September program details	p. 3
The Prez Sez	p. 3
June meeting minutes.....	p. 4
Club Show coming up!	p. 5
2016 AFMS Show	p. 6
Geology field trips	p. 8
Editor's corner.....	p. 9
AFMS: Safety matters.....	p. 10
EFMLS: How rock collecting helps kids	p. 11
Tony Nikischer.....	p. 12
Volcanism in New Mexico	p. 13
Auction bid slips	p. 16
Upcoming events	p. 17

**Spodumene
from Brazil**



Mineral of the Month Spodumene

by Sue Marcus

Spodumene sends a mineral collector's mind off in many directions. Kunzite (the variety on the cover) or maybe hiddenite; specimens or gems? It often fluoresces! Single crystal or on matrix? And can you get good location information?

Luckily for collectors, the pegmatite deposits in Pakistan and Afghanistan have been producing abundant quantities of kunzite, the light pink to purple form of spodumene, in sizes and for prices that start at a reasonable level of \$10 or less and go as high as one wants—and beyond!

Transparent forms of spodumene—kunzite and hiddenite—are pleochroic, meaning the specimens (usually crystals) appear to be darker or lighter when seen in different directions. The pink or purple color is due to manganese, while the green is usually chromium. There are exceptions—heat treating can darken or deepen the colors, particularly in kunzite, and when there is no chromium present in the green variant, it technically is not hiddenite. Webmin notes an additional form of colorless or yellow spodumene called triphane.

Spodumene was named in 1881 after the Greek word *spodoumenos*, or reduced to ashes. Sources differ on whether this refers to the color of the original material—an ashy, opaque gray—or to the looks of the material when it was incinerated. Kunzite was named for mineral collector and gemologist George F. Kunz. Hiddenite was first found in North Carolina by William Earl Hidden, a mining engineer, collector, and dealer. The town of Hiddenite, NC, was later named after the mineral found nearby.

Spodumene can be a source of lithium, and it is mined in Australia for industrial uses. Lithium is used in batteries, ceramics, medicines, and other products. China and Chile may also produce spodumene when the price is right.

In the United States, spodumene is not mined industrially. Kunzite has been found in pegmatites in California, Maine, and several other places. Along with the Afghani-Pakistani pegmatites, notable foreign localities include Brazil, Madagascar, and Mozambique.

Happy Labor Day!



Northern Virginia Mineral Club members,

Please join your club officers for dinner at the Olive Garden on September 26 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.

Technical details (source mostly Mindat):

Chemical formula LiAlSi2O6

Crystal form Monoclinic (when formed below 900 °C); tetragonal (when formed above 900 °C)

Hardness..... 6.5-7

Density 3.1-3.2 g/cm³ (measured)

Color Clear, white, purple, green, yellow, colors in between these, and bicolor; opaque grey

Streak White

Cleavage Perfect, two directions; cleaves easily.

Fracture Perfect

Luster Vitreous

Gigantic crystals of spodumene have been found. Minerals.net reports a 42-foot (12.8-m) crystal! Wikipedia tops that with a report of a 47-footer (14.3-m crystal) from South Dakota. These are not gorgeous crystals; they are the opaque, gray variety. ↗

Sources

<http://www.mindat.org/min-3733.html>

<https://en.wikipedia.org/wiki/Spodumene>

<http://webmineral.com/data/Spodumene.shtml#.V8NN9jU6wgc>

<http://www.gia.edu/kunzite-quality-factors>

<http://www.minerals.net/mineral/spodumene.aspx>

Club Member Rocks and Minerals Auction Coming Up! September 26 Program

Our September club meeting will feature our fall Club Member Auction! Proceeds from the auction go into the Fred C. Schaefermeyer Scholarship Fund, which supports students in the field of geology.

The meeting will start promptly at **7:30 p.m.** (*note:* this is 15 minutes earlier than usual). We will quickly move through the business part of the meeting so we can get to the fun!

Sellers, come early to help set up the room and your items. Bid slips, which you may copy if more are needed, are contained in this newsletter below.

Please bring a guest or invite nonmembers! Although only current club members are allowed to sell, the meeting and auction are open to all.

And please consider volunteering. The auctioneers, accountants, and runners are all volunteers—so help us out here, folks!

Bring small bills, bid early and often, and help us move on to the next item. We need to be out of our meeting room by about 10 p.m.

**** Note Current Club Auction Rules ****

- Any member may offer up to 20 specimens or up to 4 flats for auction.
- Each flat is one auctionable item.
- The club gets **15 percent** of the purchase price; the remainder goes to the seller.
- Anyone may donate items to the auction to fully benefit the club (no money goes back to the donor).
- The minimum bid is **\$1** on any item. Bids above **\$20** increase by **\$5**.
- We start with a silent auction, so look carefully and start bidding. Items with multiple bids during the silent auction will be brought sooner to the vocal auction.

Winning bidders must pay for the item promptly, with cash or check. ☺

The Prez Sez

by Bob Cooke

It's already late August, so I better get on the ball and formulate some witty comments for the September newsletter before Carolyn kidnaps me next week and drags me off to Maine for 3 weeks to attend a wedding and visit relatives. (The relatives in question have not yet discovered Wi-Fi, so unless I can find a McDonald's or Starbucks, Internet connectivity will be minimal.)

I recently spoke with our Field Trip Chairman, Ted Carver, and he admitted that health problems had kept him from organizing field trips. He also noted that attendance on the previous year's trips had been very low and he didn't think there was any club interest in additional trips. But since new NVMC members are showing an interest in field trips, Ted agreed to organize some trips for us this fall.

Lesson Learned: If you want the club to sponsor field trips, you'd better go on them when they're offered.

Speaking of which, there is a field trip on September 24 to the Willis Mountain Kyanite Mine in Dillwyn, VA. If you didn't get the announcement, it's because you haven't signed up to receive field trip emails; send me an email at rdoctooke@verizon.net if you want to be on the list for future trips. Brian Whiteley is coordinating NVMC's participation in the Willis Mountain trip; to attend and for more information, contact Brian at brianwhiteley80@hotmail.com.

Our annual Mineral Show will be November 19 and 20 at George Mason University. Chairman Tom Taaffe has written up business contracts and has over 20 vendors lined up. He has also printed up cards that will be available at club meetings for members to distribute for advertising the event. Unfortunately, Jim Kostka (last year's co-chair) will not be able to assist in this year's preparations. Jim will be sorely missed. A new co-chair is urgently needed to orchestrate the setup and takedown activities. Please see me if you can help!

Funding for NVMC Representation at EFMLS and AFMS Annual Meetings

I have made it a policy not to put money issues to a vote at monthly meetings without providing advance



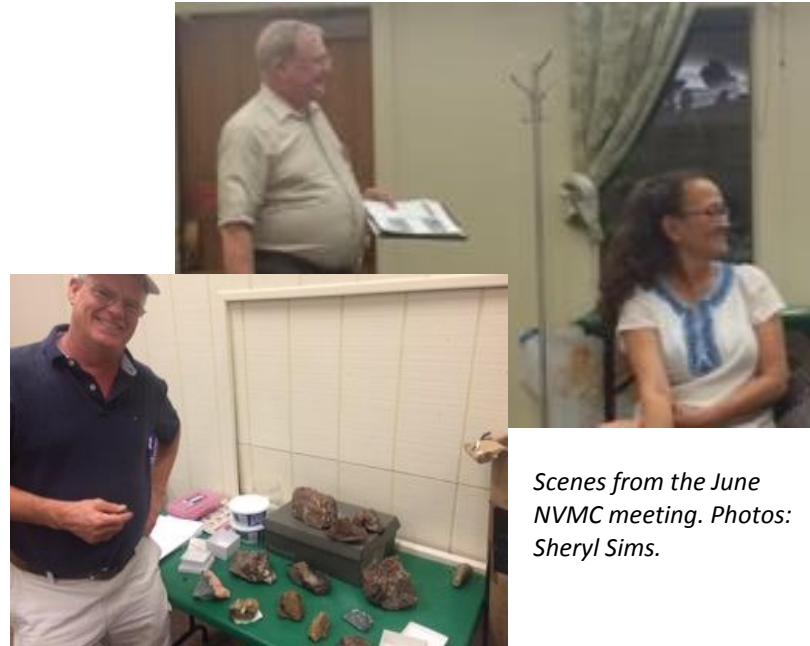
notice at a previous meeting, by e-mail, or in this newsletter. So here's your official advance notice!

The budget approved by the club membership last Spring included a \$400 subsidy for a club member to represent NVMC at either the EFMLS or the AFMS annual meetings. This was based on prior years' experience that there just wasn't interest in covering both national and regional events.

So I used the appropriated \$400 for Sheryl Sims to attend the EFMLS annual meeting. I later received an e-mail from Kathy Hrechka that she was in Oregon and would be at the AFMS annual meeting on July 29–31 and would represent the club and write an article about the show. She requested the traditional subsidy for attending. Talk about feast or famine!

The NVMC Executive Board discussed Kathy's request and unanimously agreed that it was an expenditure in the club's interest and that her request should be presented to the general membership for approval. I will raise this issue at the September meeting for discussion and vote. ↗

Bob



Scenes from the June NVMC meeting. Photos: Sheryl Sims.

Members who have signed up with President Bob Cooke (rdoctooke@verizon.net) for e-mail notification of field trips will receive further information from Bob as it becomes available. If you are interested in attending, please inform the point of contact listed by Bob in the e-mail you will receive from him.

The NVMC show will be on November 19 and 20 (a Saturday and Sunday) at the Hub, George Mason University. Volunteers are needed to distribute announcement cards, set up and take down displays, and run the show. Please see the article by Show Chair Tom Taaffe below for more information.

In the door prize drawing, prizes went to Eva Desorrento, Alex Johnston, David MacLean, Ken Reynolds, Linda Smyth, and Celia Zeibel.

Ken Johnson showed garnet and apatite crystals from the long-closed zinc mine and adjacent areas at Sterling Hill, NJ.

By motion duly made and seconded, the members adjourned the business portion of the meeting. The next NVMC meeting will be for the fall club auction on **September 26 at 7:45 p.m.** at the Long Branch Nature Center.

Doug Rambo delivered a presentation on the Estes Quarry, a relatively new pegmatite phosphate mineral locality in southwestern Maine. ↗



June Meeting Minutes June 27, 2016

by David MacLean, Secretary

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

The minutes of the club meeting on May 23 were approved as published in *The Mineral Newsletter*.

The president recognized past president Barry Remer. He also recognized guests Alex Johnston, Marie Johnston, and Holly Patrick.

An announcement was made that club dues of \$15 per person are past due.

Summer 2016 field trips were announced, including panning for gold, pyrite, and garnet at Contrary Creek, VA (near Lake Anna). Not far from Contrary Creek is the Gold Mining Museum in Mineral, VA. Another trip is to the Garrisonville quarry, which has diabase containing calcite, laumontite, and other diabase-associated minerals.



Club Show Coming Up! November 19–20, 2016

by Tom Taaffe, Show Chair

The NVMC holds its 25th Annual 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.

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 rocklectr@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 rdoctooke@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. Hours are Saturday from 10 a.m. to about 5:30 p.m. and Sunday from 10 a.m. to about 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 3 to 4 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. ↗



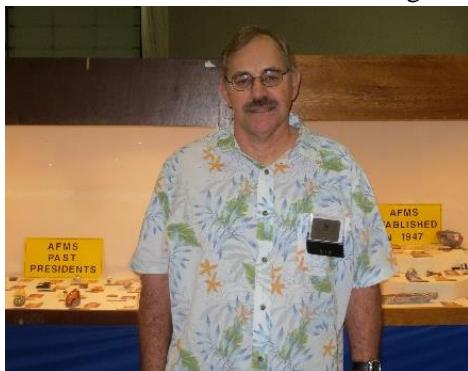
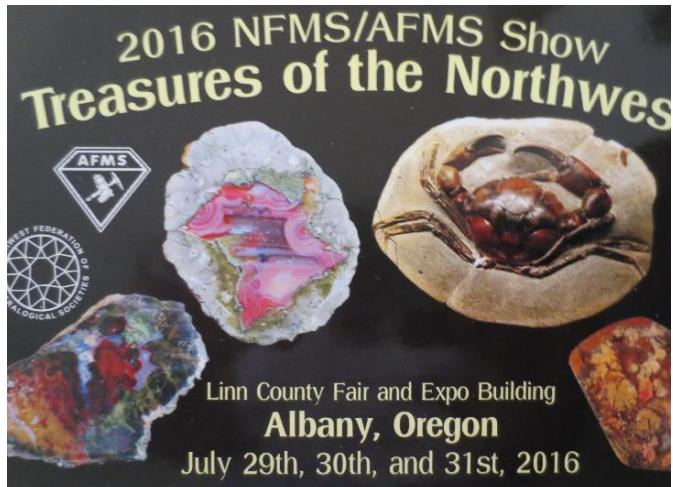
2016 NFMS/AFMS Show: Treasures of the Northwest

by Kathy Hrechka

On July 29–31, 2016, I had the opportunity to attend the 78th Annual Gem and Mineral Show in Albany, OR, at the Linn County Expo Center. The show was hosted by the Willamette Agate and Mineral Society, which is a member of the Northwest Federation of Mineralogical Societies. This show was also the location for this year's American Federation of Mineralogical Societies convention and meetings.

The president of the AFMS, Matt Charsky, a member of our own club, invited me to attend the AFMS delegate meeting, where I watched the many “position representatives” from the AFMS submit committee reports. I was amazed to see so many participants from all over the United States, representing the seven federations.

On Saturday morning, I attended the editor’s breakfast, where our editor Hutch



Matt Charsky, President of the AFMS, standing before the AFMS showcase featuring past presidents. Matt will be included in the future. All photos: Kathy Hrechka.

Brown was awarded an American Federation “Third Place, Large Bulletin” for *The Mineral Newsletter* by the Bulletin Editors Advisory Committee. Over one hundred awards were announced, and Hutch received one of the most difficult ones to earn as club newsletter editor.

The show theme was local collecting in the state of Oregon, “home of the Thunderegg beds of agates.” There were over 200 display cases, 40 dealers, lectures, silent auctions, demonstrations, and daily field trips to a local petrified wood locality. The local club also provided a gold panning activity for youth.

This show actually brought back my childhood rock collecting memories. I remember acquiring matching Thunderegg agates, not knowing their locality. As I studied the many showcases featuring local agates, I



found my matching locality to be Oregon. The displays that most caught my attention included anything with agates.

My favorite competitive showcase contained fluorescent minerals.

I appreciated the lecture series, which featured local collecting, completely different from our East Coast collecting. Eddie Hopper, member of the Willamette Agate and Mineral Society, gave a talk under the title, "Look at What is Deep Within that Rock—A Microscopic View." Eddie gave me a reason to look more closely at agates while viewing them under a microscope.

MacKensie Smith, a recent graduate of Oregon State University in geology and biology, gave a talk titled "History of Paleontology in Oregon." I met the agate expert and author K.T. Meyers, who presented "Beachcombing 101: Finding Agates to Zeolites on the Central Oregon Coast." She also had a display of rocks from her book *Agates of the Oregon Coast*.

Overall, I was glad to have attended this show, because the vendors and exhibitors all collected agates. ↗



Author K.T.
Meyers, "Agates
of the Oregon
Coast."



Fluorescent mineral display, awarded "First Place Masters." The award went to Albert Leibetrau of the Central Oregon Rock Society in Albany, OR.



Display: Flintstones in Bedrock City.



Un-Edible Rock Table set for dinner, all constructed of rocks and minerals from the Rock and Arrowhead Club of Washington.



Geology Field Trips

by Bob Cooke

In addition to the Willis Mountain Kyancite Mine field trip on September 24 (see Prez Sez above), the Annandale campus of the Northern Virginia Community College has scheduled three 1-day trips for this fall as part of GOL 135—Field Studies in Geology.

GOL 135–052N: Miocene Geology of Calvert Cliffs, MD

Instructor: Kenneth Rasmussen

Saturday, September 17, 9 a.m.–6 p.m. (rain date Sunday, September 18)

Register at class #[15264](#)

Explore the Miocene seas that spread across the Chesapeake Bay region about 10 to 20 million years ago. We visit Calvert Marine Museum collections (\$6 museum fee required) and study ancient sediments, stratigraphy, and marine environments preserved in the world-famous Calvert Cliffs, collecting fossils along the way. For Calvert County meeting place, time, and preparation, contact Dr. Rasmussen at krasmusen@nvcc.edu.

GOL 135–055N: Building Stones of the National Mall, Washington, DC

Instructor: Kenneth Rasmussen

Saturday, October 15, 9 a.m.–6:30 p.m. (rain date Sunday, October 16)

Register at class #[15265](#)

Walking tour over 20 National Mall sites, examining the geologic history and architecture of the National Mall and the rocks used to construct the federal buildings and monuments. For Calvert County meeting place, time, and preparation, contact Dr. Rasmussen at krasmusen@nvcc.edu.

GOL 135–071N: Geology of Shenandoah National Park, VA

Instructor: Callan Bentley

Saturday, September 24, 8 a.m.–7 p.m. (rain date Sunday, September 25)

Register at class #[15810](#)

See pretrip logistical information and readings at <http://www.nvcc.edu/home/cbentley/gol135.htm>. We will examine the geology of the Shenandoah National Park, from the granites underlying Old Rag to the lava floods of the Catoctin Formation. You will get an overview of the tectonic setting of the park, including the

formation of the Appalachians, an event that completed the assembly of the supercontinent Pangea. Students will be evaluated with a field trip report which will be completed after the trip itself. NOTE: This trip involves moderately strenuous hiking on forest trails. Meet in back of the CT building at 8:00 a.m.; return by 7:00 p.m. For additional info:

http://www.nvcc.edu/home/cbentley/gol_135/shenandoah

These trips are each 1 credit hour and incur a tuition fee of \$177. However, Virginia residents over age 60 can audit these classes for free on a space available basis. For details, see:

<http://www.nvcc.edu/admissions/apply/seniors.html>

I have taken several field trip classes as well as lecture courses under the senior citizen program and fully recommend them. The registration process can be confusing and seems to change frequently, but the end result is worthwhile. If the Website listed above isn't sufficient, please call me at 703-451-1540.

Subscribe to S.C.R.I.B.E.

Thanks to Sheryl Sims for the tip!

Please join S.C.R.I.B.E.!

S.C.R.I.B.E. is an organization of bulletin editors, but it's not for editors only. It's a great way to get tips on writing articles and helping to making your club newsletter great!

At \$6 per year, membership is extremely affordable. You get the organization's newsletter four times a year, a membership contact list, and free bulletin evaluation service for your club! Please subscribe for a year and see!

You can join at:

<http://scribe.rbnnet.net/membership.htm>



Editor's Corner White Space

by Hutch Brown

There's a secret to newsletter design and layout that most people would never guess. It's called white space.

What is white space? Why would it be any good?

One of the temptations for an editor is to use every last bit of available space. Why waste space when you can get one more tidbit of information onto a page? If you can economize on the length of your newsletter, isn't that good?

Actually, no. If you're not careful, your newsletter will be crammed full to the gills. Almost every square inch of space will have something in it, whether words, symbols, boxes, borders, images, or whatnot.

The human eye simply can't take it all in. You don't know where to start. You can hardly tell where to stop. And there's no place to rest your eyes.

That's why our newsletter does not use borders, for example. Desktop publishing gives editors all kinds of gimmicks, including fancy borders. But borders break up white space in the margins, and margins are important for resting the eye.

Our newsletter also leaves blank spaces on the cover and between articles. You might have noticed that articles usually have short paragraphs. The reason is to break up dense text and add white space.

White space is one of the most important—and most widely overlooked—features of good publications.

Who would have guessed? ↗

Deadline for Submissions

October 1

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

How the Himalayas formed



Red Rover, Red Rover, send India right over!

Source: [Funny 1 Page Comics..](#)

Scam Alert

On May 5, I was on Mindat following an old discussion of a stolen Königsberg silver specimen from the British Natural History Museum. I got led toward a URL called "varockhounder.com."

That site appears to be a scam. They will take over your computer, freeze it, and demand \$266 and change to clean up your computer and unlock it. The hard-to-understand lady on the phone helping you through all this has a heavy South Asian accent.

We turned her down and used "forced quit" to unfreeze and turn off the computer. On restarting, everything appeared to be working normally, with no lost files apparent.

Just a warning, since some of us might be tempted to follow "varockhounder," whoever it is.

Tom Tucker



Safety Matters

Terribly Toxic Treasures

by Ellery Borow, AFMS Safety Chair



Editor's note: The article is adapted from AFMS Newsletter (May 2016), p. 4.

Tightly tucked toward the top of our trinket trunks are treasures too toxic to touch, tempting us as they tease our thoughts.

Yes, 'tis true! Tossed throughout our treasure trunks are things that are toxic to the touch and taste. Even in this totally tantalizing yet tranquil task of teaching there are terrors taxing my temperament.

Well, enough of these terrible, Thesaurus-taxing alliterations on the letter "t." The message this month is about the dangers lurking among our mineral treasures and what to do about them.

Think for a moment, if you will, about the chemical compositions of some of the minerals we collect: autunite, arsenopyrite, cinnabar, bafite, thorite, cuprosklodowskite, malachite—even beach shells for the jewelry we make—all have within them chemistries that, under certain conditions, can raise health-related concerns about working, handling, or storing them.

Think about the conditions under which we find our mineral treasures, exposing ourselves to biting or stinging insects, rash-causing plants, or precarious physical conditions potentially injurious to our health. Our hobby is associated with great joys but also has within it certain dangers, and we should exercise substantial care and caution.

Some minerals should not be touched with bare hands. Others should not be worked dry or produce slivers that, oh so easily, penetrate the skin. Still others might be radioactive nature. Each case requires certain protective measures.

We encounter many kinds of fauna and flora on the way to our favorite collecting localities. Many can bite, sting, or scratch. Some things just lie in wait to dig into our delicate hides, or scratch and tear us. We don't usually encounter hiding tigers or crouching dragons on our trips, but those pesky little eight- and six-legged things sure can mess with our enjoyment.

What is a body to do to? Glad you asked!

We have a hobby based on sharing, giving, and teaching! Most of our hobby's enthusiasts, the ones I've met over the years, follow safety practices in all ways. There are folks in our clubs who have all manner of experience with the dangers and hazards we might encounter.

What I would like to offer here is a thought for your consideration—a suggestion that we encourage our members with the most experience to share not just about their knowledge of rocks, minerals, and fossils, but also share what they have learned about being safe. We should encourage our experts to teach safe mineral handing, safe storage, safe caring and feeding of our treasures, safe traipsing on quarry roads, safe avoidance of biting insects, and so on.

I'd like to broaden the sharing approach of our hobby to all things safety. Indeed, if your club does not have a safety coordinator, I would recommend investigating the benefits to your club of having a dedicated safety person.

If you already have a dedicated safety person in your club, I applaud your forethought! If your safety coordinator makes safety a fun and interesting learning experience, you are well ahead of the safety curve!

Please be safe, and think safety. Also, please mind those legless critters as well. After all, we all have a place on this Earth, and we need to be mindful about sharing it with them. ↗

4.5-Billion-Year-Old Rocks Found

Thanks to Sheryl Sims
for the reference!



Scientists have found birthmarks of the Earth in the Solomon Islands of the South Pacific and on Baffin Island, Canada: 4.5 billion-year-old rocks preserved just below the surface.

A study published May 13 in the journal *Science* revealed the discovery of the oldest rocks found yet from the Earth's mantle. According to a press release, the rocks were formed just 50 million years after our planet formed. Click [here](#) to read more!



How Rock Collecting Helps Kids: Our Responsibility

by Dr. Gary Lohman, EFMLS Juniors Chair

Editor's note: The article is adapted from EFMLS News (May 2016), p. 3.

Nearly every rockhound I know became interested in rocks, minerals, or fossils when young. Hobbies like rock collecting were once an important part of personal and social development.

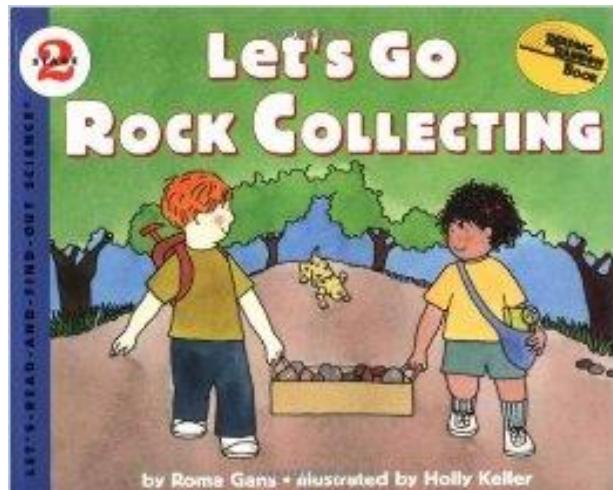
Today, many children have never experienced the rewards of a hobby. A hobby is not the same as organized after-school activities such as Little League. Hobbies are means of self-discovery and expressions of personal accomplishment that help build self-esteem and resilience. Hobbies teach children how to learn, set goals, make decisions, and solve problems. Hobbies often mature into lifelong interests and sometimes even careers.

Thirty-plus years ago, almost every kid in your neighborhood had a hobby, whether trading baseball cards, mounting butterflies, or collecting stamps or rocks. A young colleague recently told me that his motive for getting a degree in electrical engineering was financial, as was his interest in getting a master's degree in business. By contrast, an older colleague with a degree in electrical engineering got his start by building radios as a child and is now unhappy that his career is pulling him away from his technical roots. Just as trees need solid roots to grow tall and stand strong, kids need hobbies to help them develop life-long roots as well.

As rockhounds, we recognize the value of our hobby, so how do we help children develop hobbies?

Having participated in events with children over past few years, I know that kids still have an innate curiosity that hobbies can satisfy. Fortunately, geology remains fashionable among kids. Collecting rocks is interesting, and using rocks as geological windows into our own past is even better. Kids love seeing patterns in nature.

Cultivating a hobby takes time, a scarce commodity for kids today. By age 15, the average child has spent more time watching television than sitting in a classroom. Addiction to videogames and tethering to social media and texting further take away time for kids, who crave constant stimulation, even to a point of overstimulation.



Then come the adult pressures of making a living on demanding schedules. If you never learned how to make time for hobbies as a child, you're not likely to do so as an adult, either.

So the first challenge is making time by untethering the child, even for a little while, from a media-saturated environment. That doesn't have to mean draconian parental controls and screaming protests. The key is (1) setting an example by making time ourselves as adults, and (2) using that time to tap into a shared childlike curiosity.

This is where family-oriented events like rock shows, county fairs, and STEM expos come in, helping families explore interests together. Our clubs and members should continue hosting and participating in such events! The real value of these events is not their profitability. The last STEM expo I went to had a 10-by-10-foot blackout tent filled with UV lights and fluorescent minerals, captivated the interest of children and adults alike! By setting the example as role models and being prepared to provide encouragement and guidance, we can make room for hobbies, even in today's world.

The good news is that hobbies can free kids from their computers and cell phones! Given the chance, children embrace the opportunity to enjoy hobbies! It takes a village to help make the spare time for a hobby. It takes time and effort by our clubs and members supporting each other, parents, and children. By helping a child find a hobby, a talent may be born and a life enriched.



Tony Nikischer: Characterization and Naming of New Minerals

by Sheryl E. Sims

Tony Nikischer, founder and president of Excalibur Mineral Corporation in Charlottesville, VA, was a featured speaker at the Micromounters' Conference in Alexandria, VA, in April 2016. His presentation about the naming of new minerals was extremely interesting. Excalibur Mineral Corporation specializes in rare minerals and has been in operation since 1974. Tony is also the publisher of *Mineral News* and had the honor of having a new mineral, nikischerite, named after him in 2001.

Naming methodologies include listing the locality (such as country, town, river, and mine) and the physical properties (such as streak, color, and shape). The number of mineral species has skyrocketed, and electronic microprobes have made it faster and easier to characterize minerals chemically. With the aid of computers, characterization has become far less labor intensive. Since 1965, about 55 new species have been discovered each year on average. In 2015, however, a total of 135 new minerals were discovered and described.

Who discovers new minerals? According to Tony, scientists, dealers, field collectors, and "lab rats" all find new minerals. All it takes is knowledge and curiosity. Micromounters are responsible for finding lots of new minerals because of their eye for detail.

Naming minerals involves a lot of work. Submissions must include an abstract; keyword search; introduction; descriptions of the mineral's occurrence and general appearance, physical and optical properties, chemical data, infrared and Raman spectroscopy, XANES spectroscopy, X-ray crystallography, and crystal structure; a discussion; and acknowledgments and references, along with figures and captions.

Also present at the conference was Pete Dunn, the world leader in describing new minerals. The Commission of New Minerals and Nomenclature and Classification oversees and approves technical details and nomenclature proposals for new minerals. ↗



Tony Nikischer. Photo: Sheryl Sims.



Tony Nikischer's presentation.
Photo: Sheryl Sims.



Pete Dunn and Tony Nikischer.
Photo: Sheryl Sims.



The Rocks Beneath Our Feet Volcanism in New Mexico's Jemez Mountains

by Hutch Brown

Last February, I visited the rugged Jemez Mountains of northern New Mexico. The mountains are the ancestral homeland of the Jemez (HEM-ez) Pueblo, an indigenous people. The Jemez settled the area in about 1200; they maintain sovereign control of lands in the southern Jemez watershed.

To the north, the stream has carved a spectacular canyon, now part of the Santa Fe National Forest. Called San Diego Canyon, it features the layered rock formations typical of the Southwest (fig. 1).

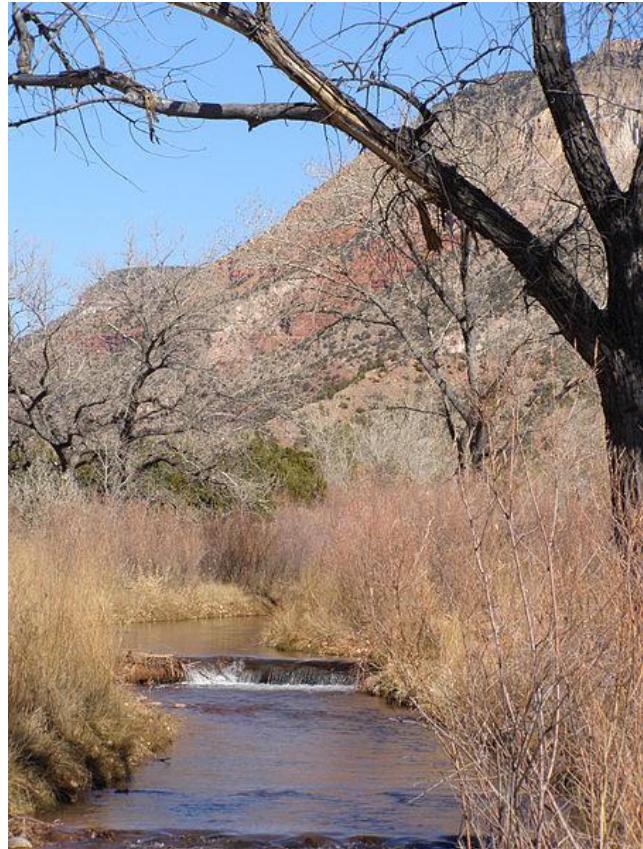
But there is more to these rocks than meets the eye.

At first glance, the rocks look like the flat marine sedimentary rocks exposed in the Grand Canyon. Indeed, shallow seas covered vast parts of what is now the American Southwest during the Carboniferous Periods (from about 360 million to 286 million years ago). The seas deposited sediments that hardened into limestones, shales, and sandstones, including the red and brown rocks shown in figure 1.

But overlying those Paleozoic deposits are younger, lighter colored layers of rock (fig. 1). These rocks, called tuff, formed from clouds of ash resulting from



Figure 1—Cliffs above the Jemez River feature deep-red or brown Paleozoic sedimentary rocks overlain by lighter colored volcanic tuffs from the late Tertiary and early Quaternary Periods. Photo: Hutch Brown.



The Jemez River in New Mexico's Santa Fe National Forest has carved a canyon through the Jemez Mountains.

Source: Wikipedia.

two of the greatest volcanic eruptions in the North American geological record. Hundreds of times greater than the Mount St. Helens eruption in 1980, these volcanic explosions occurred about 1.6 million and 1.2 million years ago.

And volcanism remains active in the area. The Jemez Mountains abut a huge crater to the north, source of the great eruptions. Known as the Valles Caldera, the crater is about 13 miles across, and it overlies a giant reservoir of magma close to the Earth's surface, much like Yellowstone in Wyoming.

Accordingly, the caldera is doming, with multiple mountainous bulges—actually, small volcanoes and cinder cones inside the crater (fig. 2). The region has long experienced tremors, and minor eruptions have occurred as recently as 50,000 years ago.

Like Yellowstone, the Valles Caldera has an active hydrothermal system. For at least a million years, superheated waters have bubbled up in the caldera



Figure 2—The Valles Caldera, a huge crater featuring grasslands on the caldera floor and forested volcanic rises and peaks. You often see elk grazing. Source: Wallace (2015).

and found their way to the Earth's surface. In particular, a system of faults along the Jemez River has resulted in a series of hot springs, some large enough for a commercial spa in the town of Jemez Springs.

Upstream from Jemez Springs, closer to the caldera, mineral-rich waters emerge along the Jemez Fault (fig. 3), a contact zone between the overlying Paleozoic sedimentary rocks and the underlying Proterozoic gneiss, which is roughly 1.7 billion years old.

The overlying rocks are at most about 360 million years old. The age difference between them and the underlying granitoids is roughly 1.4 billion years! Geologists call such gaps in the geological record unconformities, and this one is so large that it is known as the Great Unconformity.

The underlying granitoids are less porous than the overlying sedimentary rocks, so they block ground waters flowing down from Valles Caldera, stopping further infiltration. As the Jemez River carved its valley and exposed the Jemez Fault, the hot mineral-rich waters emerged from underground to spill over the Earth's surface and ultimately into the stream itself.



This area has about 15 mineral springs and seeps, with water temperatures at about 118 °F. The waters give off a smell of rotten eggs and leave yellowish sulfur deposits.

Seep showing sulfur and algae.



Figure 3—The Jemez Fault (red arrows, yellowish rock) overlies Proterozoic gneiss (lower left), with travertine deposits to the right. A cave entrance is in the travertine at top (blue arrow). Source: Budge (2014).

But the main deposits are travertine, a form of limestone (calcium carbonate). The travertine here is white to pink in color and concentric in shape, including tiny circles that look almost like marine fossils. Over the past million years, the springs have deposited enough travertine to cross the entire canyon, forming Soda Dam across the Jemez River (fig. 4).

The stream has carved a hole through the dam, and the entire site (as you might imagine) is popular with tourists in summer. Mineral pools once formed on top of Soda Dam, but roadbuilders cut through part of the travertine, changing the area's hydrology, and the pools dried up. The springs I saw on the site were little



Figure 4—Soda Dam, made up of travertine deposits from local hot springs. The Jemez River has cut a hole through the dam (lower right). Source: Wikipedia.



Jemez Cave entrance (now closed to visitors) looking out over the Jemez Mountains. Source: Mountain Project, Inc. (2016).

more than seeps. Soda Dam is no longer building up but gradually weathering away.

The travertine extends far upslope, burying the underlying Paleozoic sedimentary rock (fig. 3). Like all limestones, travertine dissolves in slightly acidic rainwater, a process that has formed cavelike hollows in Soda Dam (fig. 4). Across the road from the dam and up the hill, the travertine and the underlying Paleozoic limestone have formed a cavern known as Jemez Cave (fig. 3). The cave was once popular with rock climbers, who took photos from the entrance, like the one shown above.

However, Jemez Cave and Soda Dam are sacred sites for the people of the Jemez Pueblo, who occupied the entire area for centuries before the Spanish completed their conquest in the late 17th century. In the 1930s, archeologists excavated the cave and found many Jemez artifacts, including an infant who had died and been buried inside the cave.

The infant was on display in museums until native revulsion and protest finally prevailed. In partnership with the Forest Service, the Jemez Pueblo secured the cave site and reburied the infant in a special ceremony. Out of respect for the sacred site, the Forest Service has closed the cave to visitors.

Visitors still throng to Soda Dam. The road is on a popular loop for tourists wanting to sightsee in the Jemez Mountains and in the Valles Caldera beyond. In summer, so many cars line the road at Soda Dam that it's hard to find parking.

But if you happen to be in the area and can find a parking spot—easiest to do in the off season, the best

time to visit—you will see some truly remarkable rock formations. It is well worth the trip! ↗

Acknowledgments

I am grateful to the U.S. Forest Service's Southwestern Regional Office for arranging a field trip to the Jemez Mountains as part of the agency's Chief's Review of the Southwestern Region from February 28 to March 4, 2016. Chris Toya, Tribal Cultural Properties Manager for the Pueblo of Jemez, participated in the Chief's Review and gave me much of the information contained in this article. Some of it also came from geologic maps and descriptions on display at the Walatowa Visitor Center in the Pueblo of Jemez.

Sources

- Budge, K.G. 2014. [Supervolcano: A geological history of the Jemez area](#).
- Fraser, G.; Shevenell, L. 1987. [Travertine deposits of Soda Dam, New Mexico, and their implications for the age and evolution of the Valles Caldera hydrothermal system](#). Bulletin of the Geological Society of America 99(2): 292–302.
- Mountain Project, Inc. 2016. [Jemez Cave](#).
- Toya, C. 2016. Personal communication. Tribal Cultural Properties Manager, Pueblo of Jemez. 28 February.
- USDA Forest Service. N.d. [Geology and minerals: Santa Fe National Forest, Jemez District, Soda Dam](#). Southwestern Regional Office, Albuquerque, NM.
- Wallace, T. 2015. [Super volcano in the backyard: The Valles Caldera Marathon](#). Blog. 26 April.

GeoWord of the Day

(from the American Geoscience Institute)

bedding-plane cave

- (a) A cave with passages, generally much wider than high, that have developed along a bedding plane, usually by dissolution of one of the beds.
(b) A passage formed along a bedding plane, especially when there is a difference in susceptibility to corrosion in the two beds.

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

AUCTION BID SLIP

ITEM # _____

DESCRIPTION _____

FROM _____

Starting Bid amount: _____

Bidders: You need to bid on this item if you want it to be auctioned! Place bid below.

NAME BID

AUCTION BID SLIP

ITEM # _____

DESCRIPTION _____

FROM _____

Starting Bid amount: \$2 _____

Bidders: You need to bid on this item if you want it to be auctioned! Place bid below.

NAME BID

AUCTION BID SLIP

ITEM # _____

DESCRIPTION _____

FROM _____

Starting Bid amount: _____

Bidders: You need to bid on this item if you want it to be auctioned! Place bid below.

NAME BID

AUCTION BID SLIP

ITEM # _____

DESCRIPTION _____

FROM _____

Starting Bid amount: _____

Bidders: You need to bid on this item if you want it to be auctioned! Place bid below.

NAME BID

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

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1		2 Show, Henderson, NC
4 Show, Henderson, NC	5 Labor Day Show, Henderson, NC	6	7 MSDC mtg, Washington, DC	8	9	10
11 Patriot Day	12 GLMSMC mtg, Rockville, MD	13	14	15	16	17 Field trip, Calvert Cliffs; show, Harrisburg, PA
18 Show, Harrisburg, PA	19	20	21	22 Fall Begins	23	24 Field trips; shows, MD, NJ
25 Shows, MD, NJ	26 NVMC mtg, Arlington, VA	27	28 MNCA mtg, Arlington, VA	29	30	

Event Details

2–5: **Henderson, NC**—35th Annual Gem & Mineral Spectacular; Henderson County Gem & Mineral Society; Fri-Sun, 10–6, Mon, 10–5; Whitmire Activity Center, 301 Lily Pond Rd; adults \$4, kids under 12 free; info: <http://www.hcgms.com/index.html>.

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

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

17: **Annandale, VA**—Field trip, Geology of Calvert Cliffs; Sat 9–6; Dr. Kenneth Rasmussen, NOVA; details, see article above; info: k.rasmussen@nvcc.edu.

17–18: **Harrisburg, PA**—51st Annual Gem, Mineral & Jewelry Show; Central Pennsylvania Rock & Mineral Club; Zembo Shrine.

24: **Annandale, VA**—Field trip, Geology of Shenandoah National Park; Sat 9–6:30; Dr. Callan Bentley, NOVA;

details, see article above; info:

http://www.nvcc.edu/home/cbentley/gol_135/shenandoah

24: **Farmville, VA**—Field trip, Willis Mountain Kyanite Mine; Willis Mt Plant Rd; Sat 9–1; info, register: Brian Whiteley, brianwhiteley80@hotmail.com.

24–25: **Franklin, NJ**—60th Annual Franklin-Sterling Gem & Mineral Show; Franklin Mineral Museum; Sat 9–5, Sun 10–4; Franklin School, 50 Washington Ave; adults \$7, kids (6–16) \$4; info: <http://spmom3.wix.com/franklin-gem-mineral>.

24–25: **West Friendship, MD**—Atlantic Coast Gem, Mineral, Jewelry & Fossil Show; Gemcutters Guild of Baltimore; Howard County Fairgrounds.

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

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



Mineral of
the Month:
Spodumene

PLEASE VISIT OUR WEBSITE AT:
<http://www.novamineralclub>

2016 Club Officers and Others

President: Bob Cooke
rdoctooke@verizon.net

Vice-President: Ti Meredith
ti.meredith@aol.com

Secretary: David MacLean
dbmaclean@maclean-fogg.com

Treasurer: Rick Reiber
mathfun34@yahoo.com

Field Trip Chair: Ted Carver
jtcarve@msn.com

Webmaster: Casper Voogt
casper.voogt@plethoradesign.com

Club Historian: Kathy Hrechka
kshrechka@msn.com

Communications: Vacant

Photographer: Sheryl Sims
sesims4@cox.net

Editor: Hutch Brown
hutchbrown41@gmail.com

Show Chair: Tom Taaffe
rockcollectr@gmail.com

Greeter/Door Prizes: Ti Meredith
ti.meredith@aol.com

The Northern Virginia Mineral Club

You can send your newsletter articles to:

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.

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.