THE NORTHERN VIRGINIA MINERAL CLUB INC

The Mineral Newsletter

Next meeting: March 2 Time: 7:30 p.m.

Dunn Loring Fire Station, 2148 Gallows Road, Dunn Loring, VA

Sapphirine on biotite, albite

Undisclosed occurrence, Vangaindrano, Atsimo-Atsinana, Madagascar

Source: Mindat. *Photo: Neal Luppescu.*

Volume 66, No. 3
March 2026
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March Meeting Program:

Juniors' Presentation Night

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Mineral of the Month
Sapphirine

by Sue Marcus

Sapphire and ruby are varieties of the mineral corundum, as most of us know. What about sapphirine? I bought a sapphirine specimen last autumn that sparked my interest in it. It was a novelty to me.

Similarity to Sapphire

In looking for information on sapphirine on any digital device, be careful that the autocorrect feature doesn't think you mean sapphire. Some people and some algorithms can be misled. Blue corundum is known as sapphire, and sapphirine, our March Mineral of the Month, can be easily mistaken for sapphire.

Their chemistry has similarities. Corundum (sapphire) is simply aluminum and oxygen (Al_2O_3); sapphirine comprises both elements, along with magnesium and silicon ($(Mg,Al)_8(Al,Si)_6O_{20}$). So sapphire is classified as an oxide mineral, whereas sapphirine is a silicate.

Both are hard, although corundum (sapphire) is much harder (Mohs scale 9) than sapphirine (Mohs scale 7.5). Both can form beautiful blue gemstones with relatively high refractive indices, meaning that they sparkle by reflecting light well. Their refractive indices are close—1.76-1.77 for sapphire and 1.70-1.72 for sapphirine.

Type Locality

Sapphirine was originally found in Greenland by Carl Ludwig Giesecke in 1809. Giesecke was an interesting character. He was born in Bavaria in 1761 as Johann Georg Metzler, then reinvented himself when he was 20, taking the name Carl Ludwig Giesecke.

Giesecke was originally an actor. He met several mineralogists at a Masonic lodge in Vienna and soon thereafter become a mineralogist and mineral dealer. He moved to Denmark and was sent by the Danish king to explore the geology and minerals of Greenland. He did so with great success, but he was stranded in Greenland during a brief war in 1807 between Britain and Denmark in connection with the Napoleonic Wars (1803-15). A British ship seized a significant collection of minerals that Giesecke had sent to Denmark. The shipment included many unusual minerals.

Giesecke initially called what he'd found cyanite. Later, he referred to the same material as emery; still

Happy St. Patrick's Day!

Northern Virginia Mineral Club members:

Our next club meeting will be in person at the Dunn Loring Fire Station, 2148 Gallows Road, on March 2, 7:30 p.m. Several junior club members will give presentations. Please join them for dinner on March 2 at 5:30 p.m. at:

BJ's Restaurant & Brewhouse
8027 Leesburg Pike, Suite 100, Vienna, VA
Phone: 703-356-7305

Reservations are under Jennifer Grimes, Vice President, NVMC. If you plan to attend, please email Jennifer at vicepresident@novamineral.club by noon on the day of the meeting.

Sapphirine, Morafino thorianite deposit, Tranomaro, Amboasary Sud District, Madagascar. Source: Wikipedia; photo: Rob Lavinsky.

later, in his catalogues written in German, he referred to the material as "blauer Diamantspath (saphirine)." Stromeyer (1819) studied the type material and published his results, using the name sapphirine, even though that term may have been previously used for another mineral.

Geologic Environment

Sapphirine usually forms through retrograde metamorphism, requiring moderate pressures and relatively high temperatures. Retrograde metamorphism can occur after prograde ("regular") metamorphism has ended and temperatures and pressures have normalized, resulting in recrystallization. Fluids, including water, aid in altering minerals formed earlier during metamorphic events.

In some occurrences, sapphirine forms minute, often microscopic-scale alteration rims. The sapphirine halos may be parts of a series of roughly concentric alteration rings around a core of an original or altered mineral species, typically spinel or corundum. Mafic and ultramafic rocks are usually associated with sapphirine. Phlogopite, a type of mica, is frequently associated with sapphirine, as is plagioclase and sometimes calcite or quartz.

Localities

The most important localities for sapphirine are Madagascar and Sri Lanka, even though this mineral was first reported from Greenland. We'll start with Greenland, then move on to other places.

Greenland

The original or type samples of sapphirine were found near the old harbor of Qeqertarsuatsiaat (Fiskenæsset or Fiskernæs in Danish) in southeastern Greenland. Sapphirine forms small grains in ultramafic rock, probably from retrograded spinel and corundum.

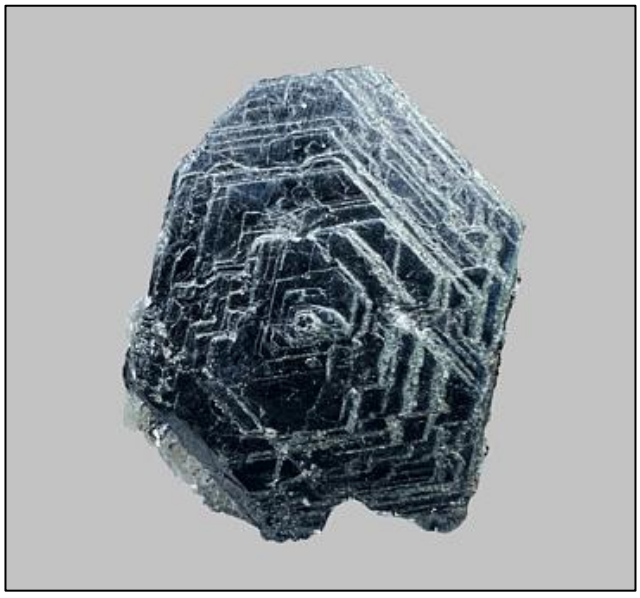
Since its initial discovery in 1809, sapphirine has also been found at several southwestern Greenland locations, including Sukkertoppen (Maniitsoq), Auvaitsersarfik, and in a boulder along a branch of the Gothaab (or Godthaab) Fjord. These Greenland sapphirine localities are of very minor interest to mineral collectors. Small (millimeter-sized) crystals, rarely showing marginal crystal faces, may have been found at the Auvaitsersarfik locality.

In other Greenland occurrences, sapphirine most commonly forms rims around microscopic grains of corundum hosted in anorthosite (plagioclase-rich plutonic rock) or hornblendite (hornblende-rich ultramafic rock). Sørensen (1955) conducted fieldwork for his Ph.D. dissertation and produced what is probably the most detailed study of Greenland's sapphirine occurrences and the petrogenesis of sapphirine (how it forms).

In 1949, sapphirine was identified at a site named Ol.1 between Søndre Isortoq and Alangue fjords (the names in Sørensen (1955); many places in Greenland have both Inuit and Danish names). According to Sørensen (1955), a similar sapphirine occurrence was found by the author and others in 1951 in a boulder at Qorqut, the southeastern branch of Gothaab fjord. (Names have changed and the occurrence is minor, so I refer interested readers to Sørensen (1955).)

Madagascar

Sapphirine crystals from Madagascar far surpass any found elsewhere. The best are dark blue euhedral pseudohexagonal crystals. Most crystals formed in metamorphic rocks rich in feldspar, phlogopite, and calcite. Host rocks range in color, depending on the abundance of mafic minerals present and on the color of the phlogopite. Phlogopite varies from light tan to almost black. Rims of a fine-grained white mineral often set off the sapphirine crystals from the surrounding matrix. Indigo (dark blue) sapphirine is usually opaque. All occurrences are in the southern part of the country.



Sapphirine, undisclosed sapphirine occurrence, Vangaindrano, Atsimo-Atsinana, Madagascar. Source: Mindat; photo: Jamison K. Brezendine.

Sapphirine on phlogopite and plagioclase, Morafeno thorianite deposit, Tranomaro, Amboasary Sud District, Madagascar. Source: Mindat; photo: Kelly Nash.

The world's best sapphirine crystals came from a vaguely named "undisclosed sapphirine occurrence" in the Vangaindrano area of southeastern Madagascar. Some of the crystals appear to have been carefully prepared. The dark blue, euhedral sapphirine crystals are surrounded by a thin rim or halo of white fine-grained anorthosite resting in a coarser biotite matrix. The largest crystal shown on Mindat is 5 centimeters (1.97 in) in size. Most Mindat images show matrix specimens, although single crystals were also found or extracted from their matrix. The primary discovery was in 2023, so specimens may still be available.

At the Morafeno thorianite deposit, both matrix specimens and individual crystals were collected; the latter may have been worked out of the matrix. Many crystals exhibit stepped growth, with ridges or steps on the c-axis. Specimens up to about 8 centimeters (3 in) in size with multiple crystals were extracted. Individual crystals are small but macroscopic, ranging up to 2.8 centimeters (1.1 in) in size. Most crystals may have been found in the late 1990s; it is unknown whether this locality is still producing sapphirine.

Crystalline sapphirine occurs near Voronkafotra. Specimens seldom show crystal faces, but some sapphirine samples from this locality have translucent, gemmy areas. All specimens shown on Mindat are matrix samples. Phlogopite is commonly associated with the pale blue through indigo sapphirine.

Sapphirine, Morafeno thorianite deposit, Tranomaro, Amboasary Sud District, Madagascar. Source: Mindat; photo: Jasun D. McAvoy.

Euhedral sapphirine crystals up to 3 centimeters (1.8 in) in size formed in calcite at the Beraketa phlogopite deposit, also in southern Madagascar.

Sri Lanka

Multiple sources mention Sri Lanka as a source of sapphirine. The highly metamorphosed rocks provide suitable geologic environments for sapphirine, yet documented occurrences and specimens are scarce.

The lone specimen shown on Mindat, at 2.28 centimeters (1.7 in) long, is sizable for this species. It consists primarily of sapphirine with lesser calcite. The greenish-blue sapphirine contrasts appealingly with the white calcite. The sapphirine is highly fractured but translucent in places; no crystal faces are evident.

The main Sri Lanka occurrence is in the Kolonne area, near Embilipitya. A mine produced gem-quality corundum (ruby and sapphire), spinel, zircon, sapphirine, and other minerals. The mine was active in 1990, when a report on the deposit was published, but its current status is unknown. Sapphirine was found in highly weathered metamorphic rocks. One blurry photo in the 1990 report shows a matrix specimen about 3 centimeters (1.3 in) in size with a caption indicating that sapphirine crystals form most of the specimen's surface.

Sapphirine, Katukubura Hills, Kolonne, Sri Lanka. Source: Mindat; photo: Maggie Wilson.

So this obscure locality could be a good source of sapphirine specimens. About 25 percent of the sapphirine produced there was gem quality.

The authors of the 1990 report who confirmed the presence of sapphirine at the Kolonne mine looked for serendibite ($Ca_4[Mg_6Al_6]O_4[Si_6B_3Al_3O_{36}]$) as well. Chemically related to sapphirine, serendibite is a member of the sapphirine supergroup of minerals. The two minerals can be difficult to tell apart. Further examination of the Kolonne deposit and mineralogy is warranted using more recent techniques in order to confirm what material is sapphirine and what is serendibite.

United States

Only one sapphirine specimen from the United States is shown on Mindat. Small clusters of dark blue, probably opaque sapphirine crystals sit in a gedrite matrix. Gedrite is an amphibole that forms in contact metamorphic zones and in other metamorphic rocks. Since gedrite and sapphirine form under similar geologic conditions, they are often found together. The host rock of the pictured specimen has been highly altered, forming gedrite and sapphirine. The locality of the sample is given as Amethyst Prospect in Custer County, CO.

Sapphirine was reported at several localities in Cortlandt Township, NY, by Friedman (1952): the DeLuca Quarry and a quarry on Dutch Road, both on Emery Hill, near Montrose; the Kingston Mine on Colabaugh Road; and Salt Hill. Sapphirine was found in emery and in sillimanite-cordierite hornfels. Emery is a rock composed of corundum and other minerals. Hornfels is a metamorphic rock. The maximum size of the sapphirine in the emery was about 0.25 centimeters (0. 1 in), with rare euhedral crystals. Contact twinning was seen in some specimens, which is unusual for this species. Sapphirine forms rims as part of alteration zones of individual garnet(?) grains. At the Kinsgston Mine, sapphirine formed through retrograde metamorphism of spinel along a contact zone between norite, a mafic intrusive rock, and hornfels.

All of the mines and quarries mentioned by Friedman (1952) are probably long closed. The Dutch Road quarry was abandoned when Friedman visited in 1952.

Wikipedia lists the Dome Rock Mountains of Arizona, Riley County in Kansas, and Clay County in North Carolina as sapphirine localities. I could not find any information on these possible occurrences. The Kansas locality is particularly suspect due to its unfavorable geology for sapphirine.

Canada

Several sapphirine occurrences are reported in Canada. For mineral collectors, these occurrences are tantalizing, but no crystals are reported. Specimens of massive material seem likely, although most of the academic papers on the localities are unclear about the size of the sapphirine presence. I could not find any photos of Canadian sapphirine.

Princeton University has a sapphirine sample from the General Electric Mine near Saint-Urbain, Quebec, but there is no description of the specimen. In 2024, the General Electric Mine became part of an exploration project seeking titanium and phosphate minerals. Perhaps Canadian sapphirine will be extracted too.

Sapphirine is reported in granulite host rocks near Wilson Lake, Labrador. Granulite is a metamorphic rock formed under high temperatures and moderate pressures. Greenish-blue sapphirine was visible in hand samples. Crystals are mentioned in a paper on this locality, although they may be submicroscopic—seen only by using a petrographic microscope.

Talor (1980) reported sapphirine with “some grains up to 2 cm [0.8 in] long” from Lac Sirmiq in northern Quebec. Unfortunately, this locality is probably accessible only by float plane. A Manitoba locality at

Sipiwesk Lake may be similar to the Wilson Lake occurrence.

France

An outcrop of friable (crumbly) granulite in the Ariège department of southern France, near the border with Andorra, produced a variety of minerals. The verdant hillside pictured on Mindat shows bare patches that might be caused by erosion or by animals digging. But the bare patches were probably dug by two-legged mineral collectors rather than four-legger critters.

Most minerals found at this locality seem to be small single crystals. Sapphirine occurs in small matrix specimens in granular quartz. Well-terminated tiny crystals, 0.4 to 0.7 centimeters (0.16-0.28 in) in size, formed in several habits that are unusual for this species.

Mindat photos show a likely twinned crystal and another unique specimen that looks like a cyclical twin with a dark central core. The latter specimen is 0.4 centimeters (0.16 in) across. Most of these "larger" single crystals are gray-blue and opaque. Sapphirine matrix specimens are usually indigo blue, translucent though highly fractured, and poorly crystalized.

The most exquisite French sapphirines shown on Mindat are the tiniest crystals, less than 1 millimeter (0.04 in) in size. They are transparent and euhedral—tiny jewels. Sapphirine has also been reported near Salzuit in the Haute-Loire department.

Norway

Near the town of Ivesdal, a lens of migmatite 400 meters (1,300 ft) is rich in sapphirine, which comprises about 20 percent of the rock. The lens is up to 2 meters (6 ft) thick, with elongated sapphirine crystals. Some crystals shown on Mindat are heavily weathered and dull. Others, dark blue and unweathered though highly fractured, grew up to about 1 centimeter (~0.4 in) long. Specimens shown on Mindat are 7 centimeters (2.8 in) or less across, with sapphirine crystals firmly embedded in matrix. None of the crystals show terminations.

Migmatite, the host rock, forms at the boundary of igneous and metamorphic rocks when additional metamorphism partly melts and combines the two rock types. This locality is closed to collecting. It is probably part of the Magma UNESCO Global Geopark.

Sapphirine on calcite, granulite outcrops, Etang de Lers, Col d'Agnès, Occitanie, France.
Source: Mindat; photo: François Périnet.

Italy

Sapphirine and cordierite were found on a boulder in Codera Valley, near Bresciadega. A single Italian sapphirine sample from there is pictured on Mindat. The Mindat photo shows what appear to be poorly formed sapphirine crystals with small, well-formed crystals of a colorless to light tan unspecified mineral. These two minerals cover the surface of the 18-centimeter-long (~7-in-long) chunk of mafic or ultramafic rock. Since the minerals extend up to the top edges of the rock, adjacent rocks must have also hosted them.

Australia

Sapphirine was found in "appreciable amounts" at a vermiculite mine near Dangin, Western Australia. The mineral occurred in friable metamorphic rocks. Sapphirine was identified by an Australian government lab.

South Africa

The Handbook of Mineralogy mentions "[l]arge crystals from Blinkwater, near Messina, Transvaal, South Africa" without any further explanation or reference.

Sapphirine gemstone from Sri Lanka, 0.51 carat. Source: MineralAuctions.com.

Other Countries

Sapphirine has been reported as grains or single crystals from other countries, including Algeria, Antarctica, Brazil, China, Finland, Germany, India, Russia, Scotland, South Africa, Tanzania, and the United Arab Emirates. One Algerian occurrence might be in a meteorite. Wikipedia lists many occurrences, but more detailed information could not be readily found, and the likelihood of specimens of interest to collectors is low.

Economic Uses

There are no economic uses for sapphirine except as a gemstone.

Gems

A 13.61-carat uncut sapphirine was reported from Sri Lanka. The largest faceted sapphirine, also from Sri Lanka, is reported to be 1.88 carats. This faceted stone is transparent but deep red-brown (the color of root-beer). Due to the unusual color for sapphirine, the identification needs confirmation.

Prices

Small matrix specimens are available online for about $3 and up. On one website, they seem to be very small—an inch or less—although most specimens show well-formed crystals.

Other websites (here and here) offer two separate specimens with a single euhedral crystal in matrix for $1,250 each. The crystals, from Madagascar, are 4.7 centimeters (1.9 in) in length and 4.5 centimeters (1.8 in) across. Perhaps a better buy is a 4.1-centimeter-long (1.6-in-long) single crystal offered for $300. This is an opaque, bluish-black specimen from Madagascar.

*Sapphirine gemstones. **Top:** Tulear, Madagascar, 0.50 carat. **Bottom:** Madagascar, 1.02 carats. Photo by Gamel Gems Academy (top); The Global Stone (bottom).*

A 0.19-carat faceted sapphirine from Sri Lanka is being offered online for $18. It is very pale blue-gray. A beautiful faceted teal Madagascar sapphirine is being offered for about $150 for the 0.4-carat stone.

Prices were found during online searches on February 14, 2026.

Technical Details

Chemical formula.....$(Mg,Al)_8(Al,Si)_6O_{20}$ (Wikipedia); $Mg_4(Mg_3Al_9)O_4[Si_3Al_9O_{36}]$ (Mindat)

Crystal form ..... Monoclinic; possibly also trigonal in some forms (Wikipedia)

Hardness 7.5

Specific gravity 3.4-3.58

Color ..... Navy blue, grayish-blue, indigo, teal, pale pastel blue; pinkish-brown; colorless/slightly gray (Sri Lanka)

Streak ..... White

Cleavage ..... Poor

Fracture ..... Uneven to subconchoidal

Luster ..... Vitreous

Sources

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The Science Behind the Beautifully Bizarre Spotted Lake in Canada

by Garrett Ettinger

Editor's note: *The article is adapted from Slash Gear, 16 October 2023. Thanks to Sue Marcus for the reference!*

Though we are inundated with mind-blowing visuals from the internet and media, it's nice to be reminded that Mother Nature can produce some of the best visual effects. The strange phenomenon of the Spotted Lake in British Columbia's Okanagan Valley looks like something straight out of a science fiction movie but is actually one of the rarest naturally occurring phenomena on Earth.

A perfect confluence of natural factors enables the Canadian lake to form colorful spots that are both beautiful and odd. Unsurprisingly, a few natural processes are happening under the surface. Just like the Northern Lights or nacreous clouds that occur at higher latitudes, the Spotted Lake has been studied by scientists who have discovered the cause of the blue and green spots on the lake's surface.

What may surprise you, however, is that the Spotted Lake is more than just a cool scene. It's also an important site for geological scientific study with a rich history and cultural significance for the people there.

The colorful circles on the Spotted Lake's surface are myriad minerals, including sulfates, calcium, and sodium. As the water evaporates in the lake during summer, the salt and mineral deposits become more concentrated, hardening and forming the circles that give the lake its distinct look. … *Read more*.

Presentation Night Featuring Junior Club Members

March 2 Program

We have a fun March program to look forward to. Several club members who are 21 and younger have volunteered to take up to 15 minutes each to talk about something that interests them about our hobby. It will be a fun evening showcasing some of the extraordinary talent emerging in our club. We reserved the March program for junior hobbyists a year ago, and now we hope to make it an annual event.

35th Annual Chesapeake Gem, Mineral, Jewelry & Fossil Show

Saturday, April 4, 10 a.m.– 4 p.m.

Howard County Fairgrounds
2210 Fairgrounds Rd., West Friendship, MD

Free admission and parking

Minerals, original jewelry, fossils, rough & cut gemstones, silent auctions, door prizes, activities for kids

Info: www.chesapeakegemandmineral.org

Directions from Washington area: Take Routes 29 or I-95 North to Rt. 32 west/north; turn left on Rt. 144 west; fairgrounds road is half a mile on the right.

Spring Mineral Sale in the Pavilion Sterling Hill Mining Museum

Saturday, April 25 & Sunday, April 26
10 a.m.– 4 p.m.

30 Plant St., Ogdensburg, NJ

Free admission and parking

Lots of new flats, great deals on a large variety of rocks, minerals, fossils, crystals, books and much more

Cash sales preferred. Credit card sales will be charged a 4% service fee.

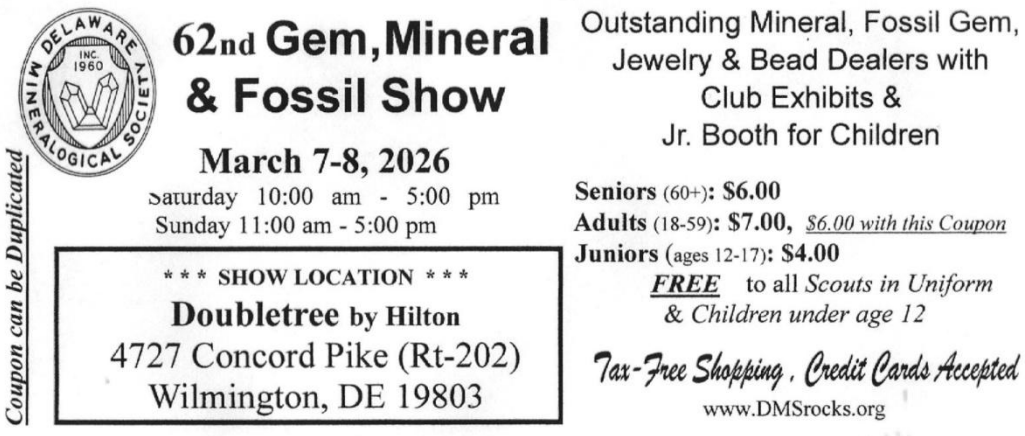
36th Annual North Jersey Gem, Mineral & Fossil Show

Saturday, April 11, 10 a.m.-5 p.m.
Sunday, April 12, 10 a.m.– 4 p.m.

Midland Park High School
250 Prospect St., Midland Park, NJ

Adults $5, Seniors $4, under 18/Scouts in uniform free; free parking; all indoors

Rocks, minerals, fossils, crystals, gemstones, jewelry, lapidary, rockhounding samples, and much more! Free minerals for kids, door prizes



President's Message

by Jason Zeibel

Greetings, NVMC, and welcome to March! After many weeks of snow and ice, it is finally starting to show signs of warming up around here.

But our family didn't have the patience to wait for warmer weather, so we flew to Tucson, AZ, for some desert sun. Our trip just so happened to coincide with the Mecca pilgrimage for our hobby, the Tucson Gem and Mineral Show. But calling what goes on in Tucson in February every year a "show" does not do it justice.

Over 2-1/2 days, we tried to do and see as much as possible. Our family hit 10 different shows, including the main show in the Tucson Convention Center, the Mineral City Show, the 22nd Street show, the Kino Sports Complex show, the miners' co-op show, the Madagascar minerals show, and more. The scale of it defies simple description.

In the end, we came away with new fluorescent mineral samples I had never seen before, as well as a variety of meteorite specimens, some new jewelry, and sore feet! We contemplated investing in one of the floor-standing amethyst geodes, which would have made an exquisite conversation piece in our living room—but, in the end, we didn't find the right one at a price that we could shoulder. This just provided motivation to return in the future!

One vendor at the Mineral City Show had a selection of pyramidal zoning shortwave reactive UV calcites. These specimens displayed extremely bright fluorescence, along with striking geometric patterns, and I couldn't resist. Check it out below (fig. 1, bottom)!

Some of the coolest things we saw in Tucson were our very own Maria Nopo's exhibits at both the Tucson main show in the convention center and at the Mineral City Show. It was awesome that we got to meet up with the Nopo family and congratulate Maria on her displays (fig. 2). She won second place in her category for her exhibit on pyrite.

Figure 1—*Top:* *The Zeibel family at the Tucson Gem and Mineral Show.* ***Center:*** *The show theme this year was red, white, and blue in commemoration of the 250th anniversary of the United States.* ***Bottom:*** *Pyramidal zoning UV calcite from Hunan, China, acquired by the Zeibels. All photos: Jason Zeibel.*

Figure 2—*Left:* *Maria Nopo with her pyrite display, which took second place in her category.* ***Top:*** *Maria Nopo and Celia Zeibel together with their parents at the Tucson show.*

I look forward to hearing from Maria and Celia about the show at the youth night program coming up this month (see page 9). To foreshadow Celia's presentation a bit, in addition to all the fun and excitement at the Tucson show, we were able to spend a day touring the University of Arizona. Maybe Celia and Maria will wind up in Tucson full time in a year or so!

Before Tucson, I enjoyed our February NVMC meeting, our first in-person meeting this year. Dr. John Grant from the Smithsonian gave a wonderful presentation about what scientists have learned after 20 years of operating Mars rovers. Dr. Grant was a very dynamic speaker, and there were a lot of questions.

We had some extra excitement at our February meeting due to the recent completion of construction at the Dunn Loring Fire Station. The new floor and lighting really spruce up the place. We may have to get creative in arranging a projector screen, but altogether it is a nice update.

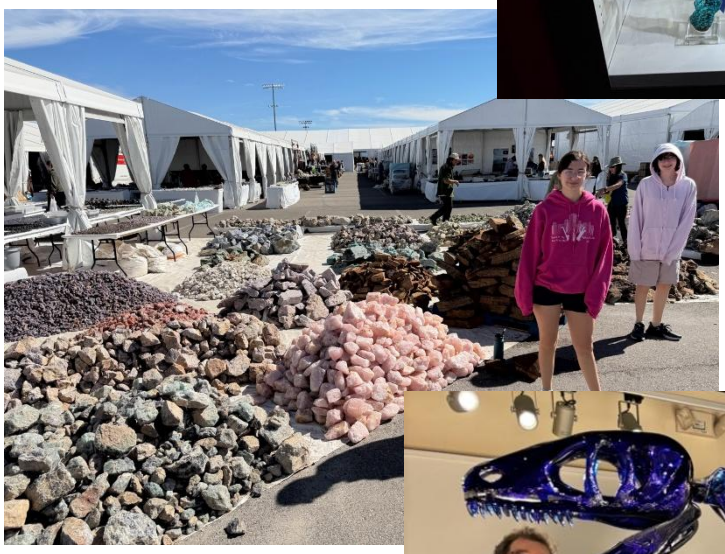
March is often thought of as the time for St. Partick's Day. Since I graced this space with a list of red gemstones last month, I figured I needed to follow up with a bit of the green! This month, get out and try to find yourself a nice tsavorite, kunzite, or peridot.

The latest club name tag order has come in, so I will bring name tags to the March meeting for those who ordered them. I hope that Almas and the board will finalize designs for our club's hoodies so we can place orders for them this month as well.

At our March meeting, we will turn the mic over to a select group of junior club members to speak about hobby-related things they enjoy or places they have been. Come listen to the future of our hobby!

Jason

Scenes from the Zeibels' trip to Tucson



Club Meeting Notes
February 2

by Almas Eftekhari, Secretary

President Jason Zeibel opened the meeting by inviting members to sign up for name tags, if they want them. In last month's newsletter, Jason reported a generous donation to the club of more than 700 pounds of minerals and five or six pieces of lapidary equipment. He is looking for someone to step forward as equipment chair, checking the equipment in and out from the club storage unit.

Jason and Craig Moore reminded members of upcoming mineral shows in March in Montgomery County, MD, and Wilmington, DE. (See details on page 22.) Jason reminded members that they can submit an article to newsletter editor Hutch Brown telling the story of how they got interested in our hobby.

Field Trip Co-Chair Katy Johnson reported that the January geology walk in Leopold Preserve turned into an indoor geology talk due to snowfall. She and Co-Chair Mickey Johnson are working on future trips. If you have suggestions, please send them to Katy.

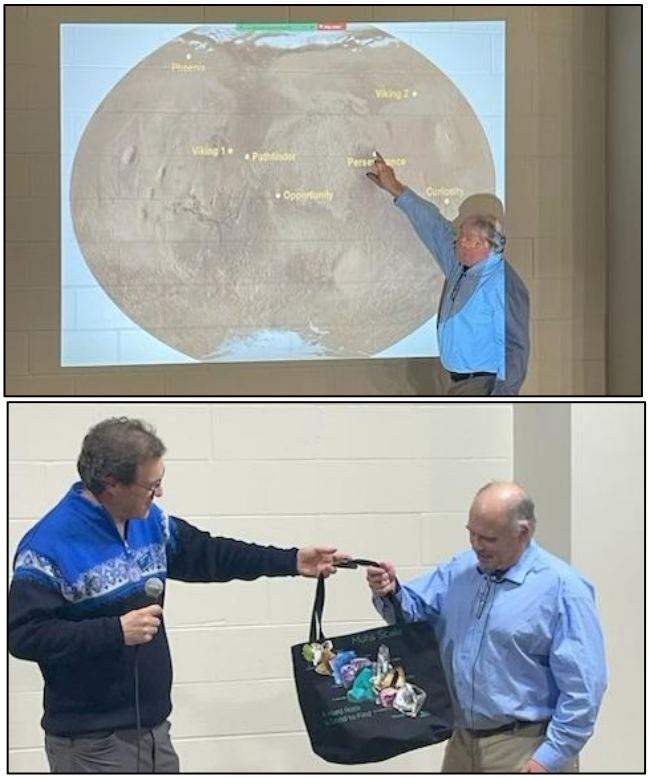
Jason reminded members that junior club members can apply for a travel scholarship worth up to $250 for any hobby-related event, such as a mineral show. Applicants write a couple of paragraphs describing their plans, then give a club presentation upon their return.

Treasurer Roger Haskins reminded members that it's time to pay club dues. Insurance requires field trip attendance to be limited to paid club members only.

Secretary Almas Eftekhari announced that we are ordering club merchandise. She asked members to vote on slogans (like "Rocks rock") for the merchandise. Members had a week to send her design suggestions. Jeff Guerber suggested stickers with the club logo.

Vice President Jennifer Grimes announced that the program for March will be junior speakers (see page 9). Jason added that the April meeting will be devoted to our annual spring club auction.

Craig Moore introduced our speaker for the night, Dr. John Grant, noting that his resume appears in the February newsletter. Dr. Grant started his presentation on Mars rovers by comparing Earth to Mars, showing differences in their moons and rotations.



Dr. John Grant showing a slide of Mars (top) and receiving a club tote bag (bottom) in appreciation for his presentation from President Jason Zeibel.

Mars rovers have gone from microwave to minicooper in size. The rovers didn't find evidence of water at first but finally found deposits with hematite and formations only made in the presence of water.

The rovers also found evidence of surface water. Layered rocks with surficial marks similar to marks on rocks in the Namib Desert proved that water was there in the past. The rovers also found a long history of water along the rim of Endeavor Crater predating the hematite there.

Eventually, the solar rovers were replaced with rovers with nuclear power. The Curiosity Rover is drilling in in the center of an ancient lake. Early on, it found water with organic molecules, evidence of a sustained wet environment with waves. Mud cracks and gypsum show that the lake dried up periodically.

About a year ago, the rover found rocks containing sulfur, possibly from a volcanic eruption or a water-related deposit. Scientists are now putting together "chapters" in the story of how the water came and went.

The meeting ended with door prizes announced.

Field Trips Coming Up!

by Katy Johnson, NVMC Field Trip Co-Chair

On Saturday, January 31, I attended a lecture on the geology of the Triassic Basin and the basics of field geology. Due to the snowy weather, the geology walk scheduled at Leopold's Preserve became a much warmer talk inside the Bull Run Mountain Conservancy (BRMC) headquarters, located at the foot of Bull Run Mountain.

This has become an annual event for me. I had attended twice before, so it was nice to hear a slightly different take on the same topics. We covered the basics of geology and moved on to the geology of the Triassic Basin and a quick history of mining in the area.

Unlike on previous occasions, the naturalist spoke more about how the geology determines what grows. We learned how, at different stages of a geologic formation, different flora grow. We also learned how fragmentation causes loss and degradation of biodiversity. There was also a discussion of land conservation, near and dear to my heart. I highly recommend any of the naturalist-led walks at the BRMC.

Our own club is planning an exciting year of field trips. We have confirmed May 3 for the **Texas Quarry** in Maryland and June 6 for the **National Limestone Quarry** in Pennsylvania. Our first geology walk will be at **Lake Fairfax Park** in northern Virginia. The date is not yet confirmed, but our leader will be Rob Robinson. Other possible sites include the **Amrize Quarry** in Maryland (see the article on page 18) and **Mineral Hill**, also in Maryland.

Field trips are for club members only. Please ensure that your membership is current and that your 2026 dues have been paid. Memberships are for 1 year and must be renewed each January (see page 24 for information on membership renewal).

All field trip signups are through Google forms (signups by email will not be accepted). A separate Google form will be sent for each field trip several weeks before the date. Forms include a waiver and ask for your name, cell phone number, and emergency contact name and number. Forms must be completely filled out by each individual attending, and only those confirmed by form will receive field trip details.

Finds along trails in Lake Fairfax Park during an NVMC geology walk in June 2024. ***Top:*** *Mather Gorge schist with sparkling flecks of mica.* ***Bottom:*** *Serpentinite with greenish antigorite and black magnetite. Photos: Hutch Brown.*

Signups will end when we reach the attendee limit. If the number of signups exceeds the limit, we will go by date received, which can be tracked by Google form. If your membership is not current, your form will be removed, so please make sure that your membership is up to date!

All waivers must be signed. All rules, both NVMC rules and site rules, must be followed or you will be asked to leave and will not be eligible for future field trips.

Field trips are fun but require an enormous amount of coordination. Mickey and I are looking forward to an exciting field trip season, with—we hope—at least one outing every month.

Fluorescence Exhibited by Certain Herkimer Diamond Specimens

by Calvin Harris

Quartz generally does not exhibit fluorescence, so it is worth investigating luminescence displayed by certain Herkimer diamonds under ultraviolet light. This paper describes the effects of four different wavelengths of ultraviolet radiation on specimen A from a Herkimer diamond mine in the state of New York and on specimen B from St. Johnsville, NY (fig. 1). These specimens are part of my personal collection for their educational value. I describe test methods and their outcomes and account for the possible causes of the luminescent responses.

Geologic Setting

Current theory has it that Herkimer diamonds from Herkimer County, NY, formed by slow crystallization in vugs within dolostone. Within the vugs, silica was suspended in solution by certain organic acids that formed when bacteria decomposed organic matter. The acids were lost through thermal splitting when temperatures rose due to burial under sediments, allowing formation of the Herkimer diamonds.

During formation, ions or molecules that functioned as activators were incorporated within the crystallizing mineral. Under the right conditions, enough activators accrued for solidification to continue until completed. One of my sources for this paper indicates that organic matter as inclusions in the mineral causes blue-white fluorescence. The term inclusion means a foreign matter or substance within a mineral, generally seen without magnification. In any case, the fluorescence is due to ions or molecules in the mineral.

Specimen Acquisition

An interesting factor is the role that chance plays in finding specimens with unusual fluorescence. When considering a purchase at mineral shows, I use my RAYTECTOR 5 ultraviolet lamp to determine fluorescence, even when the possibility is remote. This easily portable unit provides shortwave and longwave radiation independently or in unison.

While purchasing fluorescent minerals from a familiar dealer, I noticed a Herkimer diamond attractively perched within a pocket of medium gray, fine-grained dolostone. Before deciding to purchase the sample based on its aesthetic quality, I wanted to expose it to ultraviolet light—with dealer permission, of course, my normal routine.

Figure 1—*Herkimer diamonds in dolostone matrix, from Johnsville, NY (specimen B). Photo: Calvin Harris.*

Fortunately, the dealer was generous enough to allow me to handle the sample for testing; the dealer even provided a cardboard box to shade the specimen from ambient light. In exposing the mineral to shortwave ultraviolet radiation, I was pleasantly surprised to see a bluish-white fluorescent zone in its center. At this point, there was no question about buying the item, and a deal was made.

Specimen Description

Specimen A is slightly less than 1 inch in length, with a fractured center and clear terminations. Its center occupies a considerable area of the specimen and is quite distinct from the clearer parts of the sample. The crystal is perched in a dolostone matrix and can be viewed from almost any direction. It was originally collected from the Herkimer Diamond Mine in Herkimer County near Middleville, NY.

Specimen B (fig. 1), from St. Johnsville, NY, consists of several crystals in an open pocket within dolostone. The largest crystal is about 1.75 inches long and the smallest a little more than 0.5 inches in length. All of the crystals formed with fractured centers and clear terminations, although the extent of the fractured areas varies. The St. Johnsville locality has the same geological profile as the Herkimer Diamond Mine.

Test Procedures and Results

I used three SuperBright II lamps for this study, all manufactured by UV SYSTEMS, INC. They emit the following wavelengths: 254 nm (shortwave), 312 nm (midwave), and 351 nm (longwave). I also used a SuperBright III that emits the wavelength 370 nm (longwave). Each ultraviolet source was battery operated and positioned about 1-2 inches from the test subject, which allowed meaningful observation (fig. 2). Table 1 shows test results.

Discussion

The fluorescent responses were restricted to the fractured zones of the crystals. The response of both specimens to shortwave radiation was similar, but there was a noticeable color difference. Specimen A displayed color changes and lower intensity with longer wavelengths. The progression exhibited by specimen B was less pronounced but otherwise similar that shown by specimen A.

The luminescent responses of the samples tested suggest that organic compounds play a role as activators. Typically, organic activators cause pastel fluorescent and phosphorescent responses that are often similar. The outcome for the Herkimer diamonds was limited to fluorescence with a chromatic feature indicative of inorganic activators—ions or ionic radicals.

Additional Comments

Herkimer diamonds can be stained by the carbonaceous substance anthraxolite, giving them a pronounced tarlike odor. Interestingly, one specimen from St. Johnsville that I own has no obvious staining, but the odor indicates the presence of one or more volatile aromatic compounds. The dolomite matrix was apparently permeated with an asphaltic compound. This particular specimen is so malodorous that it had to be encapsulated in an airtight container and stored in isolation.

Figure 2—*Herkimer diamonds (specimen B) under shortwave ultraviolet light, showing a pronounced light blue fluorescence. Photo: Calvin Harris.*

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Table 1—Fluorescence of two Herkimer diamond specimens, by ultraviolet wavelength.

Herkimer diamond	Color/intensity			
	Shortwave (254 nm)	Midwave (312 nm)	Longwave (351 nm)	Longwave (370 nm)
Specimen A	Bluish-white	Bluish-white; lower intensity than shortwave	Gray; low intensity	Gray; low intensity
Specimen B	Light blue	Similar to shortwave	Bluish-gray; low intensity	Bluish-gray; low intensity

The Rocks Beneath Our Feet

A Serpentinite Quarry in Maryland

by Hutch Brown

Editor's note: *The article follows up on the geology of Travilah Serpentine Barrens described in the February 2026 newsletter.*

On a chilly January afternoon, together with my son Alex, I tromped through part of Serpentine Barrens Conservation Park near Rockville, MD. Serpentine barrens are globally rare, and the park is a remnant of a large one, Travilah Serpentine Barrens. Managed by Montgomery County, the park is wedged between a new exurb to the south and a large quarry to the north. The quarry has been in operation since the 1950s.

Alex, a stormwater manager for Arlington County, wanted to see how the quarry has affected the headwaters of the creek that drains the barrens. Greenbrier Branch is named for the thorny native vine that covers the stream's floodplain. It's hard to get through the greenbrier, even on deer trails. (We did see deer.)

For my part, I wanted to look at the serpentinite bedrock underlying the barrens, which crops out in many places (fig. 1, top). The shallow serpentine soils are so inhospitable to plants in the native oak/hickory forest that even very old trees are relatively short in height and small in diameter (fig. 1, bottom).

I also wanted to see the quarry. With its poor soils and stunted trees, the barrens has never been farmed or logged (hence its old-growth forest). But the serpentinite bedrock is easily accessible under the shallow soils, so rapid development in our area in the 1940s-50s attracted mining companies. A high point in the barrens—Hunting Hill—made a prime location for quarrying aggregate used in construction (fig. 2, top). The quarry entrance is located on Piney Meetinghouse Road, a name reflecting the pine component typical of forests on serpentine soils—and the Piney Meeting House, a Methodist church that once served as a hub for the local Black community.

Quarry Operations

According to the Maryland Department of Environmental Protection (DEP), the site first opened in 1955 as the Hunting Hill Quarry (the name still shown on Mindat). Over the years, it has also been known as the Rockville Crushed Stone Quarry and the Bardon Inc. Quarry. Today, it is called the Amrize Mid Atlantic

Figure 1—*Travilah Serpentine Barrens.* ***Top:*** *Outcrop of serpentinite covered in lichens and moss.* ***Bottom:*** *Alex standing next to a typical oak no more than 16 inches in diameter at breast height. Note the open area behind Alex, with relatively sparse vegetation. Photos: Hutch Brown.*

Travilah Quarry; the entrance sign also shows the name Holcim for the Swiss parent company (fig. 2, bottom). The quarry produces much of the aggregate used in construction in the Washington metropolitan area, and it is expected to remain in operation through

Figure 2—*Travilah quarry.* ***Top:*** *Location just north of Serpentine Barrens Conservation Park.* ***Bottom:*** *Quarry entrance showing logo for Amrize, the current quarry owner, and the name of the parent company, Holcim. Photos: Hutch Brown.*

the 2060s. But it is also being studied for repurposing as a water reservoir serving the metropolitan area.

From the northern edge of the park, we could see quarry operations from a distance through the trees (fig. 3). One step in the operations, according to the Maryland DEP, is to use explosives through detonations called shots. A series of shots breaks down the bedrock for processing into aggregate. Extraction goes on for 11 months per year, with an average of 60 shots

Figure 3—*Quarry views from the northeastern edge of the park. Note the greenish-gray serpentinite bedrock; Hunting Hill in the distance (top); and processing machinery in the quarry (bottom). Photos: Hutch Brown.*

per year (about 2 per week). We heard no shots but saw trucks coming and going, presumably hauling out stockpiled aggregate. In addition to producing aggregate, the quarry also contains a ready-mix concrete plant and a hot-mix asphalt plant.

Unusual Bedrock Type

Most quarries in our area are in traprock, a name derived from the steplike formations left by ancient basalt flows in India, Scandinavia, the Pacific Northwest, and elsewhere around the world. (The term "trap" comes from Swedish *trappa*, "stairs.") In our area, the traprock is mostly diabase, a fine-grained intrusive igneous rock. Diabase in the Piedmont came from magma rising through cracks in the bedrock (what geologists call dikes and sills) during continental rifting

as Africa broke away from North America beginning about 230 million years ago. (For more on that story, see the article about the geology of the Manassas quarry in the November 2019 issue of the newsletter.)

Diabase is medium to dark gray in color. By contrast, the serpentinite bedrock in the Travilah quarry is generally a light greenish-gray (fig. 3). The difference reflects the different origins of the rock. Whereas diabase comes from magma rising from Earth's mantle, serpentinite is an altered form of a green igneous rock called peridotite that makes up much of Earth's upper mantle itself. (Maybe you've collected peridot, a green mineral derived from peridotite.) The Travilah serpentinite reportedly started out as dunite, an olivine-rich type of peridotite (Mindat; Larrabee 1969).

Like peridotite, serpentinite is known to geologists as ultramafic rock, meaning exceptionally ("ultra") rich in magnesium ("ma-") and iron ("-fic," from the chemical symbol Fe). It is therefore relatively poor in quartz and feldspar, with less than 45 percent quartz. Diabase (like basalt) is called mafic rock, also rich in iron and magnesium, but less so: it contains 45 to 55 percent quartz. Most bedrock types in our area contain more than 55 percent quartz; they are called felsic, relatively high in feldspar ("fel-") and quartz ("-sic," from the chemical symbol Si for the silicon in quartz).

Bedrock Composition

Near the edge of the quarry, I used a rock hammer to break off pieces of weathered outcrops to expose the interior of the rock (fig. 4). As you can see, serpentinite can appear attractively crystalline. The colors are predominately green or greenish, but the minerals in serpentinite can also be white, yellow, orange, bluish, gray, or black. (The rusty brown is from oxidation of iron in the rock's mineral makeup.)

According to Larrabee (1969), the serpentine mineral antigorite makes up most of the serpentinite in the quarry; accordingly, the bluish-green part of the rock in figure 4 (top) is probably antigorite, and the white might be calcite or perhaps chrysotile (another serpentine mineral). Talc appears in the quarry in places, as does tremolite. The Travilah serpentinite also has a heavy magnetite component, giving the rock the frequently seen greenish-gray color in figure 4 (bottom).

Serpentinite is metamorphosed ultramafic rock—peridotite altered by what geologists call metasomatism, a kind of metamorphism. The serpentinite in our area originated during a mountain-building event beginning

Figure 4—*Serpentinite samples near the Travilah quarry. The minerals making up the rock show typical serpentine colors, including white, bluish-green, and greenish-gray. Antigorite and magnetite appear to be the minerals mainly in evidence. Photos: Hutch Brown.*

about 474 million years ago. As a tectonic plate called the Taconian (or Taconic) Terrane approached the proto-North-American continent, the continental plate subducted (slid) under the advancing terrane, diving

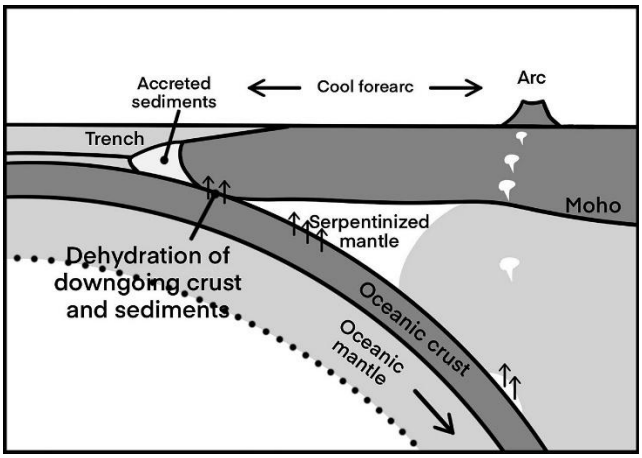

Figure 5—*Serpentinization of upper mantle rock during subduction. Superheated silica-rich waters released by the subducting crust react with peridotite to form serpentinite. Less dense than the ocean crust and mantle, serpentinite rises to underlie seafloor rock in the forearc basin. Source: Hyndman and Peacock (2003).*

into Earth's mantle and melting (fig. 5). In the process, the subducting oceanic crust emitted water. The superheated silica-rich waters circulated through the subducting rock, reacting with peridotite in the upper mantle to alter the olivine and pyroxene minerals in the rock into serpentine minerals. For example, the olivine mineral forsterite in peridotite reacted with superheated quartz-rich water to produce the serpentine mineral lizardite:

$$3Mg_2SiO_4 + SiO_2 + 4H_2O \longrightarrow 2Mg_3Si_2O_5(OH)_4$$

Serpentinization yields mainly the minerals antigorite, lizardite, and chrysotile, along with small amounts of brucite and magnetite as well as talc, sulfide minerals, and native metals like nickel. Antigorite, lizardite, and chrysotile are polymorphs, meaning that they have the same (or almost the same) chemical formula but different atomic structures and crystal habits, making them look different. The platy habit of antigorite and lizardite gives some serpentinite a mottled or "snakeskin" appearance, hence the name. However, none of the serpentinite I saw at Travilah had that appearance.

Joining serpentinite in the Travilah quarry is another hydrated metamorphic rock, this one derived not from peridotite but from gabbro, a mafic rock. During Taconian subduction (fig. 5), magma rich in iron and magnesium intruded peridotite in the upper mantle, forming dikes (vertical or diagonal intrusions in the rock). The magma intrusions hardened deep underground

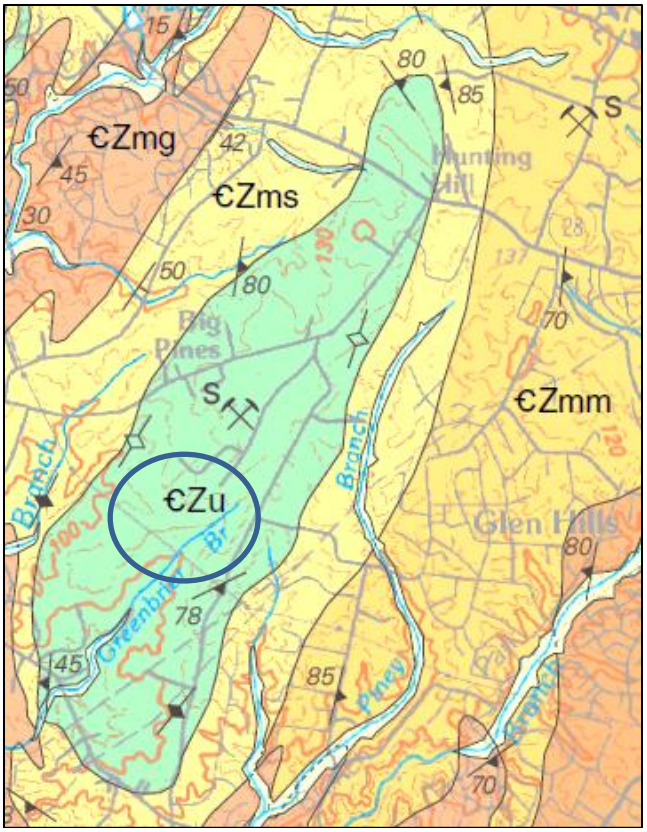

Figure 6—*Detail from a map showing the serpentinite bedrock underlying Travilah Serpentine Barrens, with Serpentine Barrens Nature Park circled and the Travilah quarry marked* **S** *for building stone.* **CZu** *= serpentinite/rodingite (green);* **CZ** *= Cambrian/Proterozoic (reflecting uncertainty);* **u** *= ultramafic/mafic.* **CZms** *= Mather Gorge schist (yellow).* **CZmg** *= Mather Gorge metagraywacke (dark orange).* **CZmm** *= Mather Gorge migmatite (light orange). Source: Southworth and others (2007).*

into gabbro, a coarse-grained igneous rock analogous to granite, the corresponding felsic rock.

Like the peridotite host rock, the gabbro dikes were then subjected to metasomatism as superheated silica-rich waters altered the rock into rodingite. According to Mindat, rodingite in the Travilah quarry comprises mainly "a green chromium-rich diopside and a pink to white grossular garnet." Other minerals in rodingite reportedly include zoisite, idocrase, and prehnite.

According to Larrabee (1969), the rodingite dikes were up to 1,500 feet long and 100 feet wide but made up only a small part of the quarry's bedrock (10 to 20 percent). Dikes are not obvious to me in recent photos of the quarry on Mindat, and I noticed nothing but serpentinite cropping out in the park south of the quarry.

Uplift Onto the Continent

Serpentinization during Taconian subduction hydrated the parent dunite, expanding its volume and reducing its density. In the process of subduction, the hydrated ultramafic rock apparently rose from the upper mantle to underlie seafloor rock, as suggested in figure 5. The precise mechanism is unclear, at least to me.

The Taconian orogeny (about 474-450 million years ago) ultimately attached the Taconian Terrane to proto-North America; today, we call it the Piedmont. In the mountain-building process, the serpentinite was emplaced on the continent together with the metamorphosed seafloor rock that now surrounds it (fig. 6). The tremendous heat and pressure of mountain building metamorphosed the surrounding rock into the schist, metagraywacke, and other metamorphic rocks of the Mather Gorge Formation. (For more on that, see the article on Travilah serpentinite in the February 2026 issue of this newsletter.)

A serpentinized plume of dunite is the simplest explanation for how ultramafic rock rose from the upper mantle miles underground to form part of the Piedmont today. It would also explain why the Travilah serpentinite is embedded in completely different and totally unrelated metamorphic bedrock types, beginning with the surrounding Mather Gorge schist (fig. 6, **CZms**).

Collecting at Travilah

According to Mindat, the bedrock in the Travilah quarry has "veins and open-space fillings of a suite of bizarre [and] often well-crystallized minerals," with more than 60 minerals reported from the quarry. Many reports came from local mineral club members who collected there; the Mindat site lists mineral clubs in the metropolitan area, including ours. Over the years, club members and others have posted more than 150 photos of specimens found in the quarry. Figures 7-8 show examples of the major serpentine and rodingite minerals from the Travilah quarry.

Do the current quarry owners still allow collecting? In reviewing this article, club member Sue Marcus, who has collected at the quarry in the past, commented on her own experiences. If collecting is allowed, then the quarry might make a good club field trip. From Arlington, the Travilah quarry is relatively close—only about 40 minutes away by car. Field Trip Co-Chair Katy Johnson is working with the quarry manager to line up a date—good news!

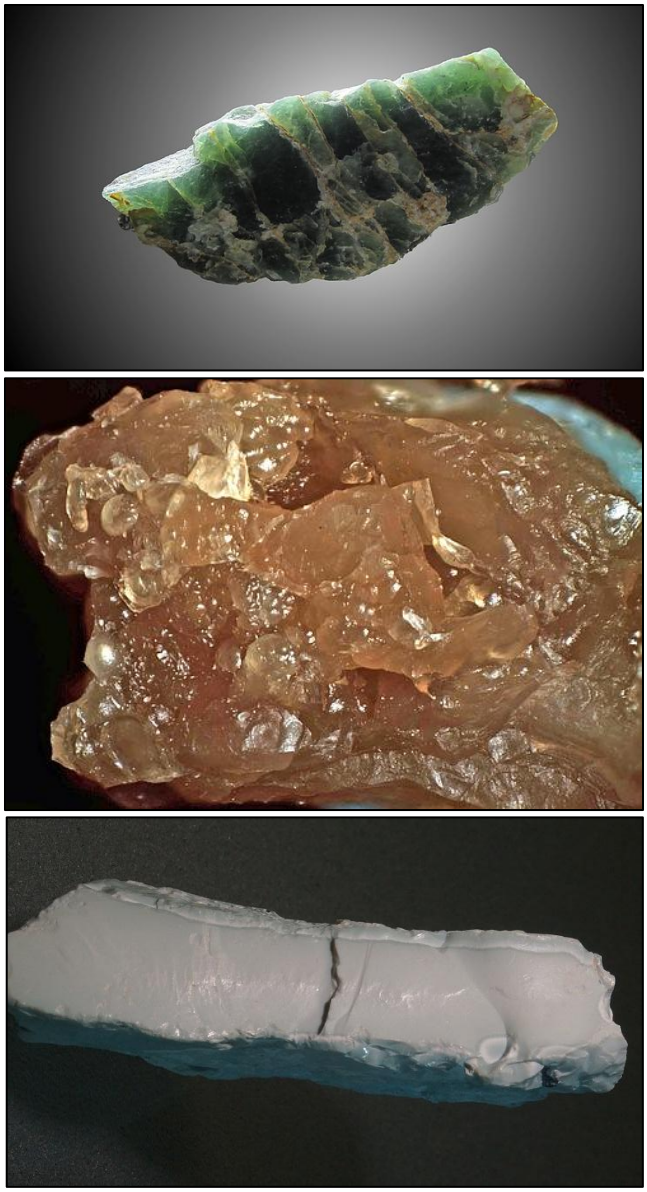

Figure 7—*Serpentine minerals from the Travilah quarry.* ***Top:*** *Antigorite with chromite; note the platy habit.* ***Center:*** *Lizardite.* ***Bottom:*** *Clinochrysotile. Source: Mindat; photos: Tim Novak (top, bottom); Rolf Luetcke (center).*

Or you can simply visit Serpentine Barrens Conservation Park on your own. From Arlington, take I-66 West to I-495 North, then exit on River Road going west. Follow River Road through the town of Potomac, then look for Piney Meetinghouse Road. Turn right and follow Piney Meetinghouse Road past the Glenstone Museum turnoff until you reach a large powerline corridor crossing the road. Park on the right under the powerlines in the dirt parking area and cross the road on foot.

Figure 8—*Rodingite minerals from the Travilah quarry. Both photos show green diopside with orange grossular garnet. Source: Mindat; photos: Dave Fryauff.*

Step around the gate and head into the woods on either side of the powerlines (your choice). If you're looking for the quarry, turn right into the woods and go uphill until you find the fence around the quarry. It's not far.

The park is new and undeveloped, so it has no signs or trails; you have to bushwhack. But you will easily find serpentinite exposures, and the stunted oak/hickory forest is unusual and interesting in itself.

Acknowledgment

Thanks to Sue Marcus for reviewing and improving the article!

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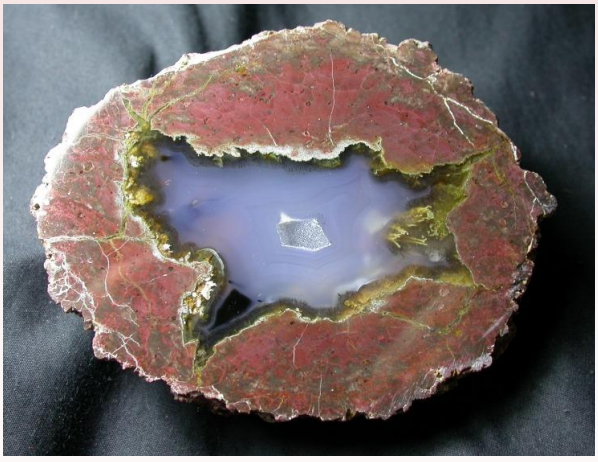
GeoWord of the Day

(from the American Geoscience Institute)

thunder egg

A popular term for a small geodelike body of chalcedony, opal, or agate that has weathered out of the welded tuffs of central Oregon.

(from the *Glossary of Geology*, 5th edition, revised)



March 2026—Upcoming Events in Our Area/Region (see details below)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 NVMC mtg	3	4 MSDC mtg	5	6 Show: Hickory, NC	7 Shows: Hickory, NC; Wilmington, DE
8 Shows: NC, DE; Daylight savings begins	9 GLMSMC mtg	10	11	12	13 Show: Richboro, PA	14 Shows: Richboro, PA; Gastonia, NC
15 Show: Gastonia, NC	16	17 St. Patrick's Day	18	19	20 Show: NC; Spring begins	21 Shows: GLMSMC, NC, GA
22 Show: GLMSMC, NC, GA	23	24	25	26	27 Show: Raleigh, NC	28 Shows: Raleigh, NC; Marietta, GA
29 Show: Raleigh, NC; Marietta, GA	30 MNCA mtg	31				

Event Details

2: Arlington, VA—Northern Virginia Mineral Club; info: https://www.novamineralclub.org/.

4: Washington, DC—Mineralogical Society of D.C.; info: http://www.mineralogicalsocietyofdc.org/.

6-8: Hickory, NC—Annual show; Catawba Valley Gem & Mineral Club, Inc; Hickory Metro Convention Ctr, 1960 13th Ave Dr; Fri 10-6, Sat 10-6, Sun 10-5; $6 adults, kids under 12/Scouts in uniform free; info: Dean Russell, cvgmcsecretary@aol.com, www.cvgmc.com.

7-8: Wilmington, DE—Annual show; Delaware Mineralogical Society; DoubleTree, 4727 Concord Pike (Rt 202); Sat 11-5, Sun 11-4; $6 seniors (60+), $7 adults (18-59), $4 juniors, kids under 12/Scouts in uniform free; info: Dianne Soccio, rockincatmom23@gmail.com; www.DMSrocks.org.

9: Gaithersburg, MD—Gem, Lapidary, and Mineral Society of Montgomery County, MD; info: https://glmsmc.com/index.shtml.

13-14: Richboro, PA—Annual show; Leidy Microscopic Society; Advent Lutheran Church, 45 Worthington Mill Rd; Fri 12-6, Sat 9-6; $5 Fri, $10 Sat (incl lunch); info: Donald McAlarnen, 610-247-5097, donmcalarnen@outlook.com, https://leidymicroscopical.com.

14-15: Gastonia, NC—Annual show; Gaston Gem & Mineral Club; Gastonia Farmers Market, 410 E Long Ave; Sat 10-6, Sun 10-4; admission free; info: Robert Winstanley, 703-577-3391, machine66man@gmail.com.

20-22: Swannanoa, NC—Show; Mountain Area Gem and Mineral Association; Land of the Sky Shrine Club, 39 Spring Cove Rd; Fri 9-6, Sat 9-6, Sun 10-4; free; info: Richard Jacquot, 828-779-4501, rickjacquot@gmail.com, www.AmericanRockhound.com.

20-22: Marietta, GA—Bellpoint Gem Show; Cobb Civic Ctr, 548 S Marietta Pkwy; Fri 10-5:30, Sat 10-5:30, Sun 10-4:30; $10 admission (cash only); info: BJ, mbellpoint@gmail.com, www.bellpointgemshow.com

21-22: Gaithersburg, MD—Annual show; Gem, Lapidary, and Mineral Society of Montgomery County, MD; Montgomery County Fairgrounds, Bldg 6, 16 Chestnut St; Sat 10-6, Sun 11-5; $7 ages 12+; info: www.glmsmc.com.

27-29: Raleigh, NC—Annual show; Tar Heel Gem & Mineral Club; Kerr Scott Bldg, NC Fairgrounds, 4285 Trinity Rd; Fri 3-7, Sat 10-6, Sun 10-5; visitors $3, family of 4 $5, under 3 free; info: Cyndy Hummel, 919-779-6220, mchummel@mindspring.com, www.tarheelclub.org/.

28-29: Plymouth Meeting, PA—Annual show; Philadelphia Mineralogical Society & Delaware Valley Paleontological Society; Lu Temple, 5140 Butler Pike; Sat 10-5, Sun 10-4; $7 adults, kids under 12/Scouts in uniform free; info: Douglas Klieger, dklieger@verizon.net, www.phillyrocks.org.

30: Burke, VA—Micromineralogists of the National Capital Area; info: https://www.dcmicrominerals.org/.

The Northern Virginia Mineral Club, Inc.

Visitors are always welcome at our club meetings!

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

Club 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).

Please send your newsletter articles to:
Hutch Brown, editor
4814 3rd Street North
Arlington, VA 22203
hutchbrown41@gmail.com

RENEW YOUR MEMBERSHIP!

SEND YOUR DUES TO:
Roger Haskins, Treasurer, NVMC
4411 Marsala Glen Way, Fairfax, VA 22033-3136

OR

Bring your dues to the next meeting.

Dues: Due by January 1 of each year; $20 individual, $25 family, $6 junior (under 16, sponsored by an adult club member).

2026 Club Officers

President: Jason Zeibel
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Youth Coordinators: Maria Nopo, Celia Zeibel

Meetings: At 7:30 p.m. on the first Monday of each month at the Dunn Loring Fire Station, 2148 Gallows Road, Dunn Loring, VA.* (No meeting in July or August.)

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