THE NORTHERN VIRGINIA MINERAL CLUB INC

The Mineral Newsletter

Virtual Meeting, June 22, 7:30 p.m.—Through Zoom!

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

Lazulite

Blow River, Yukon, Canada

Photo: Bob Cooke.

Note!

Coronavirus transmission remains a high risk. The June NVMC meeting will therefore be virtual.

Volume 61, No. 6
June 2020
Explore our website!

June meeting on Zoom

Show-and-Tell

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In this issue …

Mineral of the Month
Lazulite

by Sue Marcus

I enjoy writing these articles because they push me to learn. The research is fun, at least for the initial hours.

What's in a Name?

I started learning about lazulite, our mineral this month, by seeking information about its name. The syllable "laz" is shared with lazurite and is similar to the first syllable of a third blue mineral, azurite. And then there's lapis lazuli. My hypothesis was that these minerals (and, in the case of lapis lazuli, this rock) share a name related to their shared blue color.

True!

The "laz" and "az" syllables were derived from the Persian word for heaven, which passed through Arabic and eventually into English. The name lazulite was bestowed by German chemist Martin Klaproth in 1795.

Metamorphic Origins

Lazulite forms from the metamorphism of sedimentary rocks and in pegmatites. In high-temperature metamorphic environments, commonly associated minerals include kyanite, rutile, corundum, and andalusite. In lower temperature metamorphic environments, siderite, calcite, and other common minerals are its associates. In pegmatitic environments, associated minerals include beryl and tourmalines. Quartz occurs with lazulite in all geologic environments.

Localities

The original specimens came from the Austrian Bruck-Mürzzuschlag District. Although the aqua-and-white-colored rocks here were found in 1783, they were initially confused with azurite, which has a much deeper blue color, with vivianite (a different phosphate mineral), or even with feldspar. The original discoveries were probably massive rocks rather than pieces displaying lazulite crystals.

While seeking photos to help illustrate this article, editor Hutch Brown found a Wikipedia image showing a specimen with crystals up to 1.2 centimeters in size. Lazulite crystals from this locality are rare and ones of this size are astounding.

Summer break ahead!

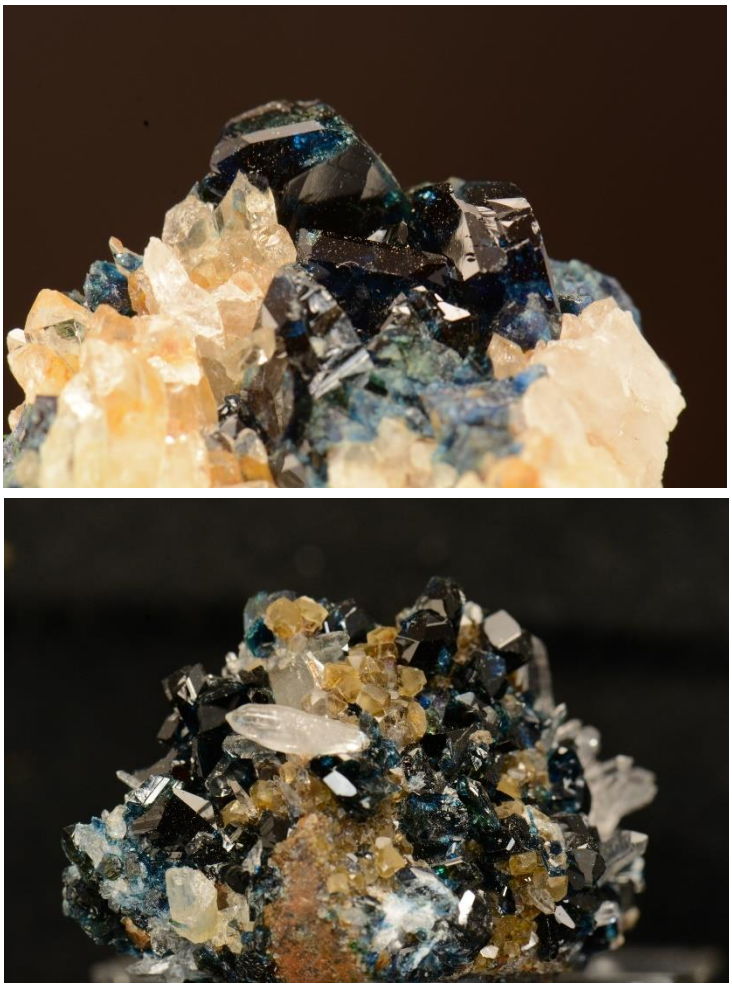
Northern Virginia Mineral Club members,

The Long Branch Nature Center where our club meets is temporarily closed. Our in-person club meeting scheduled for June 22 is canceled—but we will be meeting online (see page 5).

See you in person in September! (Let's hope!)

Lazulite on quartz, Färbergraben, Werfen, Salzburg, Austria. Source: Wikipedia; photo: Rob Lavinsky.

Lazulite from the original Austrian locality is mostly massive, in the aqua part of the color palette, and usually more suitable for jewelry than as specimens. Those who collect specimens from type localities might also find some poorly crystallized material. Tiny crystals (millimeters in size) have been found on the Italian side of the Vizze Pass in the Tyrolian Alps, with slightly larger crystals coming from a Tuscan locality. Lazulite has also been found in other parts of Europe, including Sweden, Switzerland, and Germany, but materials from these localities are more oddities than fine specimens.



Lazulite on quartz from Crosscut Creek (top) and Rapid Creek (bottom), Yukon, Ontario. Photos: Bob Cooke.

The Rapid Creek area in the Yukon, Canada, is probably the world's best location of high-quality lazulite specimens. These are usually quite lustrous, transparent to translucent, and equant and blocky to tabular. Up to about 3 centimeters in size, they are found with siderite and other minerals. Based on the unique deposit and the quality of the crystals, lazulite was chosen as the territory's official gemstone.

The Rapid Creek deposits are hosted by metamorphosed sediments. Ironstone, mudstone, shales, and sandstone concentrated the phosphates contained in them and deposited the resulting rare minerals into fractures in the metamorphic rocks. The phosphate minerals are believed to have been emplaced by cold, northeast-flowing upwelling currents that deposited them against the edge of a Precambrian marine trough.

I don't recall reading a more precise deduction of deposit's origin. Many new minerals were found here, with initial discoveries of lazulite in 1959 (or 1962—sources vary).

Big Fish River is another phosphate locality in the same region that is probably geologically related. It has produced similar, though fewer, lazulite specimens as well as other newly identified mineral species.

Graves Mountain, GA, is the source of most U.S. lazulite specimens. The site was known for opaque blue crystals with white streaks that were found with double terminations (elongated dipyramids) more frequently than at other localities. Dipyramids (also called bipyramids) are symmetrical, mirror-image pyramids, divided by a symmetry plane. Lazulite occurs at Graves Mountain in quartzite, forming up to 15 percent of the rock in some places and suitable for cabochons. The more sought-after crystals, up to four inches long, were found in another part of the same deposit, which was mined for kyanite.

If you have been reading this and are a field collector, here's your bonus: this site is open to collecting at specified times! See the Georgia Mineral Society's website (https://www.gamineral.org/index.html) for details. (Like our club, the site's collecting activities have been on hold due to COVID-19.)

Granular to massive lazulite comes from the Champion Mine in Inyo County, CA, although it is not abundant.

Dipyramidal lazulite on quartzite from Graves Mountain in Georgia. Photo: Bob Cooke.

Pakistan is a relatively new source of lazulite, with specimens beginning to arrive in the West in about 1998. Pegmatites host the lazulite, which is usually more green than blue, distinguishing it from material from other localities. Some of the crystals are large for lazulite, up to slightly more than 3 centimeters. While researching this article, I found a greenish specimen for sale for $1,200, and it was just over 3 centimeters in its largest dimension.

Uses

The Yukon River deposits are rich in iron, phosphate, and manganese, with their manganese content possibly ranking as the fourth largest in the world. However, these deposits are very low grade for all commodities, none of which are in short supply. Phosphate is primarily used in fertilizer and as a soil amendment or in screen-based electronics. However, lazulite is never extracted for its phosphorus or phosphate content.

Transparent lazulite is pleochroic—that is, its color changes as light strikes a rotated specimen. Lazulite makes a gorgeous though rarely cut gemstone. The largest known cut stone is 11.36 carats, and it is darker green than any uncut lazurite I have seen. The gemdat.org website shows cut lazurite in some very unusual colors.

Technical Details

Chemical formula .....$(Mg,Fe)Al_2(PO_4)_2(OH)_2$
Crystal form.....Monoclinic
Hardness 5.5–6
Specific gravity.....3.0–3.2 (sources vary)
Color.....Shades of blue, from lighter blue with white streaks (usually in opaque specimens), to azure blue, to slightly greenish-blue, to blue-green
Streak.....White
Cleavage .....One poor to good
Fracture.....Uneven, splintery
Luster.....Vitreous, greasy, resinous, dull

Sources

Amethyst Galleries. N.d. (no date). The mineral lazulite.
Collection Arkane. N.d. Yukon Territory, a Klondike of phosphate minerals!
Encyclopedia Britannica. N.d. Martin Heinrich Klaproth: German chemist.

Lazulite, Nanga Parbat, Pakistan (2.4 by 1.7 cm). Source: Wikipedia; photo: Rob Lavinsky.

Haege, J. N.d. The treasures of Graves Mountain. The Georgia Mineral Society.
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Velthuizen, J.V.; Sturman, B.D.; Robinson, G.W.; Ansell, H.G. 1992. Mineralogy of the Rapid Creek and Big Fish River area, Yukon Territory, in Yukon phosphates. Mineralogical Record, spec. pub.: 1–47.
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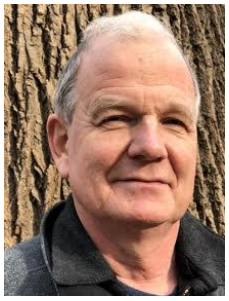
Wikipedia. N.d. Lazulite.
Yukon Geological Survey. N.d. Rapid Creek.

See your photo in print!

Next Mineral of the Month: **Torbernite**

The Mineral of the Month leads off our newsletter, thanks to the knowledge and talents of Sue Marcus (writer) and Bob Cooke (photo contributor). Why not join the fun? Help illustrate the next article by sending your photo(s) to editor@novamineral.club.



President's Collected Thoughts

by Tom Burke, President

Due to the ongoing COVID-19 threat, the club's board of directors has voted to cancel the club's in-person June meeting, though this is currently a moot point since Arlington County has not yet announced a reopening of the nature center where we normally meet. Instead, we want to hold an online meeting using the Zoom videoconferencing service. This will be on June 22, which would be our normal meeting day.

I'm sure I'm not alone in very much missing our monthly gatherings. Any hope we might have had that the coronavirus will vanish quickly is now gone, and it is currently impossible to predict when it will be safe to restart our in-person meetings even after facilities are reopened. So, online meetings will be very helpful for maintaining our camaraderie, and I hope you will all join us in our attempt to make this work.

I say "attempt" because, although Zoom is used successfully by many people, including those who would not consider themselves to be "techies," it can sometimes be challenging to get it to work for first-timers. So, let's please treat this first try as an experiment and not allow ourselves to get frustrated and give up if it doesn't go smoothly this time. With a little patience, we can make it work for everyone.

The topic of our June 22 online meeting will be show-and-tell, and this will be a perfect opportunity for you to show off something special from your collection without having to lug it to the nature center. This will be especially useful if you have something delicate that you'd be reluctant to carry around. So, please be thinking about what specimen you'd like to display and what you might say about it.

A separate article in this newsletter will discuss the details about installing and using the free Zoom software on your computer, or about using it on your mobile device (phone or tablet) if you prefer.

Looking forward to seeing you all online on the 22nd! And, please note that using your own video during these meetings is completely optional. If you are camera shy, you can simply watch as if it were television, and participate by voice only if you wish.

ALSO, on a separate topic, the board has voted to cancel this year's club show, which would normally be held in November at George Mason University. For the club, the primary focus of the show is education, and because of the social distancing required by the coronavirus it is questionable whether or not we'd be able to gather people together for activities. The crowded Kids' Room, in particular, now seems like a rather bad idea. We will, however, be reserving the space at GMU for 2021.

Virtual Adventure

June Meeting Through Zoom!

June 22, 7:30 p.m.

Our June meeting will be held virtually. A few days beforehand, you will receive email instructions on how to join the meeting online.

The program will be show-and-tell. Tell us about a specimen you found, traded, or bought—and the story behind it. We will take turns, about 5 to 10 minutes each, so come prepared! Once everyone who wants has had a turn, we can go around again, if people want.

May Meeting Canceled—No Minutes

The NVMC meeting in May was canceled because meeting facility was closed due to the coronavirus pandemic. The next club auction is scheduled for the September club meeting.

In Defense of Rocks

by W.C. McDaniel

Editor's note: *The article is adapted from* MAGS Rockhound News *(newsletter of the Memphis Archaeological and Geological Society), May 2020, pp. 1, 3. Thanks to Sue Marcus for the reference!*

The use of the phrase "dumb as a rock" appears to be on the rise, especially by politicians, and it is time to stand up for rocks.

I adore rocks, collect them, play with them, hoard them, display them, sell them, and put them to work. But I have never met a dumb rock. Met a few that were hard and somewhat ugly and of little use; some made my back ache, and a few tried to remove my big toe. But through it all, they were rocks, not dumb rocks. The origin and use of the term are somewhat hazy, and an online search will give you multiple answers and opinions.

So stand up for rocks, collect them, appreciate them, and keeping on rocking.

Addendum. Rocks are a perfect companion and activity for social distancing.

Rock Samples Need To Be Archived or Shared

by Erin Blakemore

Editor's note: *The source is* The Washington Post *(May 17, 2020). Thanks to Tom Burke for the reference!*

Why did everything in the teeming oceans of the late Devonian Period (which ended about 358 million years ago) go extinct? Did Earth's entire surface cool into a "snowball" at some point in prehistory?

Geologists could one day lay to rest these contentious debates about Earth's environmental history. But if they don't have access to one another's rock samples, argues an international group of geology researchers, they may never solve these riddles.

In an editorial in the journal Nature, a group of geologists from the United States, China, and Australia makes the case for storing and sharing ancient rocks. … *Read more*.

Bench Tip
Premade Bezel Cups

Brad Smith

As a rule, I assume it's going to take me 15 to 20 minutes to make a bezel for an ordinary cabochon, so buying premade cups can save a lot of time for some projects. But if you go this route, keep in mind three things.

First, try to get cups made from fine silver, not sterling. Fine silver is softer and burnishes over the stone more easily.

Second, you may have trouble matching the shape and size of the stone with the bezel cup. Purchased cups can only be found in a limited number of standard sizes. You may have to adjust your choice of gemstone to match the cup. Also, premade cups often have fairly low sidewalls. Though fine for low-dome stones, they're not dependable for stones with steep sidewalls.

Lastly, before setting, check the fit of your gemstone in the cup, particularly around the bottom. The bottom corners of a stamped cup are much more rounded than a bezel you would fabricate yourself. This causes a problem with stones that have a sharp edge around the bottom. Burnishing the bezel over one of these stones will place a lot of stress on the stone and may cause it to crack. To avoid this, I round off the bottom edge of the stone with a diamond file (or sandpaper on soft stones).

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

How I Got Interested in Rocks (and Fossils)

by Hutch Brown, Editor

Editor's note: *All of us have a back-story, so why not share a few paragraphs (up to 500 words or so)? A photo of you would be nice too! Just send your contribution to editor@novamineral.club. I've started it off below.*

I thought I might kick off a way for club members to learn more about each other. Everyone has a story to tell about how they got interested in our hobby.

When I was ten, I climbed Mount Vesuvius with my parents and collected shiny bits of obsidian on the trail. Someone also gave us sea glass (bits of broken bottles rounded by the waves) collected on North Sea beaches in Germany, and I was fascinated by the colors.

When I was twelve, I collected sharks' teeth one summer at Boy Scout camp on Chesapeake Bay. For Christmas, I got one of those mineral kits, the kind with Mohs hardness testing and all. It probably helped me get my geology merit badge as a Boy Scout.

I remember finding what I thought was a lovely piece of obsidian on the street. I showed it to my science teacher, who took out his penknife and carved a piece off my "rock." It was tar left over from paving operations—how embarrassing!

Well, it was a start.

When my son Alex was eleven or twelve, he wanted to start collecting rocks. We went looking for fossils and minerals, and he wanted to find gold in our area, but I didn't really know how to go about any of it.

We decided to learn more through a local mineral club, so I looked online and found the NVMC. We started coming to meetings and joined the club in 2012. I'm a professional writer/editor for the U.S. Forest Service, so I volunteered to edit the club newsletter.

Working for the Forest Service, I'm interested in ecosystems (interrelated plant and animal communities) and how they function. I realized that ecosystems have a lot to do with the underlying soils and geology, so I started researching and writing articles for the newsletter on the geology of our area—and voila!

What about you?

Safety Matters
Tools of the Trade

by Ellery Borow, AFMS Safety Chair

Editor's note: *The article is adapted from* A.F.M.S. Newsletter *(April 2020), p. 1.*

Perhaps you have noted the warning, "Please read and follow manufacturer's instructions." These words appear on myriad tools, supplies, and equipment, including anything from a rock pick to a 48-inch slab saw. The instructions often cover safety as well as maintenance guidelines. So yes, safety is part of many manufacturers' recommendations, and it can save you money as well.

Our hobby involves the use of tools—microscopes, rock picks, slab saws, geode crackers, faceting machines, soldering torches, and cars. Cars are a really big tool. Sure, we service and maintain our cars. It costs time and money, but your car will last longer and be safer.

The same can be said of a rock pick or a slab saw. Rock pick instructions are usually short and the slab saw's rather lengthy. However, both are worth reading. Besides routine saw maintenance, which generally makes a saw safer to run, there are usually specific safety recommendations, such as maintaining hood gaskets for mist containment and ductwork to vent the mist, safe saw vice operation, adjustments to guarding, proper grounding of electrical components, and avoiding pinch points (areas on the saw where fingers might be pinched between moving parts).

All such recommendations are based on the manufacturer's thorough understanding of the design and operation of the equipment. Manufacturers want you to be safe as you enjoy many years' use of the equipment. That's true for everything from that rock pick to the mammoth 48-inch saw.

Now to the cost of safety. Safe car tires and brakes as well as working windshield wipers are all clearly issues of safety. The expenditures help avoid car accidents.

Perhaps the cost of a damaged hammer handle or poorly adjusted blade guard are not as apparent. The costs might become much more apparent if the flying hammer head hits a bystander or the improper guard allows flying debris to cause eye damage.

EFMLS Newsbits

Editor's note: *The item is based on* EFMLS News *(May 2020).*

The August session of Wildacres is still scheduled to be held (the May session was canceled), and the EFMLS will keep you informed of any changes.

We continue to send our gratitude, thanks, and appreciation to all our first responders, medical personnel, truckers, grocery and pharmacy workers, garbage collectors, and everyone else who risks their lives for us during the COVID-19 pandemic, many of whom belong to our clubs. Keep these heroes in your thoughts and prayers!

Several clubs have lost members to the virus. Let us also remember them and their families and friends in their time of grieving. May they all rest in peace.

Rockhounds are safety-minded people, and we are sure you are doing your part to help contain this unprecedented virus, wearing a mask and observing social distancing when out in public and staying home except for basic necessities (such as groceries and medicine).

If you are having difficulty finding or affording face masks to protect yourself from COVID-19, you can make your own. Just type "make a facemask" into your computer's search engine and you will be surprised by how many different kinds of masks you can make. Some sites even have a video to guide you.

You might have the virus and show no symptoms, spreading it unwittingly, so be careful. The Centers for Disease Control and Prevention have updated their list of symptoms on their website at www.CDC.gov.

Many clubs have canceled their meetings; other clubs are meeting by video or phone. Shows have been hit hard, with almost all club shows canceled in April, May, and even into June.

Because the March EFMLS convention was postponed until October, the results of the EFMLS BEAC 2020 contest will be announced at the Editors Breakfast in October.

Quote of the Month: "The first concept of continental drift first came to me as far back as 1910, when considering the map of the world, under the direct impression produced by the congruence of the coast lines on either side of the Atlantic. At first I did not pay attention to the ideas because I regarded it as improbable. In the fall of 1911, I came quite accidentally upon a synoptic report in which I learned for the first time of paleontological evidence for a former land bridge between Brazil and Africa. As a result, I undertook a cursory examination of relevant research in the fields of geology and paleontology and this provided immediately such weighty corroboration that a conviction of the fundamental soundness of the idea took root in my mind."

–Alfred L. Wegener (*The Origins of Continents and Oceans*)

Links To Explore

Editor's note: *The item is adapted from* EFMLS News *(January 2020), p. 6.*

The following links contain information related to our hobby. If you have a favorite link, please send it to efmlsnews.editor@gmail.com.

- American Federation of Mineralogical Societies: www.amfed.org
- American Lands Access Association: www.amlands.org
- American Geological Institute: www.americangeosciences.org
- Gemological Institute of America: www.gia.edu
- Mineralogical Society of America: www.minsocam.org
- Mindat.org (mines, minerals, and more): https://www.mindat.org/
- National Speleological Society: www.caves.org
- Smithsonian Magazine Smartnews: www.smithsonianmag.com/smartnews
- Society of American Silversmiths (care of silver, glossary of silversmithing terms and tools): www.silversmithing.com
- U.S. Geological Survey (information on earthquakes, water, volcanoes, landslides, and so on): www.usgs.gov
- WebSightings from the Maryland Geological Society (articles on paleontology and geology): www.ecphora.net/mgs/new_interesting_articles.html

Caveat Emptor

Buying Minerals and Fossils on eBay

by Thomas Pallant, Jr.

Editor's note: *The article is adapted from* Rock Chatter *(newsletter of the Rock and Mineral Club of Lower Bucks County, PA), April 2020, pp. 2–3.*

In January of this year, my mother and I got on the Internet with the help of my computer-tech brother Frank. One of the first places I began to examine was eBay. I quickly added two mining lamps to my collection.

Then I discovered that eBay also sells minerals and fossils—and that you have to be careful about what you purchase. Here are some helpful hints.

My first mineral purchase was a cobalt-and-hematite geode. When I received my purchase, I noticed a strong chemical smell. Closer examination revealed that the geode was artificial. Still, I found it an interesting addition to my collection.

As I examined the system more thoroughly, I began to notice other things. I found Moroccan geodes with crystals dyed in various colors. I also saw quartz crystal clusters in bright yellow, red, pink, and violet—obviously laboratory grown, with chemicals added to color them. Another item was geodes with bismuth crystals inside, obviously laboratory grown.

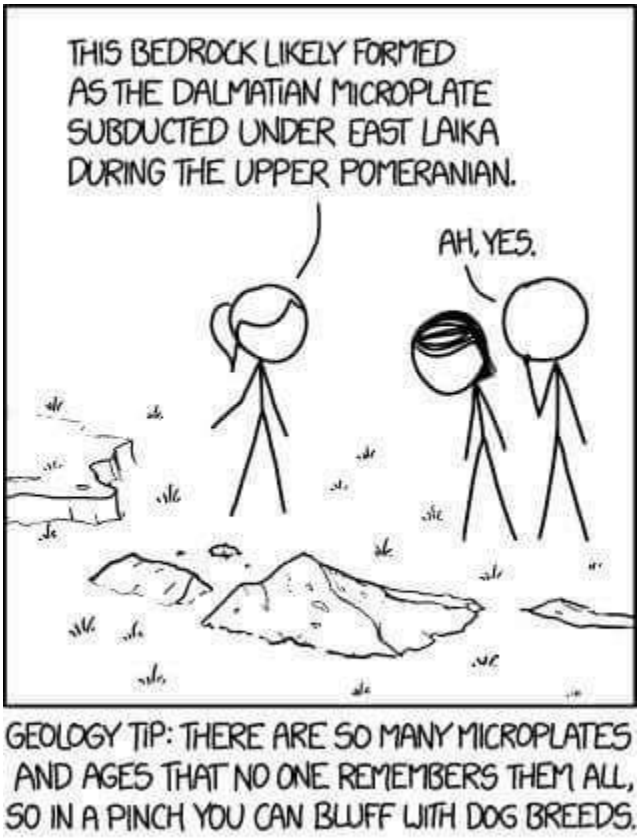
Then there were the fossils, including lots of offers of megalodon sharks' teeth. Some of the prices were too low, and the teeth offered looked as though they were casts. Some were identified as casts, others not.

In recent years, Chinese artists have become very good at counterfeiting dinosaur eggs. Only close examination can spot the differences.

The collector must also be really careful with Moroccan trilobites. I have seen lots of "trilobites" from Morocco on the Internet that are simply too good to be true. They are all on a sand-colored matrix and every one of them is perfect—too perfect. And considering the high prices being asked, my advice is to stay away.

I have found that the Internet does offer some interesting and even good buys for the collector, but you have to be careful. Use your commonsense, and remember: if an item seems too good to be true, it probably is.

"Geode" from Morocco, made from painted pottery clay lined with galena crystals. Source: Geology.com; photo: Guy Courteois.



What Are Thundereggs?

by David Rix

Editor's note: *The piece is adapted from the Eibonvale Thundereggs blog.*

The crystallographers report that geodes (which many thundereggs are) can help in breaking addictions. I am inclined to agree from my own experience. The things themselves are so darned addictive that no other addiction stands a chance!

Put simply, thundereggs (or *lithophysae*) are a structure, not a mineral. They form in rhyolitic lava flows, probably as nodules split on cooling, creating a hollow space inside. This then fills with a agate, quartz, jasper, opal, and other things in various combinations.

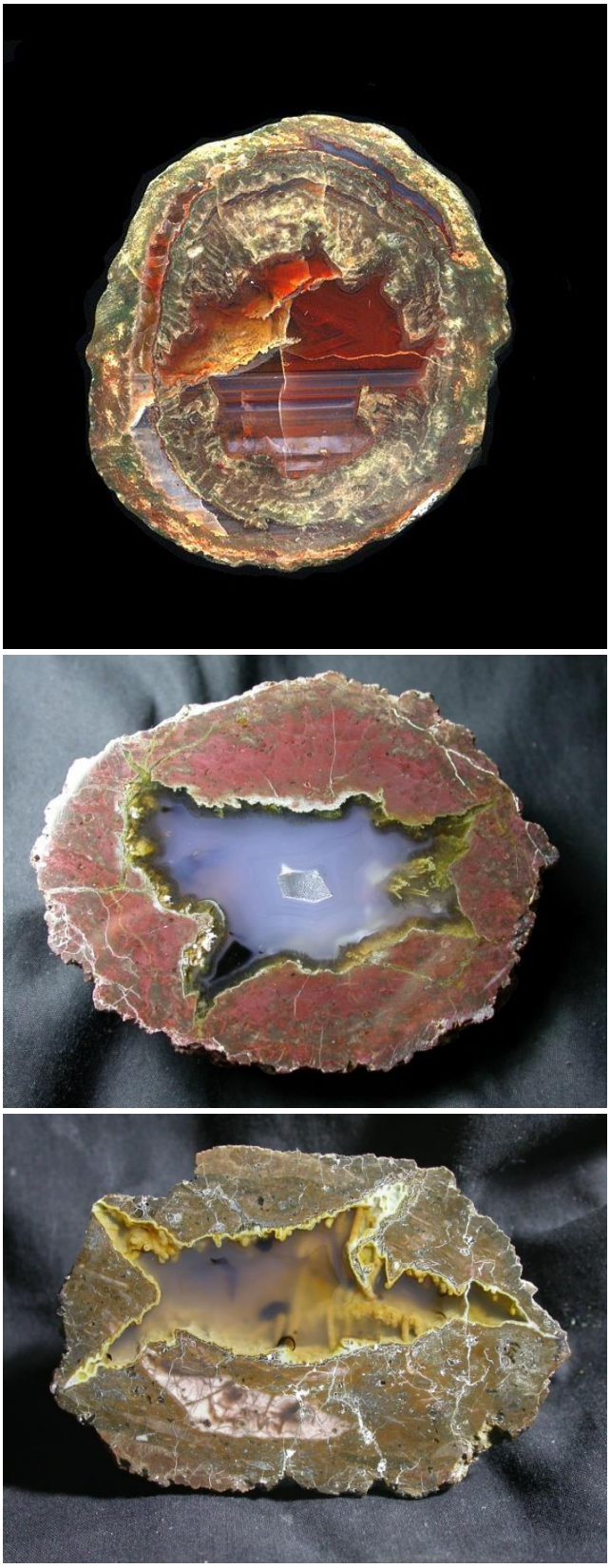
The result is a rock that, when cut in half, reveals a self-contained center of sometimes magical beauty, surrounded by a rock matrix. The filling is as varied as agate can be, and each variation can be highly location specific.

Every bed (site where thundereggs are found) has its own characteristics—its own flavor, like some unique variety of wine. Thundereggs from locations just a few miles apart can be almost unrecognizable. That is part of their charm and what makes them so highly collectible.

Sit a French Esterel next to an American Friend Ranch egg, next to a Buchanan Ranch egg, next to a vivid agate from St. Egidien, and you might well wonder how these things can be related at all. But the similarities are there in the shapes and structures—the sense of torn rock and the seeming "energy" in their history, which is very different from a sedate classic geode or agate window ornament.

The name "thunderegg" comes from American Indian legends; with the appearance of these things—the way they seem filled with the frozen energy of torn and stretched rock (far more so than a sedate classic agate) and the layering of colors inside them—they really seem to merit their name. Sometimes they look almost organic or as though made of gel or water. Some even seem to have swirling storm clouds frozen inside. Or jagged crystalline lightning or murky rockpools.

The online Eibonvale Thunderegg Gallery classifies thundereggs according to location, as far as possible, although true completeness is utterly impossible.



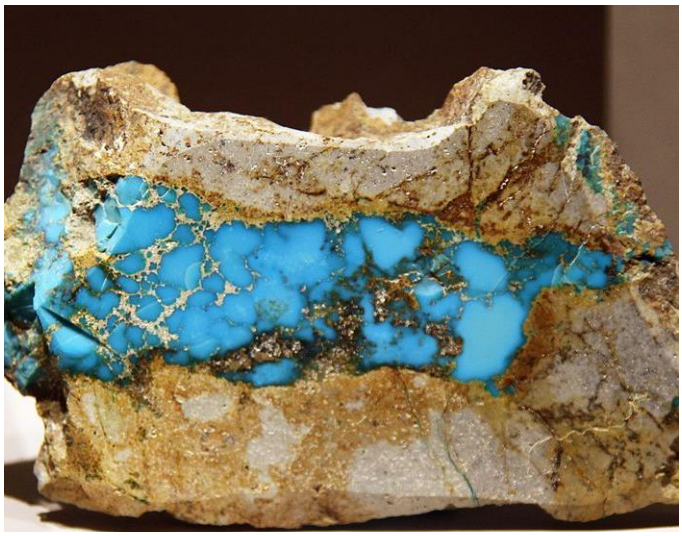
Thundereggs from the Massif de l'Esterel, France (top); Black Rock Desert, NV (center); and Friend Ranch, OR (bottom). Source: Wikipedia; photos: David Rix.

A Unique Prospecting Method: Anthills

by Dr. Ralph E. Pray

Editor's note: *Adapted from Mineengineer.com. Thanks to Sue Marcus for the reference!*

Note from Sue Marcus, contributor: *Anthills, termite mounds, and other animal excavations are sometimes used by geologists to find mineral deposits or their chemical signatures. We can't directly see what's beneath the surface, and animals helpers can unintentionally bring information to the surface. You can browse articles on the web on termite mounds used for gold exploration in Australia. I came across a fun tale of a miner who used the blue specks of turquoise brought up by New Mexican ants to mine for that gemstone. Other articles tell of insects concentrating and excreting metals, thus showing the presence of potentially economic deposits nearby.*



Turquoise from Cerrillos, NM, in the Smithsonian collection. Source: Wikipedia; photo: Tim Evanson.

My First Anthill

In 1948, I lived alone in the Cerrillos Mountains south of Santa Fe, NM, at the Tom Payne Mine. When lead and zinc metal prices suddenly took a nosedive, our ore and concentrate shipments from the mine to the smelter in El Paso, TX, barely paid the rail freight.

I went broke. Couldn't even get a haircut.

My isolated cabin wasn't far from New Mexico's famous old turquoise diggings. The Pueblo Indians living along the Rio Grande south of Santa Fe had chipped turquoise from the Chalchihuiti Mine for over a thousand years, until perhaps 1700.

Although it was a waste of time fooling around in the ancient Indian mines, I tried prospecting outcrops in the area. Nothing. A newcomer could hardly be expected to discover a vein of sky-blue stone beneath the Indians' abandoned sites, not unless the new guy tried something different and got very lucky.

There were anthills near the old workings. Ants are known to bring grains of rock up to the surface. So I got down on my hands and knees to look for blue specks in nearby anthills. Within 30 minutes, I spotted tiny blue grains in one deserted cone-shaped mound about 8 inches high.

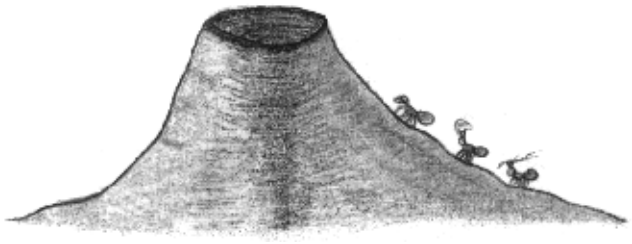
I dug a pit down through the mound. A thin vein of solid turquoise opened up a few feet down. That was the Tedi Mine, named later for my girlfriend in town. It wasn't the best blue stone, not at that shallow depth, but it got better as I went deeper. I staked the claim with my 38 Smith & Wesson.

I traded the easily polished portion of my freshly mined turquoise for Navajo rugs with enterprising Indians on the Santo Domingo reservation. The Pueblo necklace makers soaked the rounded pale blue chips in urine to deepen the color. Weak ammonia can react on copper in turquoise to turn it bright blue. Poorly informed tourists bought this jewelry to wear around the neck, next to their skin.

My high-grade stone was the only new Cerrillos turquoise that Santa Fe's shops had seen in over 40 years. Lapidarists and silversmiths came onboard my little Cerrillos Turquoise Company. Bob Castner, state auditor of New Mexico, set the first cabochon of turquoise from the Tedi Mine into his Elks Lodge ring. I'm still wearing an enchanted stone I pried from beneath that anthill 55 years ago.

Sky-blue Tedi turquoise, with its dark brown matrix, brought premium prices. I got a haircut.

This unique prospecting method is very different from everyday approaches to finding a mineral occurrence. The normal method involves outcrop sampling, float examination, searching old workings, and tracing known faults. Where valuable minerals lie completely covered by overburden, there is little chance of discovery using only these standard visual practices. A unique method is needed.



Why Ants Prospect

No ant goes underground looking for rich ore. They're too busy. They couldn't care less about minerals, other than the ease of burrowing through them.

Water is the target, and the quickest way to it is down along cracked fault planes, through soft slickensides, and along talc-coated vein walls. They chew their way into the easy stuff and carry it to the surface. Ants and termites operate above the water table, in the oxidized zone, where rock alteration has led to softening.

They don't actually fracture quartz with their clasping jaws. Natural freeze-thaw cycles, earthquakes, and other invasive events crack vein material over geological eons, permitting the ants to pick up broken pieces from the mother rock.

For the modem human prospector, what could be simpler than examining recent anthills in old mining districts? You simply scoop up the fine-grained sample and pan it for heavies. If anything is left after taking out the magnetics, further attention might be warranted.

There's a name for this anthill business. It's new, nothing any mining school ever heard of in the old days. The study of insects and animals as they react with their mineral environment is called geozoology.

Favorite Websites?

Many of us surf the web for interesting photos and information related to our hobby. Do you have any favorite sites related to …

- Beautiful but unaffordable?
- Vendors?
- Supplies, equipment, books, etc.?
- Clubs, other organizations?

Share your favorites in the newsletter! Just send them to editor@novamineral.club.

GeoWord of the Day

(from the American Geoscience Institute)

diamond simulant

A material that is not diamond or synthetic diamond but simulates a faceted diamond's appearance. Common diamond simulants include cubic zirconia (shown below), gadolinium gallium garnet, synthetic spinel, and yttrium aluminum garnet. Also called diamond substitute.

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

Calcite, Haymarket Quarry, VA, George Reimherr Collection.

June 2020—Upcoming Events in Our Area/Region (see details below)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20 Summer begins
21 Father's Day	22 NVMC meeting via Zoom	23	24	25	26	27
28	29	30				

Event Details

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

??: Rockville, MD—Gem, Lapidary and Mineral Society of Montgomery County. ***Next meeting date to be determined. Check website*** here.

22: Arlington, VA—Monthly meeting; Northern Virginia Mineral Club; 7:30–10; Remote via Zoom.

24: Arlington, VA—Monthly meeting; Micromineralogists of the National Capital Area; 7:45–10; Long Branch Nature Center, 625 S Carlin Springs Rd. ***Canceled.***

Note: **Shows, meetings, and other events might have been canceled for June due to the COVID-19 pandemic. Before going to any event you think might be open, check to make sure it is still happening.**

Lazulite, Rapid Creek, Yukon, Ontario. Source: Wikipedia; photo: Rob Lavinsky.

Hutch Brown, Editor
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THE NORTHERN VIRGINIA MINERAL CLUB INC
Crystals are the flowers of the Mineral Kingdom

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Mineral of the Month: Lazulite

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

The Northern Virginia Mineral Club

Visitors are always welcome at our club meetings!

Please send your newsletter articles to:
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 member).

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).

You may reprint NVMC materials in this newsletter.
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.*

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