



The Mineral Newsletter

Meeting: January 23 Time: 7:45 p.m.

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



Zincite from New Jersey

[Smithsonian Mineral Gallery](#). Photo: Penland.

Volume 58, No. 1

January 2017

Explore our [Website](#)!

January Meeting Program:

Unfinished Business and
Mineral/Rock Giveaway

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Deadline for Submissions

February 1

Please make your submission by the 1st of the month! Submissions received later might go into a later newsletter.



Mineral of the Month Zincite

by Sue Marcus

Zincite is synonymous with Franklin, NJ, as exemplified by the lovely crystal on the cover. But if you think this mineral is always red, look at the brownish-green synthetic crystal below.

The chemical formula of zincite is zinc oxide (ZnO), but iron and manganese (Fe and Mn, respectively) are usually significant components of the mineral material. The red color comes from traces of Fe and Mn in the crystal structure. That's why the purer synthetic material does not have that feature.

Although Archibald Bruce originally identified the mineral as zinc oxide in 1810, it did not receive the name "zincite" until Wilhelm Karl von Haidinger bestowed the moniker in 1845. Minerals usually retain the earliest name published for them, but for unknown reasons zincite was called "sterlingite" by Francis Alger in 1944. Another name, used by Henry James Brooke and William Hallows Miller, was "spartalite."

Today, the International Mineralogical Association (IMA) officially sanctions mineral names, usually following publication of a physical and chemical description in a peer-reviewed journal. Zincite, the name for zinc oxide, was grandfathered into the IMA list of minerals.

The major occurrences of zincite are Franklin and Sterling Hill in New Jersey. Natural zincite is also found in slag heaps from mines in Poland, a country that also produces synthetic zincite. Mindat notes that synthetic zincite crystals are commonly available for sale, although I personally have not seen them.

The Mindat photos of zincite show natural specimens from New Jersey, with one very odd exception: tiny (less than 1-mm) crystals from an arsenic-rich fumerole—an igneous source—in western Russia.

Zincite has yielded faceted gemstones, usually from synthetic material. Natural specimens are



Synthetic zincite. Source: Wikipedia.

Happy New Year!



Northern Virginia Mineral Club members,

Please join your club officers for dinner at the Olive Garden on January 23 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.

usually too fractured, opaque, or both to make attractive cut stones.

With the odd and unexplained exception of the Russian fumerole, zincite forms in metamorphic rocks that are rich in zinc, iron, and manganese. Though zincite is rarely fluorescent, Mindat reports that at least some yellow zincite from the Sterling Mine fluoresces yellow-green under shortwave ultraviolet light.

Zincite commonly occurs as small patches of red—rather like dark blood stains—in the Franklin marble, although it may occur as cleaved or scaly masses up to several inches in diameter. Crystals are rare, and well-formed crystals showing many faces (like the one on the cover) are very rare. In the Franklin–Sterling Hill deposits, zincite adds color to the black franklinite, white calcite, and beige-to-brown willemite. Dark red massive specimens may look like works of art, with swirls or sharp lines of zincite crossing the white marble.

Zinc, the metal, is used as a protective coating for other metals, for example galvanized pails. It is used in chemicals and medicines and is alloyed with copper to make brass. The Franklin–Sterling Hill zincite deposits are the only ones ever known to have been mined for zinc; willemite and franklinite also provided zinc ore from these mines. Zincite is not found in sufficient quantities to be ore-grade elsewhere.

Technical details (source mostly Mindat):

Chemical formulaZnO
Crystal formhexagonal
Hardness4
Density5.64-5.68 g/cm³ (measured)
Colorusually deep or dark red, to slightly
purplish red
Streakyellowish-orange
Cleavageone good cleavage, one fair parting
Fractureconchoidal
Lusterresinous to subadamantine

An interesting note from Wikipedia:

Both natural and synthetic zincite crystals are significant for their early use as semiconductor crystal detectors in the early development of crystal radios before the advent of vacuum tubes. As an early radio detector it was used in conjunction with another mineral, galena, and this device was known as the cat's-whisker detector. ↗

Sources

Gemdat.org. 2016. [Zincite](#).
Mindat. 2016. [Zincite](#).
Minerals.net. 2016. [The mineral zincite](#).
N.a. 2012. [The Sterling Hill Mining Museum](#). Ogdensburg, NJ.
Wikipedia. 2016. [Zincite](#).

Secretary.....David MacLean
TreasurerOpen—volunteers needed!

Rick Reiber has been NVMC Treasurer for over 10 years and is due for a break. If you don't want to serve full time as Treasurer, please consider becoming co-Treasurer. Rick will help you learn the ropes.

Scholarships

We also need to approve \$250 grants for 2016 from the Fred C. Schaefermeyer Scholarship Fund. (For more on Fred Schaefermeyer and the club scholarship fund, see the articles beginning on page 5 below.) Nominated are:

Carlin Green by Julia Nord (GMU)
Austin Matthews by Lance Kearns (JMU)

We will also consider the following nominations for 2017:

Noah Fleischer by Lance Kearns (JMU)
Grant Colup by Lance Kearns (JMU)

2016 Club Show

We will go over the NVMC show at GMU last November. We will present awards for volunteers; report on show results, including proceeds for the Schaefermeyer Scholarship Fund; and discuss show-related successes and areas with room for improvement, giving everyone a chance to make comments and suggestions.

Budget/Upcoming Events

We will also report on the status of our club budget and go over the 2017 calendar of events to prepare for the coming year and make sure the right events go into the club newsletter.

Newsletter Issues

As part of discussing the year to come, we will raise issues related to our newsletter, including mailing paper copies and participating in the annual newsletter contest. President Bob Cooke has outlined the issues below on page 9. Please come prepared to discuss!

Mineral/Rock Giveaway

Do you have minerals and other items related to our hobby that you no longer want or need? Here's an opportunity to clean house! Bring whatever you have and put it up for grabs. Then check out what others have brought and take home whatever you like! ↗

Unfinished Business and Mineral/Rock Giveaway January 23 Program

by Ti Meredith, Vice-President

Because we didn't have a quorum at the December NVMC meeting and Holiday Party, the club could not make decisions on matters of pressing concern. Therefore, we will dispense with our usual program and devote the January meeting to resolving unfinished business. But we will also have an informal exchange—a Mineral/Rock Giveaway!

Club Officers

Outstanding items of business include electing club officers. Nominated are:

President Bob Cooke
Vice-President Ti Meredith

The Prez Sez

by Bob Cooke, President

As the presses are about to close for this edition of *The Mineral Newsletter*, I've just read confirmation from Secretary David MacLean that we did not have a quorum at the December meeting. Therefore, elections for club officers were not held. I guess my term of office has been extended for at least another month until we can have another attempt at elections.

The January club meeting will be a Giveaway Contest: Whoever leaves with the most stuff—wins! The club is donating over a dozen flats of rocks and minerals from the club storage locker that Tom Taaffe and I felt would not be fully appreciated at our November club show but had collector appeal for our club members.

You are encouraged to bring your own donations, too. Don't forget the baggies, blank labels, boxes, and whatever else you need to keep your new collectibles organized on the way home.

At the January meeting, we will also have a business meeting to discuss the November club show, the club budget, club scholarships, the newsletter, future programs, and ... you get the idea. This will be your chance to learn more about the club and to influence next year's activities. I never found business meetings to be particularly fun, but addressing these issues now will allow us to focus more on programs with presentations at future meetings.

And don't forget: Just like the incoming presidential administration, the NVMC has plum jobs available to reward the party faithful! ↗.

Bob



Club Meeting and Holiday Party December 19, 2016

Vice-President Ti Meredith called the meeting to order at 6:30 p.m. at the Long Branch Nature Center in Arlington, VA. Due to the lack of a quorum, club members decided not to hold a business

meeting. Instead, they proceeded straight to the annual Holiday Party.

Secretary David MacLean is currently in Hungary, visiting relatives over the holidays. His synopsis of the Holiday Party will appear in the February newsletter. ↗.



Photos: Sheryl Sims.

Strangely Beautiful Ice Formations: What Are They?

Thanks to Bob Cooke for the reference!



A week ago, some friends and I went for a hike on Shenandoah National Park's Stony Man Mountain. It was a gorgeous morning, chilly and still. The only noise came from the frozen ground crunching beneath our feet.

Then I spotted something truly beautiful and strange.

Threads of ice, as thin and delicate as spun sugar, seemed to be growing out of the ground. All three of us bent close and marveled at the odd sight. One friend plucked a piece of the ice up to examine it; the strands melted in his hand. [Read more.](#)

Fred C. Schaefermeyer: Year 97

by Kathy Hrechka

Editor's note: The article is adapted from The Mineral Mite (November 2016), pp. 9–10.



Fred C. Schaefermeyer, 97, retired United States Air Force and past president of both the EFMLS and AFMS, passed away on October 9, 2016, in Wheat Ridge, CO.

Born in Hayden, CO, in January 1919, Fred worked various odd jobs while boarding with families in town and going to public schools. After graduating from high school, Fred went to Colorado A&M University for a year. He enlisted in 1940 in the Army Air Corps and served in numerous administrative roles, ending up at the Pentagon until 1968, when he retired.

After attending electronics school, Fred began working for the 3M Company as a service representative until he retired for a second time in 1982.

Fred then began his third “career” as a devout hobbyist in rock collecting and micromineralogy. Taking college courses in chemistry and geology, he quickly became involved in numerous local rock clubs.

Fred went on to serve as president of the Northern Virginia Mineral Club, the Micromineralogists of the National Capitol Area, and the Mineralogical Society of the District of Columbia. Fred also served as a bulletin editor multiple times, as a competition judge, and as a teacher at Wildacres and many other workshops and conferences, in addition to becoming president of our regional and national federations. His induction into the Micromounters Hall of Fame in 2000 was, he remarked, “my proudest achievement.” He loved this hobby and all of the people he came to know over the years.

Preceded in death by his wife, Geraldine (Gerry), Fred is survived by his daughter, Sherry, and his sons, Michael, Mark, and Martin, along with eight grandchildren, six great grandchildren, and his dearest companion for over a decade, Muriel Frink. A memorial service was held at Arvada Presbyterian Church, Arvada, CO, on November 11, 2016.



*Fred, Tom Tucker, and George Loud in September 2015.
All photos: Kathy Hrechka.*

Contributions in Fred’s memory can be made to the “Northern Virginia Mineral Club Fred Schaefermeyer Scholarship Fund” and mailed to Rick Reiber, Treasurer, NVMC, PO Box 9851, Alexandria, VA 22304, or to a charity/scholarship of your choice. ↗

Fred’s Farewell: Written by Fred

My life’s been full. I’ve savored much: good friends,
good times, my loved one’s touch, God’s Blessings
untold.

Lift up your hearts and share all the memories you
can hold.

God wanted me now, He set me free.
And now we wish you the ‘Sunshine of Tomorrow’
In Christ’s Name.



*Kathy Hrechka with
Muriel Frink, friend of
the family since 1940.
She cared for Fred for
the past 10 years, after
Gerry passed away.*

A color photograph of Fred C. Schaefermeyer, a man with short grey hair, wearing a maroon polo shirt, smiling and holding a black microscope.

Generous Donations to the Schaefermeyer Scholarship Fund

by Bob Cooke, President

Following Fred's death at age 97 on October 9 of last year, his family suggested that, in lieu of flowers, donations be made to the Northern Virginia Mineral Club's Fred C. Schaefermeyer Scholarship Fund. Since that time, the fund has received donations totaling \$1,480 in Fred's name.

The NVMC gratefully acknowledges gifts from:

- Gary and Carla Ikenouye
- Marla and Edward Johnson
- Susan and Steve Pinkney-Todd
- George Reimherr
- Michael and Candi J. Schaefermeyer
- Zelma Todd
- Laura Vachowski
- The Micromineralogists of the National Capital Area ↗

A black and white portrait of Fred C. Schaefermeyer, an older man with white hair and glasses, wearing a dark suit, white shirt, and striped tie.

History of the Fred C. Schaefermeyer Scholarship Fund

by Bob Cooke, President

Fred C. Schaefermeyer was a member of the Northern Virginia Mineral Club from 1982 until his death in 2016. In addition to having been president of the NVMC, he served as a bulletin editor multiple times, as a competition judge,

and as a teacher at Wildacres and many other workshops and conferences.

Not content to restrict himself to a single mineral club, Fred also served as president of the Micromounters of the National Capital Area, the Mineralogical Society of the District of Columbia, the American Federation of Mineralogical Societies, and the Eastern Federation of Mineralogical and Lapidary

Societies. Fred was inducted into the Micromounters Hall of Fame in 1996 and the National Rockhound and Lapidary Hall of Fame in 2000. Throughout his long and active career, Fred greatly valued teaching youth about geology.

Origins of the Fund

Following the death of his wife Geraldine in February 2009, Fred moved from our area back to Colorado, where he was born. He took the occasion to donate minerals and books to the NVMC. The proceeds from the sale of these items became the seed money for what eventually came to be known as the Fred C. Schaefermeyer Scholarship Fund.

The fund's selection process for recipients for scholarship awards was somewhat informal until March of 2009, when Tom Tucker made a motion at a club meeting:

I move that, as long as funds in the Schaefermeyer Scholarship Fund permit, the club make annual "grants" in the amount of \$250 to a deserving student who is studying a specific mineral-related topic at James Madison University. This student will be selected by Dr. Lance Kearns, Professor of Mineralogy at the university. The recipient will be invited to present the results of their study as a club program or as an article in the newsletter.

The motion was seconded. Discussion included dropping the professor's name. The motion was carried.

Evolution of the Fund

In September 2011, Kathy Hrechka made a motion to allow NVMC junior members to apply for \$100 scholarships. The club membership approved the motion, and the amount was later increased.

At about the same time, the NVMC and MNCA each provided \$1,000 in Fred's honor to jointly fund a display case in the James Madison University mineral museum. (Fred had previously donated a case in his own name.)

In 2013, the scholarship program was expanded to solicit nominations from Professor Julia Nord at George Mason University for a second \$250 scholarship. In 2014, the scholarship program was again expanded to include nominations for a third scholarship from Professor Shelley Jaye at the Annandale campus of Northern Virginia Community College.

Funds to finance the Schaefermeyer Scholarship Fund come from donations and from the proceeds of NVMC's semiannual club auctions and the silent auction at the annual mineral show.

Grant Recipients and Contributions

As of December 2016, the following scholarships had been awarded:

Year	Name	Affiliation*	Award
2011	Michael Tracey	JMU	\$250
2013	Alec Brenner	Junior	\$400
2013	Julia Hrechka	Junior	\$200
2014	Brandon Euker	JMU	\$250
2014	Mercer Parker	NOVA	\$250
2014	Robin Rohrbach	NOVA	\$250
2014	Walter Johnson	Junior	\$200
2014	Jon Culpepper	GMU	\$250
2015	Tyler Hanson	JMU	\$250
2015	Joshua Benton	NOVA	\$250
2015	Conrad Smith	Junior	\$400
2015	Alec Brenner	Junior	\$400
2016	Marissa Dudek	NOVA	\$250

* Junior = NVMC junior member.

Recipients of Schaefermeyer Fund scholarships have delivered the following programs at club meetings:

- Coastal Plain Basement Rock and Gigapan Computer Technology
- Spectroscopic Quantification of Structurally Bound Water in Pyroxenes and Olivine, With Application to Meteorites
- Geologic Imagery by M.A.G.I.C.

Recipients have also contributed the following articles for publication in our monthly newsletter:

- Diggin' Dinos in North Dakota: Becoming a Real Paleontologist
- Tides, Convection, and Geology in Exoplanets: Why the Earth Sciences Are Not Just for Earth
- Creating Crystal Models on 3D Printers
- Next Stop: New York !
- Mineral Identification: The Cool Way ↗.

Save the Dates!

Field Trip Opportunities

James Madison University

January 28, 2017

Professor Lance Kearns has invited club members to visit the mineral museum at James Madison University from 9 a.m. to 4 p.m. on Saturday, January 28. For more information, contact [Bob Cooke](#).

George Mason University

February 18, 2017

In appreciation for the success of our recent mineral show, Professor Julia Nord of George Mason University's Department of Atmospheric, Oceanic, and Earth Sciences has invited NVMC members to visit GMU's geology facilities on Saturday, February 18.

We will meet on campus at Exploratory Hall at 10 a.m. for a demonstration of mineralogical laboratory equipment and a tour of the mineral museum. An optional lunch will follow. Details will appear in future newsletters.

Northern Virginia Community College

Geology Field Trips

In spring 2017, NOVA's Annandale campus is offering 1-day weekend courses related to our hobby. You can get more information at the [Field Studies in Geology—GOL 135 Website](#).

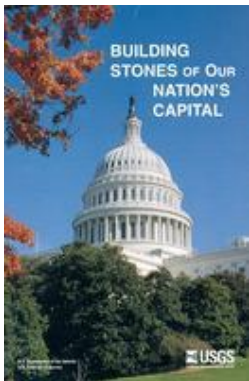


Paleozoic Geology of Virginia and West Virginia.

One-day field trip via college van on Saturday, April 1, 7 a.m. to 9 p.m. This field trip will let you explore the late Silurian and Devonian geology of western Virginia and West Virginia, considering ancient depositional settings (tropical marine reefs, lagoons, shelves, deep basins, and terrestrial flood plains) and fossils, as well as later deformation (faulting and folding) associated with the Valley and Ridge Province.

Cretaceous Geology of Maryland and Fossil Hunt.

One-day field trip starting at 10 a.m. on Sunday, April 23. Well-known dinosaur expert and paleontologist Dr. Peter M. Kranz will lead this fun outdoor expedition to nearby fossil sites, where you can discover many exciting fossils to take home. ↗.



Book Review Online Sources for Rockhounds in Our Area

by Hutch Brown, Editor

In the December issue of our newsletter, I reviewed the USGS publication *The River and the Rocks*. In response, club member and USGS retiree Mike Kaas sent me the following message.

Hutch,

Thanks for mentioning the USGS “The River and the Rocks” bulletin in the newsletter. It is a very good publication for helping folks appreciate the “rocks” in our own backyard. It is online [here](#).

Another pub is “Building Stones of our Nation’s Capital,” available online [here](#). There is also a Webpage on the building stones used in Washington, DC, that is online [here](#).

The Maryland Geological Survey has another useful pub of local geologic interest called “A Geologic Walking Tour of Building Stones of Downtown Baltimore, Maryland.” It is online [here](#).

In fact, the Maryland Geological Survey has an online Tour of Maryland Geology that covers the entire area from the Atlantic Ocean at Assateague Island to the mountains in the Maryland panhandle. You can find it [here](#). I wish they had it online 20 years ago, when I started taking NOVA Geology 135 classes! 🏹

Happy Holidays!

Mike



Mineral Database for macOS

Thanks to Sheryl Sims for the reference!

Mineral Database is a Mac app that you can use to search for minerals by selecting physical properties, optical properties, and other classification and occurrence criteria. Or you can browse the mineral photo galleries. It isn’t free, but if you’re interested, you can [read more](#). 🏹

Fluororichterite? Not so fast ...

Hutch Brown, Editor

In the December 2016 issue of our newsletter, I included the picture below of a specimen I own. I speculated that it might be fluororichterite and asked for confirmation from club members.

Former NVMC President Peter Chin responded, asking me to send him the photo so he could take a closer look.

Peter told me that the dark needlelike crystals are tourmaline and that the white matrix is a variety of albite. In retrospect, that’s exactly what they look like to me using my loupe. I collected albite last year at Morefield Mine in Virginia, and the matrix looks quite similar.

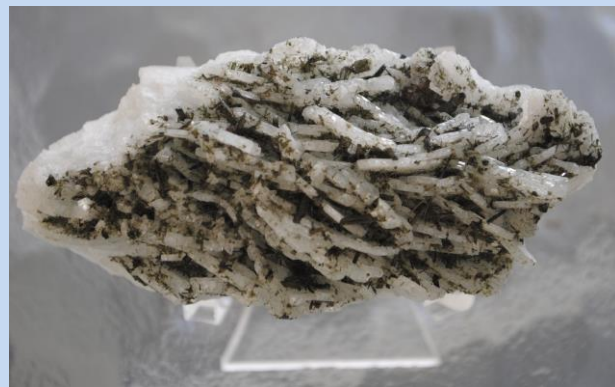
The tourmaline is black in reflected light and translucent green in transmitted light. The photo below was taken on a screen porch during the day, with light coming from multiple directions, so a mossy green tint is visible in places.

Albite is a plagioclase feldspar with the chemical formula $\text{NaAlSi}_3\text{O}_8$. The photo suggests the perfect cleavage typical of feldspar.

The variety is cleavelandite, a kind of albite associated with tourmaline in pegmatites. It typically comes in the thin bladed sheets you can see in the photo.

So thank you, Peter, for helping me identify this keepsake inherited from my parents!

My mistake!





Wildacres Registration Now Open!

by Steve Weinberger, Wildacres Committee Chair

Editor's note: The article is abridged from EFMLS News (January 2017), pp. 1, 7.

Wildacres is a fantastic retreat located on Pompeys Knob just off the Blue Ridge Parkway about an hour north of Asheville, NC. Signing up for the May 22–

28 session will give you the opportunity to take one or two classes; hear excellent talks from our guest speaker, Bob Jones; and participate in a variety of other activities.

Registration is open! You can find a registration form in the [EFMLS newsletter, January 2017 issue](#), or go to the [Wildacres Website](#). Some classes fill quickly, so register early! You can choose from the courses listed below. ↗

Coming to Wildacres in May 2017 ...

Beading: New Beads (*Mia Schulman*): Create earrings and pendants using beads with two to four holes each! Square, triangular, and rectangular beads, plus one-hole beads. No experience needed. 2-day class, 1st semester.

Beading: Peyote Bracelet (*Mia Schulman*): Create pendants using Delicata beads and the Peyote stitch, an off-loom bead-weaving technique using a fine needle and beading thread. No experience needed. 2-day class, 2nd semester.

Cabochons—Basic (*Bernie Emery*): Transform rock into a shiny, well-formed cabochon. Learn the trim saw as well as grinding, sanding, and polishing. Slabs are provided or use your own with instructor approval. Bring an apron and safety glasses. No experience needed. 2-day class, 1st semester.

Cabochons—Intermediate (*Bernie Emery*): Learn techniques for cutting different shapes. Slabs are provided or use your own with instructor approval. Bring an apron and safety glasses. Prerequisite: Prior experience with cabbing and trim saw. 2-day class, 2nd semester.

Faceting (*Larry Heath*): Learn to cut and polish a 57-facet round brilliant gemstone, to identify well-cut stones, and to select rough material. Bring an optivisor (#7 or #9) and an apron. No prior experience needed. 4-day class.

Introduction to Gemology (*Tim Morgan*): Learn the ideal color of ruby, where diamonds come from, and more about gemology, with lots of rough specimens and finished stones as examples. No experience needed. 2-day class, 1st semester.

Intermediate Gemology (*Tim Morgan*): Learn how to evaluate gemstones. Learn about the Mohs scale, inorganic gemstones, how gems are sold, what to look for when shopping for gemstones, and more, with lots of rough specimens and finished stones as examples. No experience needed. 2-day class, 2nd semester.

Gem Trees—Basic (*Ellie Pitts*): Create at least two gem trees, learning to cut, twist, and assemble wire branches according to a pattern. Bring reading glasses or an optivisor. Tools available in class, but bring jewelry pliers if you can. You may bring your own base rocks (1-1/2–5 inches wide). No prior experience needed. 2-day class, 1st semester.

Gem Trees—Intermediate (*Ellie Pitts*): Create at least two gem trees from complicated patterns. Bring reading glasses or an optivisor. Tools available, but bring pliers and cutters if you can. I recommend Artistic Wire 24ga. You may bring your own base rocks (1-1/2–5 inches wide). Prerequisite: Gem Tree 1 or prior experience. 2-day class, 2nd semester.

Mineral Identification (*Mike Wise*): Learn to identify rock-forming and “exotic” minerals, focusing on “non-destructive” and “semi-destructive” tests. No experience needed. 4-day class.

Silversmithing—Basic (*Richard Meszler*): Learn how to work silver sheet and wire to fabricate jewelry, including annealing/bending/shaping/texturing metal, soldering, piercing, and polishing. You get a kit with necessary metals and supplies as well as a step-by-step description of each project. No experience needed. 2-day class, 1st semester.

Silversmithing—Intermediate (*Richard Meszler*): Learn to make a bezel setting and bail for setting a cabochon to make a pendant. You get a kit with necessary metals and supplies as well as a step-by-step description of each project. Prerequisite: Basic silversmithing experience, including soldering. 2-day class, 2nd semester.

Soapstone Carving (*Sandy Cline*): Develop a working knowledge of the material, tools, and methods used to complete a carving. Produce a simple piece and progress to making a more advanced sculpture, developing your own personal style. No experience needed. 2-day class, both semesters.

Newsletter Issues

by Bob Cooke, President

As the Executive Board attempts to balance our club's budget for 2017, we are faced with one of the unpleasant realities of life: The good things in life cost money.

Sending Out Paper Copies

Our newsletter is one of those good things. Although there is no cost for distributing the newsletter via e-mail to 192 addresses, last year the club incurred costs of \$493.36 to print and mail newsletters to 18 recipients. That's an annual cost of over \$27 per address.

In bygone years, newsletters were paid for with monies from your dues. That was for fewer pages and cheaper postage rates. Can the club continue to afford to pay \$500 each year to provide a paper copy to those without email or who just prefer the paper version? I think this expense is particularly questionable given that anyone can get a gmail account for free and can access their email in a public library. And from email, anyone can print out the newsletter.

This topic will be raised at the January club meeting. Please be prepared to share your opinion.

Cost of the Annual Newsletter Contest

In past newsletters, Hutch Brown has written articles about the national Bulletin Editors Advisory Committee (BEAC) newsletter contest held by our regional and national federations each year. He has pointed out the limited benefits that NVMC receives from participating in a contest where some of the judging standards don't coincide with the desires of our club.

This could be just a simple case of frustration over our newsletter losing points for not conforming to BEAC judging criteria (see Hutch's article below).

But it is more than that. We pay a substantial sum for the privilege of being thus confounded. The BEAC contest requires submission of two of our monthly newsletters, in triplicate and in color, and our newsletter ranges from 16 to 20 pages in length. Those printing costs accounted for much of the \$133.82 we paid for the newsletter contest in 2015, adding to the already high annual cost of \$27 per address for distributing the newsletter to recipients in paper format.



Safety Tip: Watch for Toxics!

Adapted from Ellery Borow, "Safety Matters—Terrible Toxic Treasures," A.F.M.S. Newsletter (May 2016), p. 4.

Dangers might lurk among our mineral treasures. Think about the chemical composition of some minerals we collect: autunite, arsenopyrite, cinnabar, betafite, thorite, cuprosklodowskite, malachite.

Think about collecting conditions that hide biting or stinging creatures or rash-causing plants. Think about cliffs, slopes, ledges, and other precarious situations.

Our hobby warrants caution. Some minerals should not be touched with bare skin. Some should not be worked dry. Some can produce nasty slivers. Some are even radioactive.

So how do we protect ourselves?

Our hobby is based on sharing, giving, and teaching! Most experienced enthusiasts know what to do and can tell you.

So I would encourage our club members with the most experience to share, give, and teach—not just about their knowledge about rocks, minerals, and fossils but also about how to be safe. That includes safe mineral handling, storage, and collecting.

If your club does not have a safety coordinator, I would recommend that you consider all the benefits of having one. If you have a safety coordinator who 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 all those other critters out there. We all have a place on this Earth, and we need to be mindful about sharing it with them.

Is it worth it?

This topic will also be raised for discussion at the January NVMC meeting. ➤



Newsletter Articles: The BEAC Contest

by Hutch Brown, Editor



Each year, we have submitted articles and samples of our newsletter for judging in the newsletter contest sponsored by our regional federation's Bulletin Editors Advisory Committee (BEAC).

Though reluctant to continue submitting samples of our newsletter, I did so again for the contest this year. I laid out my concerns last year in the [April](#) and [December](#) issues of our newsletter: Some of the judging criteria seem skewed against a club like ours, and the judging itself can be uneven and subjective.

I have shared my concerns about the judging with Mary Bateman, the BEAC chair, who pointed out how hard it is to get volunteer judges. After the judges are in place, their decisions have to be final.

I understand the need for not second-guessing the judges—and for appreciating their willingness to donate their valuable time. Nevertheless, we might want to reconsider participating in the contest next year. Is it worth the cost, given the constraints?

In any case, I will continue to submit individual articles to the BEAC contest. As editor, I try to submit as many articles as I can for our club. The maximum allowed is three per category, three per author, and two per author in any given category.

We haven't had items to choose from in the BEAC contest categories of Poetry, Juniors, and Drawn Features. But we have had articles in the three remaining categories: Educational/Technical Articles (which give historical, geological, or other technical information); Nontechnical Articles (which are informational rather than technical in nature); and Written Features (which "add spice" to a newsletter).

BEAC volunteers, typically newsletter editors, judge the articles in each category. Articles on unusual topics or with information not widely known in our hobby tend to do particularly well.

Therefore, in choosing articles to submit for our club, I look for unusual information or subject matter. I get permission from the authors, and if an author asks me to submit a particular article, I will gladly do so.

For the 2017 BEAC contest, I submitted the following articles from our 10 issues in 2016:

Educational/Technical Articles—

Sue Marcus, "Mineral of the Month: Vanadinite" (February issue)

Sue Marcus, "Mineral of the Month: Stibnite" (May issue)

Sheryl Sims, "Let's Go Crazy With Purple Gemstones!" (June issue)

Nontechnical Articles—

Mike Kaas, "Getting the Big [Geologic] Picture" (February issue)

David MacLean, "Two Student Presentations" (February issue)

Sheryl Sims, "It's All in the Name: The Controversy Over Negro Mountain" (February issue)

Written Features—

Hutch Brown, "Book Review: The River and the Rocks" (December issue)

Kathy Hrechka, "2016 NFMS/AFMS Show: Treasures of the Northwest" (September issue)

Sheryl Sims, "2016 EFMLS Conference: Why You Should Attend Federation Conventions" (November issue)

Best of luck to all our authors! ➤

Humor

Fossil, Mineral, Debatable

Editor's note: The story is adapted from "[No Sale: Not Always Right](#)," a Website about incidents that defy the maxim that the customer is always right.



The store I work at sells rock and mineral specimens, so it's quite common that customers don't know much about what they are buying. Luckily, I have a geology background, so I can explain in detail what things are.

Customer (pointing to a specimen): "What is that?"

Me: "It's a chrysanthemum stone."

Customer: “What’s a chrysanthemum stone?”

Me: “It’s strontium sulfate that forms on top of black limestone.”

Customer: “But what *is* that?”

Me: “Strontium sulfate is celestite. This is just a different form of it; deposited on limestone, it looks like a flower.”

Customer: “So it’s a fossil of a flower?”

Me: “No, it’s a mineral on top of a piece of limestone. Limestones are fine-grained sedimentary rocks. The crystallization just makes it look like a flower.”

Customer: “So it’s a rock on top of another rock?”

Me: “Not technically, but sort of ... I don’t know how to explain it simpler than that.”

Customer: “So it’s two rocks in one! I’ll take it.”

Me: “Okay, great! I assume you want an info card on it?”

Customer: “Nah, it’s just a rock on a rock. That’s all I need to know.” ➤

What Do Gold and Diamonds Have in Common?

by Celia Tiffany

Editor’s note: The piece is adapted from West Seattle Petroglyphs (newsletter of the West Seattle Rock Club, Seattle, WA), May 2015, p. 3. It originally appeared in The Geode, September 1999.

- Diamond (a form of carbon) and gold are both classified as native elements on the Periodic Table of the Elements: That is, they are among the few elements that occur in the Earth’s crust in a relatively pure, uncombined form
- Both crystallize in the cubic system.
- Both most commonly occur as octahedral crystals.
- Large deposits of each are mined in South Africa and in Australia.
- Both are highly valued for use in jewelry, science, and industry.

Bench Tip: Drilling a Stone

Brad Smith

To drill a hole through a piece of gemstone, you usually use diamond drills, but I’ve been disappointed by them. The tip of the drill just pivots in the hole and does not cut well. When it looks like the drill isn’t cutting, the tendency is to push with more force. The drill gets hot, and the diamond grit falls off.

A much better approach is to use a core drill. This is a small hollow tube with a coating of diamond grit at the business end. The diamonds easily carve out a circular arc without undue pressure or heat buildup.

Core drills are readily available from lapidary and jewelry supply companies. They come in sizes as small as 1 mm and are very reasonable in price. For instance, a 2-mm-diameter drill is about \$6.

Chuck up the core drill in a drill press, Dremel or Foredom, and be sure to keep the drilling zone wet to cool the tool and to flush out debris. Also, if you’re drilling a through-hole, go very easy on the pressure as the drill is about to cut through. Otherwise, you will usually chip off some of the stone surface around the hole.

See Brad’s jewelry books at amazon.com/author/bradfordsmith



- Both have inspired exploration, exploitation, and brutal conquests.
- Both are outrageously overpriced, but diamonds set in gold remain popular as a pledge of fidelity. ➤

Pyrophyllite

by Sheryl E. Sims

I do not remember how I obtained my pyrophyllite specimen, but for the past few years, I can honestly say that I didn't know what I had. In fact, I had boxed my sample of pyrophyllite up with a bunch of minerals that I intended to donate for the Kids Mini-Mines at our annual club show.

After I arrived at the mineral club meeting, I flipped through a few of the minerals in my box as I was showing club member and Show Chair Tom Taaffe what I planned to donate.

He saw the pyrophyllite and said, "Hey! This is a pretty nice mineral. You should keep it!"

"Really?" I responded. "You know, I don't know what half of the minerals I have are!"

Tom said that it was pyrophyllite and that it probably came from Graves Mountain in Georgia. He encouraged me to look it up and see if the photo of the specimen and the location were correct.

That's exactly what I did the next morning. Tom was correct! It was pyrophyllite, and it was from Graves Mountain in Lincoln County, GA. I couldn't wait to email him and let him know that he was correct.

That's one of the beauties of belonging to a mineral club. There is almost always someone around who can identify unknown minerals. I'm always amazed that my fellow club members are able not only to identify minerals but also to quickly add the locations where they can be found.

Pyrophyllite is an aluminum silicate hydroxide. Its chemical formula is $\text{Al}_2\text{Si}_4\text{O}_{10}(\text{OH})_2$. Pyrophyllite has a hardness of 1–2 and is in the talc group. It can be found in white, pale blue, pale green, pale yellow, brownish green, and gray. Its name comes from the Greek words for fire (*pyr*) and leaf (*phyllos*).

As you can see from the photo, it's a pretty mineral. It has a pearly luster and can have an opaque or translucent appearance. It also has a bit of a waxy feel.

Pyrophyllite's crystal system is triclinic. It can occur in areas where kyanite, topaz, mica, quartz, and andalusite are found. Deposits have been found in Belgium, Canada, Japan, Russia, South Africa, Sweden, Switzerland, Turkey, and the United States (in the



Pyrophyllite. Photo: Sheryl Sims.

states of Arizona, California, Georgia, North Carolina, and Wisconsin). Crystals are compact and needle-like, radiating in fans.

As soft as the mineral is, pyrophyllite can be used in tailor's chalk and slate pencils and for ornamental carvings. It can even be used in insecticides and bricks.

Anyway, I am so glad I didn't give my hand sample away! Thanks, Tom! ↗

Sources

Mindat. 2016. [Pyrophyllite](#).

Wikipedia. 2016. [Pyrophyllite](#).

***** News flash *****

SAN ANDREAS, CA—A local store specializing in fine china and delicate shelving was, for the 18th time since early last year, forced to reorder its entire inventory.

Enhanced, Treated, Heated ... Fake?

by Deborah Phianz

Editor's note: The piece is adapted from Gem & Mineral Journal (newsletter of the Gem and Mineral Society of Lynchburg, VA), October 2016, p. 11. It originally came from The Tumbler, October 2016.

Gemstones and semiprecious stones have been fiddled with for centuries to make them more colorful, more eye catching, and easier to work. This does not make them “fake,” but you should know what the treatments are.

Heat Treated

Heating is the most common treatment, as old as fire. People have long heated agate and jasper to shape the stones for tools.

People also heat gem material to enhance clarity or create color. Amethyst is heated to create citrine and ametrine. Zircon is heated to clarify the stone to clear white. Sapphires are heated to get the most amazing pinks and blues.

Heating turns tigereye blue or red, carnelian agate orange-red, and aquamarine from green-blue to blue. Heated rubies can lose a purplish tint, and heated iolite can turn a deep blue.

Dyed

Dying is also a common practice. Agate is dyed to fancy pinks, purples, oranges, and blues—eye catching and very stable. Chalcedony is often dyed; black is sold as onyx and green as chrysoprase.

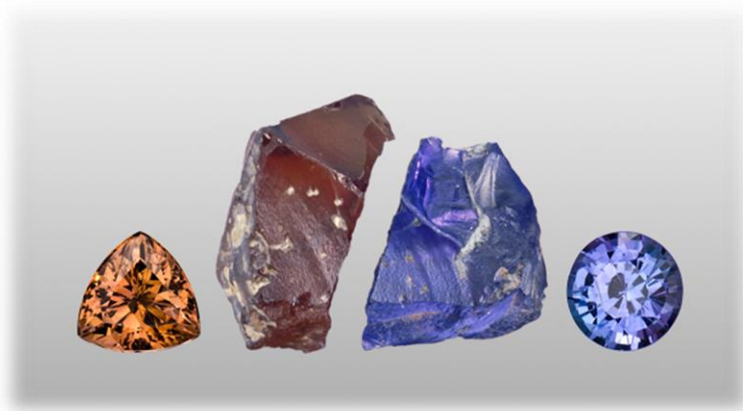
Howlite is often dyed to look like turquoise, lapis, sodalite, or charite. Turquoise and jadeite are often dyed to enhance the natural color. Alabaster, coral, banded calcite, and marble are dyed to enhance their color or to imitate other semiprecious stones.

Irradiation

Topaz is the most commonly irradiated gemstone; irradiation yields various shades and tones of blue. But irradiation is also how you get those fabulously colored diamonds. In fact, diamond was the first gemstone color-treated with radiation.

Stabilized

Opals are often stabilized, either by filling with Opticon resin or a similar agent or by capping as a doublet



Tanzanite is often mined as a brownish material (left, in both rough and cut stone). Heated, the stone changes to a blue or purplish color (right). Source: GIA (2016).

or triplet. Emerald has a long history of fracture-filling due to its popularity and its tendency to be highly included and fractured.

Although natural oils have traditionally been used for filling and stabilization, modern synthetic resins are now being used. Resins such as Opticon are more permanent than the natural oils. Turquoise and coral are often stabilized to make them more durable.

Created

This is a touchy subject for some folks. Farmed pearls are real but with a center of plastic or mother of pearl rather than sand. Similarly, laboratory-grown crystals of ruby, sapphire, diamond, and emerald are real semiprecious stones, just not grown by Mother Nature.

Disclosure

So! Real or fake? Both can be argued, with both sides technically correct.

But the argument misses the point. The most important thing, from a lapidary or jeweler's point of view, is disclosure.

Do you know upfront that the stone you are getting has been helped along by the human hand? Do you, as a jeweler, gem smith, lapidary artist, or other craftsperson, know what you are using? ↗

Source

GIA (Gemological Institute of America). 2016. [An introduction to gem treatments](#). Carlsbad, CA.

January 2017—Upcoming Events in Our Area/Region (see details below)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 New Year's Day	2 Holiday	3	4 MSDC mtg, Washington, DC	5	6	7
8	9 GLMSMC mtg, Rockville, MD	10	11	12	13	14
15	16 Martin Luther King Day	17	18	19	20	21
22	23 NVMC mtg, Arlington, VA	24	25 MNCA mtg, Arlington, VA	26 Show: Tucson, AZ	27 Show: Tucson, AZ	28 Field trip: JMU Show: Tucson, AZ
29 Show: Tucson, AZ	30 Show: Tucson, AZ	31 Show: Tucson, AZ				

Event Details

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.

23: 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.

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

26–31: Tucson, AZ—Annual Gem, Mineral, and Fossil Show; Eons Expos; 600 W. 22nd St (corner of I–10 and 22nd St); daily 9–6; free; info: Heather

Grana, Heather@EonsExpos.com; www.22ndStreet.Show.

28: James Madison University—Field trip, mineral museum; Harrisonburg, VA; 9–4; info: Bob Cooke, rdotcooke@verizon.net.

GeoWord of the Day

(from the American Geoscience Institute)

suspect terrain

A terrane whose spatial and genetic relations with respect to adjacent terranes during their time of formation is unknown or uncertain. The term was first used in a 1980 study for a terrane whose paleogeographic or paleotectonic setting with respect to the North American Craton is uncertain. Inasmuch as most terranes fall into this category, the term may be considered redundant.

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



**Mineral of
the Month:
Zincite**

PLEASE VISIT OUR WEBSITE AT:

<http://www.novamineralclub>

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

RENEW YOUR MEMBERSHIP!

SEND YOUR DUES TO:

Treasurer, NVMC
PO Box 9851, Alexandria, VA 22304

OR

Bring your dues to the next meeting.

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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.*