THE NORTHERN VIRGINIA MINERAL CLUB INC

The Mineral Newsletter

Meeting: April 25 Time: 7:30 p.m.

The meeting will be hybrid due to the coronavirus pandemic. Details on page 7.

Volume 62, No. 4
April 2022
Explore our website!

April Meeting Program:

Chemical zonation in tourmaline

Details on page 6

In this issue …

Babingtonite

Lane Quarry, Franklin County, Massachusetts

Source: Wikipedia. *Photo: Rob Lavinsky.*

Mineral of the Month
Babingtonite

by Sue Marcus

For our March Mineral of the Month, we have another uncommon though not extremely rare mineral: babingtonite. It was named by French mineralogist Armand Lévy in 1824 for Dr. William Babington, an Irish-born physician and self-taught mineralogist. He wrote texts on the systemic cataloging of minerals. He was curator of the mineral collection of John Stuart, the 3rd Earl of Bute, which he purchased after the Earl's death. The18th-century collection is referred to as "enormous" and "one of the largest mineral collections" of its time. Wikipedia informs us that babingtonite is the state mineral of Massachusetts.

Babingtonite occurs in plutonic igneous rocks like basalt and granite and in some metamorphic rocks like skarn and schist. In basalt, it is often associated with prehnite and found in miarolitic cavities, which form when gas bubbles up in basaltic magma, then escapes as the rock cools. Miarolitic cavities are commonly excellent places for minerals to crystalize. The openings protect the crystals from damage unless tectonic forces (such as earthquakes) or human forces (blasting in quarries) damages their contents. In skarn deposits, babingtonite forms from hydrothermal fluids percolating through calc-silicate rocks like limestone when the rocks are thermally altered by proximity to magma. Skarns related to basalt may host economic iron deposits. Babingtonite occurs in both types of skarns.

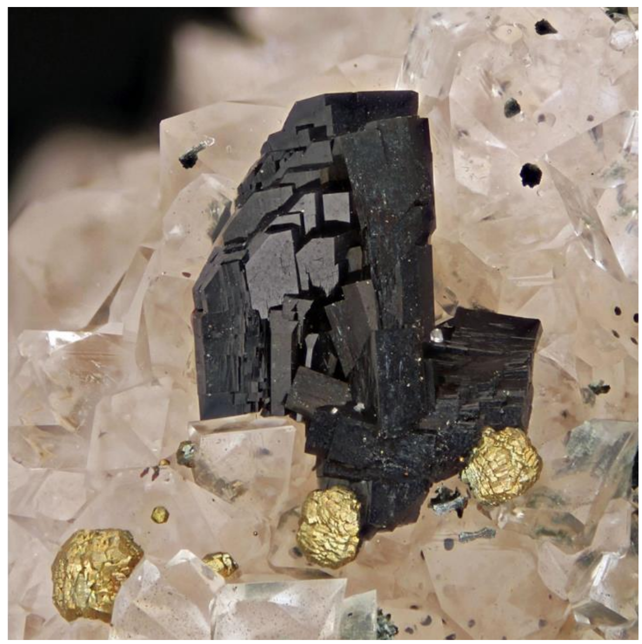
Real rockhounds stop at roadcuts. In the Canadian Province of New Brunswick, you might have been lucky enough to find some babingtonite with prehnite at the Digdeguash cut in St. Patrick's Parish. Timing is everything: babingtonite was first found in a roadcut by a local collector in 1995. The cut was blasted during road widening in 2011, leading to some nice specimens being recovered before the rocks were hauled away as road fill. This is the only babingtonite locality listed for Canada on Mindat. It seems likely that the geologic environment is part of similar terranes in the northeastern United States, described below.

Massachusetts was the first confirmed source of babington recognized in the United States. It occurs in several localities there. It was found in the early 1800s at the Granite Street or Milk Row Quarry in Somerville. First can be best, and specimens from Massachusetts were the world's best until much more recently, when Chinese specimens came onto the market. Some may still consider these U.S. babingtonites the finest. The Deerfield or Cheapside Quarry produced lustrous babingtonite crystals, some with prehnite. Individual bright babingtonite crystals are clearly visible on the Mindat website for this locality, though the specimens are more likely to interest micromounters. The quarry may still be active, managed by Trew Stone, Inc. Similar specimens have been

Happy Easter!

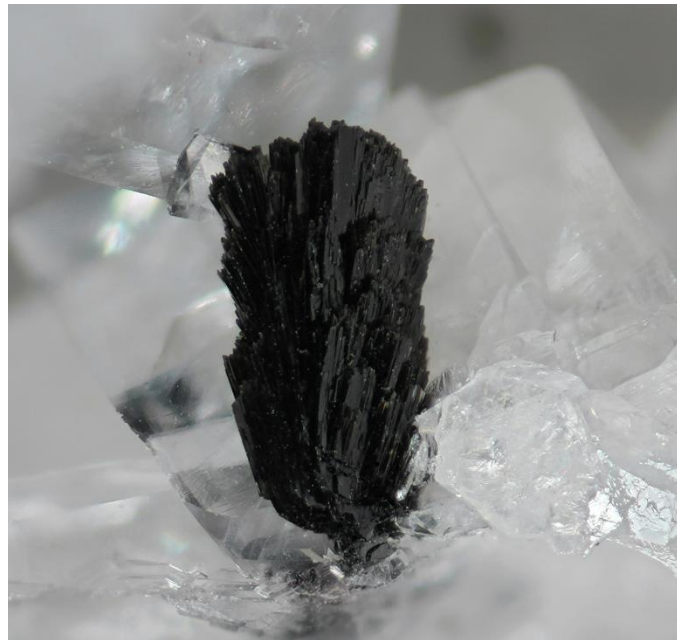
Northern Virginia Mineral Club members,

The November club meeting will be a hybrid meeting, both in person and via Zoom, on **April 25, 7:30 p.m.** Tom Kim has graciously permitted us to use his home for the meeting. The program will be on chemical zonation in tourmaline. See details on page 7.



Babingtonite on calcite from the Southbury Quarry, New Haven, CT. Photo: David Busha, by permission.

Babingtonite (tabular crystals) with prehnite on calcite (top) and on quartz (right), from Southbury Quarry, New Haven, CT. Photos: Harold "Fritz" Moritz, by permission.



recovered from Shaft 10 dumps associated with the Quabbin Reservoir Aqueduct near Hardwick, MA.

Continuing a review of Massachusetts localities for babingtonite, the Lane & Son Quarry in Westfield produced some top-quality specimens of this uncommon mineral. Crystals up to almost 2 centimeters (0.8 in) in size were found, with prehnite as a common accessory mineral. Although some stunning specimens with huge (for the species) babingtonite crystals were found in the 1940s, the quarry seems to still be active. Collectors found babingtonite crystals, usually micromount in size, at the Mount Tom Quarry in Holyoke, the Blueberry Hill Quarry in Woburn (now closed), and others in Massachusetts. The region had a favorable geologic environment for babingtonite to form, and all collectors had to do was to make the discoveries—before the land was paved by development.

O&G Industries operates at least two Connecticut quarries. Babingtonite in crystals of up to at least 0.8 centimeters (0.3 in) was found at the Southbury Quarry. Lustrous black babingtonite crystals contrast with opaque to translucent calcite, which is sometimes well crystalized, creating quite attractive specimens. Collecting was allowed until someone violated the company's rules in about 2000. Rarely, permission may still be granted, according to the property description on Mindat.

The Roncari Quarry in East Granby, CT, gave collectors opportunities to recover beautiful specimens with crystals of babingtonite up to 2 centimeters (0.7 in) in size on matrix with nicely contrasting prehnite and calcite. Doubly terminated crystals were found too. The quarry is still active.

Farther south, the famous New Jersey traprock quarries in Prospect Park and Paterson produced fine babingtonite sprays and rosettes—unusual forms for this mineral. Equally distinctively, some specimens from the Prospect Park Quarry are blue-gray, much lighter than specimens from other localities. The odd color may be due to a coating, possibly of hedenbergite, on the babingtonite crystals. Specimens of the more common black or dark brown crystals were also collected. Clusters of crystals from Prospect Park reach at least 1.2 centimeters (0.8 in) in size. There was probably a frenzy of collecting in the 1980s, when the New Jersey quarries were reclaimed for housing and other construction.

Other, similar New Jersey quarries and localities produced a few babingtonite specimens. From Lincoln Park came black-and-white "sandwich" crystals, with babingtonite centers coated with minute brown johannsenite crystals sticking up vertically from the babingtonite, like fur. These rarities would make extraordinary micromounts.

Babingtonite from Lincoln Park, Morris County, NJ. Photo: Beth Schaefer, by permission.

Our "hometown" Vulcan Quarry in Manassas (Virginia, for you farflung readers) yielded rare and unusual microsize babingtonite crystals. Some portrayed on Mindat are strange, possibly similar to the Lincoln Park "sandwich" crystals. The exceedingly small white hairlike crystals extending from the babingtonite are not identified. Micromounters who have collected there or have specimens from there may find it worthwhile to search your collections carefully. The associated mineral shown is prehnite.

Babingtonite on quartz was found in at least one specimen from Luck Stone's New Goose Creek Quarry (Belmont Station), Leesburg, VA. More crystals probably occurred there but are unrecognized or unknown. More than a decade ago, Ralph Thomas and Buck Keller collected babingtonite specimens from several northern Virginia quarries, according to Andy Dietz (personal communication, March 2, 2022).

The type specimens (used to described a new mineral) for babingtonite came from Arendal, Norway. More than 400 individual mines or prospects for magnetite, an iron ore, are reported from there, with the last of the mines closing in 1975. In these localities, babingtonite formed in skarns. Both massive and well-crystallized babingtonite was found, with some specimens collected fairly recently. Crystals are small—always less than 1 centimeter (0.4 in) in size—but clearly visible and attractive.

Babingtonite crystals from Grönsjöberget, Borlänge, Sweden are small (micros) but visible without magnification. The associates here are epidote and quartz. Asturias, Spain, is noted for many beautiful minerals, including prize fluorite specimens. Babingtonite occurs at the former El Valle Boinás gold mine in visible crystals, though these are more suitable as micromounts.

Scarce babingtonite crystals suitable for micromounts are also reported from the Seula Mine between Baveno and Feriolo, Italy. Mindat photos show one specimen from an unspecified Baveno locality that exceeds 1 centimeter (0.3 in) in size. Specimens from these localities are associated with quartz and orthoclase feldspar in the Baveno granite pluton. I recall a wonderful presentation that Beth Heesacker gave to our club about mostly micros from Sardinia in southern Italy. Babingtonite is found at the Furru e Conca Quarries there, mostly as specimens for micromounters, though some crystals grew to at least 1 centimeter (0.4 in) in size.

The Deccan Traps—a vast Indian region of flood basalts—are noted for the wealth of gorgeous zeolite minerals found there. Vugs in the basalt protect babingtonite and a wide variety of more delicate minerals, and babingtonite has been found at the Malad and Nishik Quarries. Crystals of up to 1.2 centimeter (0.5 in) in size are shown on the Mindat pages for Maharashtra, India. Although babingtonite discoveries have occurred intermittently, they were unusually prolific in December 2000. One attractive specimen

Babingtonite (tabular) selectively overgrown by byssolite on pale green prehnite. Photo: Modris Baum, by permission.

Babingtonite on prehnite from the Roncari Quarry, East Granbury, CT. Photo: Paul Gilmore, by permission.

pictured on Mindat is described as blue (but looks black to me); the high luster of the crystals may appear to have a bluish reflection.

Perhaps it is the age (or youth) of many parts of Africa that are the reason for the sparse babingtonite localities in that otherwise highly mineralized continent. A minor exception is a lovely specimen shown on Mindat with prehnite, quartz, and epidote from the [Goboboseb Mountains] of Namibia. This is unlikely to be the only specimen from this locality; maybe others were overlooked as boring dark green to black minerals or were misidentified. Sometimes, discoveries can be made by reexamining older collected specimens with the benefit of newer knowledge.

Collectors who follow the new mineral or new-on-the-market mineral information networks know that China has become a major source of excellent to spectacular mineral specimens in the past few years. Add babingtonite to the list of beautiful specimens from there. [Sichuan] and Yunnan are currently the sources of the world's finest crystals. In Sichuan, these can reach to 4 centimeters (1.6 in) in size with associated prehnite and quartz, forming aesthetic specimens. Some crystals are doubly terminated.

A 7.8-centimeter (3.1-in) crystal on matrix tops the discoveries of babingtonite from Yunnan Province. Yunnan produced the only single crystals of babingtonite that I found in researching this article. Numerous doubly terminated crystals are shown on Mindat's website for unspecified babingtonite occurrences in Qiaojia County, Yunnan Province. This area produced specimens for collectors who specialize in any size specimens, from micromounts to cabinet sizes. Prices can match sizes! Many of the Chinese localities lack specifics or are intentionally not given to protect the sources.

A specimen of babingtonite from Antarctica about 0.4 centimeters (0.2 in) in size is shown on Mindat. Don't even think about removing specimens from this protected region!

Babingtonite ($Ca_2(Fe,Mn)FeSi_5O_{14}(OH)$) forms a series with manganobabingtonite, which has a similar chemical formula ($Ca_2(Mn,Fe)FeSi_5O_{14}(OH)$). Note the reversal of the positions of Fe and Mn in the formulas, indicating that iron and manganese, respectively, can swap places at an atomic scale. Babingtonite and manganobabingtonite are therefore on opposite ends of the chemical possibilities for this material.

Manganobabingtonites seem much rarer—or possibly less frequently identified—than babingtonite. This may be due to the need to analyze the specimens with equipment seldom available to most collectors. In this article, I will delve into only a few manganobabing-

Babingtonite on prehnite from Qiaojia, Yunnan, China. Source: Wikipedia; photo: Carles Millan.

Babingtonite from Qiaojia, Yunnan, China. Photo: Van King, by permission.

tonite localities. These are, to date, of interest mainly to micromounters.

Lovely microcrystals of manganobabingtonite occur at the Iron Cap Mine and the Landsman Claim, both in Graham County, AZ; at Ricker Hill in Livingston, New Jersey; and at the Fengjiashan Mine in Daye County, China. Larger crystals, up to 1.2 centimeters (0.5 in) size, were found at the Ganzhizhou Mine, Sichuan, China. In an interesting reversal, a micromount photo (photomicrograph) of an Iron Cap specimen shows tiny manganobabingtonite crystals on larger johannsenite crystals, the opposite of johannsenite on babingtonite from New Jersey.

Babingtonite is recorded relatively infrequently around the globe. Since it is composed of common elements and occurs in multiple geologic environments, I am surprised that it has not been found more widely; it may be due to lack of recognition of the mineral rather than due to its rarity. Many collected specimens from basalts, skarns, or iron deposits might contain unrecognized babingtonite crystals hiding in plain sight. Black minerals are a bane of mineralogy students, but babingtonite is paramagnetic, meaning weakly magnetic. That distinguishing characteristic may help collectors find new sources of this mineral or at least old occurrences newly identified. Another characteristic is that babingtonite is a black mineral associated with zeolites.

Despite the prowess of lapidary artists in faceting or cabbing unusual minerals, I could find no evidence of babingtonite as a gemstone. It cleaves well but is very seldom in crystals large enough to be cut—and it is opaque.

Specimens of babingtonite on quartz from the generalized locality of "western Connecticut" are listed on Etsy for $45 to $70. The most expensive one appears to have one crystal or group of crystals up to 1 centimeter (0.4 in) in size. However, I also saw a Connecticut thumbnail-size specimen for $1,400.

Chinese specimens are often in a different price class. I saw one priced at $2,850 by a high-end dealer. For that price, you get a specimen up to a 7.7 centimeters (3 in) in size with 3.8 centimeters (1.5 in) of glossy, parallel babingtonite crystals.

Technical Details

Chemical formula	$Ca_2(Fe,Mn)FeSi_5O_{14}(OH)$
Crystal form	Triclinic
Hardness	5.5-6
Specific gravity	3.34-3.37 g/cm^3 (Measured), 3.26 g/cm^3 (Calculated)
Color	Black, dark brown, dark green, rarely blue-gray
Streak	Gray
Cleavage	1 perfect, 1 good
Fracture	Irregular
Luster	Vitreous, submetallic

Sources

Alex Stekeisen. N.d. (no date). Sassi Neri Skarn (Pargasite-Skarn).

Franzini, M.; Leoni, L.; Mellini, M.; Orlandi, P. 1978. The babingtonite of Figline, (Prato), Italy. Rendiconti 34(1): 45-50.

Mindat. N.d. Babingtonite.

Mindat. N.d. Manganbabingtonite.

Minerals.net. N.d. The mineral babingtonite.

National Gem Lab. N.d. Babingtonite.

Redwood, S.D. 2018. The mineral collection of John Stuart (1713-1792), Third Earl of Bute. Mineralogical Record 49(6): 843-852.

The Reference Desk. N.d. Massachusetts state mineral or mineral emblem: babingtonite.

Wikipedia. N.d. Babingtonite.

April 25 Club Meeting

Hybrid Format

by Tom Kim

We're having a hybrid club meeting on **April 25, 7:30 p.m., at my home, 2301 Stokes Lane in Alexandria, VA.** For benefit of all, we ask you to come in person only if you are vaccinated against COVID and are in good health. If you decide to join some of your fellow club members in person, please come—but you can also join us on Zoom:

https://us06web.zoom.us/j/82082502446?pwd=bW9OeXp2T3pXQlc1R2Z0MThYTG1Ldz09

Meeting ID: 820 8250 2446

Passcode: 848681

Either way, hope to see you there!

April 25 Program

Chemical Zonation in Tourmaline

Aaron Lussier

Dr. Aaron J. Lussier will speak about zonation in tourmaline; the title of his presentation is "Complexly Chemical Zonation in Tourmaline: Crystal Structure, Chemistry and Growth."

Minerals of the tourmaline supergroup can act as petrogenetic indicators (indicators of how rock was formed), particularly in igneous and metamorphic environments. This ability comes from the wide range of pressure, temperature, and fluid composition conditions in which tourmaline minerals remain stable.

Another characteristic of tourmaline phases is their ability to show very complex patterns of chemical zoning, even on the scale of a single crystal. Such chemical zoning patterns, which occur at the levels of both major and trace elements, may record myriad details of the complete geological history of a specimen as well as its proximal environment.

This talk will focus on a series of tourmaline specimens from different worldwide localities, each showing dramatic differences in both morphology and compositional variation. The diverse and complex crystal chemical mechanisms that may be responsible for composition zoning will be presented and discussed in detail, as well as the considerable challenges involved in characterizing, modelling, and understanding these phenomena.

Dr. Lussier completed a B.Sc. (Hons. Geology) at the University of Manitoba in 2003 and an M.Sc. at McGill University in 2006. He earned his Ph.D. in mineralogy and crystallography from the University of Manitoba in 2012 under the mentorship of Dr. Frank C. Hawthorne, studying compositional zonation in tourmaline from granitic pegmatites and the occurrence of tetrahedrally coordinated aluminum and boron in tourmaline. From 2012 to 2015, Dr. Lussier held a postdoctoral research fellowship at the University of Notre Dame in Indiana, investigating the crystal chemistry of actinide elements with support from the Natural Sciences and Engineering Research Council. Since February 2017, he has held the position of Research Scientist in Mineralogy at the Canadian Museum of Nature in Ottawa, Canada.

President's Collected Thoughts

by Tom Kim

In honor of April's designation as National Poetry Month, I proffer this gem from Emily Dickinson:

Volcanoes be in Sicily
And South America
I judge from my Geography —
Volcanos nearer here
A Lava step at any time
Am I inclined to climb —
A Crater I may contemplate
Vesuvius at Home.

While Ms. Dickinson's internal struggles might very well have felt volcanic, she may have also had in mind the volcanic history of the Connecticut River Valley, which formed the Holyoke Mountain Range in Massachusetts. She shared friends with Edward Hitchcock, a natural history professor at Amherst College, and his wife Orra White, who often collaborated with him.

Tom

Navigating Maps

The Compass

by Roger Haskins

This series of articles is a primer on reading topographic and geologic maps in the field. My intent is to sharpen your skills in hiking, cross-country navigation, terrain analysis, and analysis and interpretation of geologic maps as an aid to mineral collecting.

Let's start with a compass. The compass is a primary tool for finding your way around. Geologists like me map topography and geology and engage in terrain analysis and subsurface reconstructions from surface data, both topographic and geologic.

In 1850, the magnetic north pole was located in northeasternmost Canada, just west of Baffin Island. The pole is migrating eastward; by 2020, it was close to the geographic north pole. On its present course (not guaranteed), the magnetic pole will be in Siberia before 2225, then circulate back towards Canada.

The horizontal angular difference between the geographic and magnetic north poles is called the declination. This angle changes as you move to the east or west. The fields of declination are at an angle to the equator due to the orientation of the magnetic north and south poles. For serious navigation, where your readings must be precise, your compass must be adjusted for this angle of declination.

The line of zero declination (where the magnetic fields of the magnetic and geographic north poles align) is known as the agonic line. Declination angles from this line are either east or west. Lines of equal declination are called isogonic lines and create an isogonic map (fig. 1). If you are east of the agonic line, the geographic pole lies west of you, and your angle of declination will be westerly.

The magnetic declination for the area around Washington, DC, is currently about 9 degrees west, meaning that the agonic line is west of us and that, where we are, the angular separation between the poles is 9 degrees. In the United States, the agonic line currently enters northwestern Michigan from Ontario and exits through Georgia into the Atlantic (fig. 1).

Geologists use two basic forms of compass: (1) the Brunton compass (fig. 2, actually a pocket transit); and (2) a general adjustable field compass, such as a

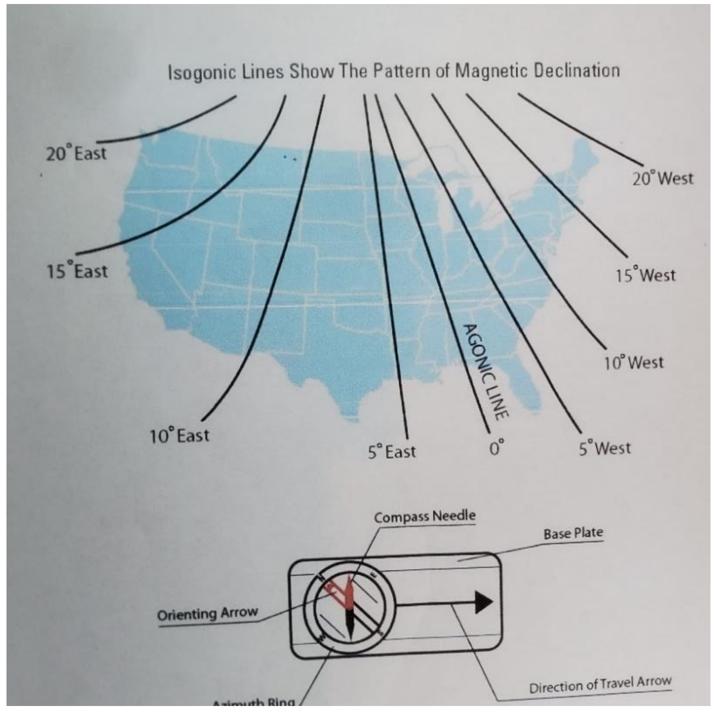


Figure 1—*Isogonic map of North America. Source: U.S. Geological Survey.*

Figure 2—*Brunton Pocket Transit, set to 9° west declination. The compass dial has been rotated clockwise so that the north index at the top is moved to 9° west.*

Silva Ranger or the like. The Brunton is accurate to 1/2 degrees, the Silva to 2 degrees. Both come with a dip needle for the third dimension. The Brunton in figure 2 is set for a declination of 9º west.

In our area, to adjust your field compass properly for our declination, you will turn your azimuth ring dial clockwise so that the 9-degree west mark is resting on the due north index on the compass base. Then your compass needle will point to true north. Figure 3 shows a Silva with the declination set to 9º west. Most official topographic and many geologic maps have a magnetic declination diagram, usually near the distance scale, that gives the information needed to adjust your compass. Figure 4 shows the magnetic declination symbol.

Figure 3—*Silva Compass set to 9º west declination. The Azimuth ring has been rotated clockwise (westwards) to set the ring's declination to 9º west.*

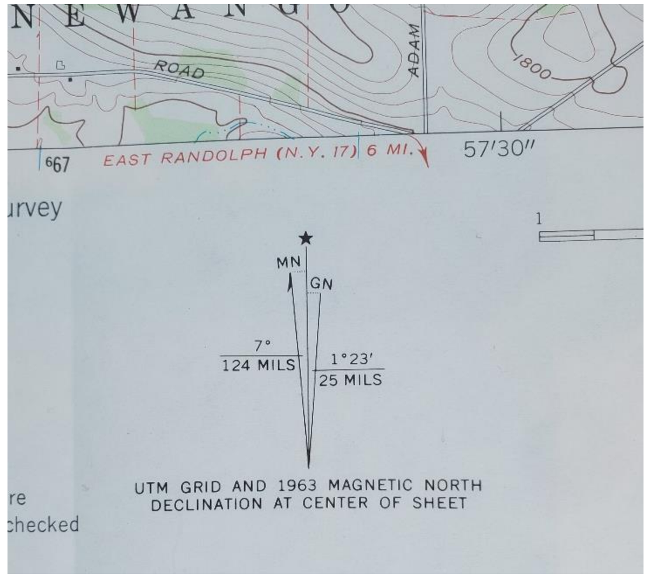


Figure 4—*Magnetic declination graphic on a topographic map. The magnetic north arrow is west of geographic north, and the angle given is 7º.*

The Potomac Gemology Class

by Helen Serras-Herman

Editor's note: *The article is in Rock&Gem magazine (2 April 2021). Thanks to Sue Marcus for the reference!*

Gemology is the scientific study of natural and artificial gemstones, a specialized branch of mineralogy. Diplomas are available through gemological associations worldwide instead of through universities. Completing gemological studies is a long, arduous, and costly undertaking. The institutions offering the certification also provide full courses and short, specialized courses at centers around the globe, online, and during large trade show seminar events.

Limited gemology courses are also offered through online classes and adult education programs. One such shining example is the Potomac Gemology Class, taught in Potomac, MD, through the adult education programs of Montgomery County. The class is celebrated its Golden Anniversary in 2021, 50 years of continuous education about the fascinating world of gems. ... *Read more*.

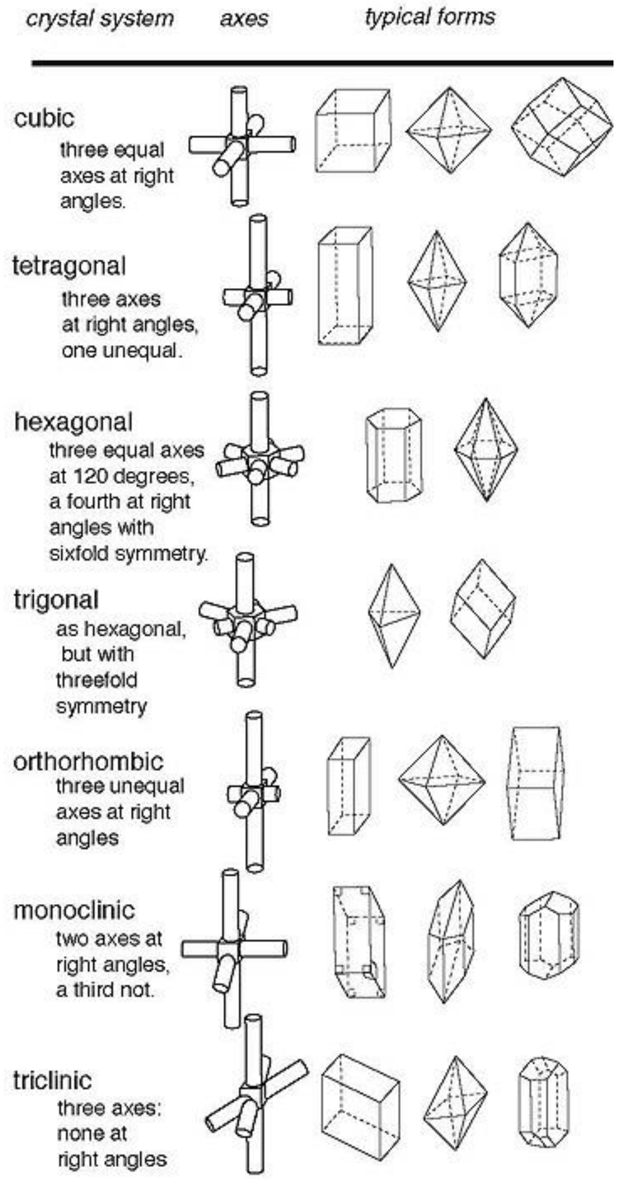
Physical Properties of Gems and Minerals

The Crystal Systems

by Barbara Smigel

***Editor's note:** Ever wonder that the "technical details" for a mineral actually are? As part of her online course on gemology, the author describes some of them. This article, adapted from the original, examines crystal systems.*

Scientific analysis has discovered seven basic plans for mineral crystals, known as the crystal systems. Each system has a unique architecture based on "axes"—the lengths and angles of intersection of planes through the crystal. The axes have various degrees of symmetry, as shown on the diagram at right. (Some sources consider hexagonal and trigonal to be different aspects of the same crystal system.)



Crystal Unit Cells

The innermost structure of each crystal is based on atomic-scale building blocks with the same axis symmetries as in the diagram. These tiny building blocks are called unit cells. The shape of a unit cell is different in each of the crystal systems (a cube in the cubic system, a "brick" for the tetragonal system, and so on). The tiny structures assemble as the crystal grows, building the crystal up to its finished size and shape.

It might seem, from the diagram, that only a few outward forms (or "crystal habits") are possible, given the seven types of unit cells available. Yet mineral crystals come in myriad shapes and sizes. How can this be?

Because it is easiest to visualize, let's use the cubic (also known as isometric) system to illustrate. The unit cell in this system is a cube. Is it possible to build a big cube out of little cubes? Sure, just stack them in equal dimensions, and your many little cubes become one big one. That's how a pyrite cube is built from the little unit cells of the mineral pyrite.

Pyrite crystals in cubes.
Source: Wikipedia; photo: Carles Millan.

It shouldn't surprise you, then, to learn that diamond (which is also a member of the cubic crystal system) is sometimes found in natural cubes.

But using those same cubic building blocks, can you build a pyramid? You bet!

Start with a square base, and decrease each square layer uniformly until you get to the top single cube. In the diagram, look at the second typical form in the

Top left: *Rough diamonds, cubic and octahedral.*
Above: *Spinel octahedron on calcite.*
Left: *Fluorite octahedrons.*
Source: Wikipedia; photos: James St. John (top left); Rob Lavinsky (above, left).

cubic crystal system, and you will see two pyramids attached to each other, base to base. That shape is called an octahedron (meaning eight sides).

Why are the faces so perfectly smooth? Because the cubic unit cells are really, really tiny and there are enormous numbers of them!

Crystal Habits

Characteristic crystal forms, such as cubes, pyramids, and octahedrons, are often typical of a particular mineral. They are known as its crystal habits, but no gem species is limited to these ideal shapes.

It's also quite possible to build a random-looking structure from your building blocks, one with no recognizable outer shape. This frequently seen habit in crystalline gems is referred to simply as "massive," such as the "massive" calcite matrix for the red spinel above. Massive white quartz is familiar to everyone, as are beautiful quartz gemstones such as amethyst and citrine.

Because each of the seven crystal systems has a different unit cell—and because the unit cells can be put together in so many different ways—the sheer variety of crystal forms in nature is staggering. To mineral specimen collectors, the variety is not only a challenge but also a delight.

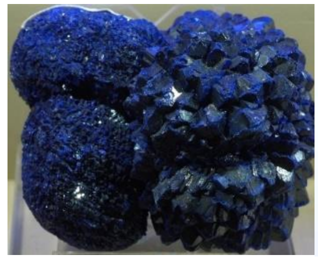
A few crystal habits, due to their similarity to common objects, are especially recognizable and have acquired special names. Below are some examples, along with short descriptions.

Acicular (needlelike): golden rutile crystals in quartz (above left); “puffball-like” mesolite with radiating acicular needles (above right).

Prismatic (pencillike): tourmaline crystals (above left); red beryl crystal in matrix (above right).

Dendritic (like tree branches): sandstone matrix with iron oxide dendritic crystals (below, top left); quartz with black manganese dioxide crystal inclusions (below, bottom left); dendritic native copper crystals (below right).

Drusy (like sugar or powdery snow on a surface): uvarovite garnet on matrix (below right); azurite (below left).



Botryoidal (like a bunch of grapes or bubbles): grape agate (quartz) (above top); chrysocolla with malachite (darker green) (above bottom).

Note: All images are either from the original online article or from Wikipedia. (The four Wikipedia photos above of drusy and botryoidal minerals are by Rob Lavinsky.)

April 2022—Upcoming Events in Our Area/Region (see details below)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 April Fool's Day	2
3	4	5	6 MSDC mtg	7	8	9
10	11 GLMSMC mtg	12	13	14	15	16
17 Easter	18	19	20	21	22	23 Show, W Friendship, MD
24	25 NVMC mtg	26	27 MNCA mtg	28	29	30 Show, Pitts-town, PA

Event Details

6: Washington, DC—Mineralogical Society of the District of Columbia; info: http://www.mineralogicalsocietyofdc.org/.

11: Rockville, MD—Gem, Lapidary, and Mineral Society of Montgomery County; info: https://www.glmsmc.com/.

23: West Friendship, MD—31st Annual Chesapeake Gem, Mineral, Jewelry & Fossil Show; Chesapeake Gem and Mineral Society; 2210 Fairgrounds Road; 10-4; info: Lynne Emery, berniejem@outlook.com, www.chesapeakegemandmineral.org.

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

27: Arlington, VA—Micromineralogists of the National Capital Area; info: http://www.dcmicrominerals.org/.

30-May 1: Pittston, PA—18th Annual Treasures of the Earth; Mineralogical Society of Northeast Pennsylvania; St. Joseph's Oblates, 1880 Highway 315; Sat 10-5, Sun 10-4; $3, under 13 free.

Disclaimer

All meetings/shows are tentative during the coronavirus pandemic, and club meetings might well be remote. Check the website for each organization for more information.

The Northern Virginia Mineral Club

Visitors are always welcome at our club meetings!

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

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 member).

The Northern Virginia Mineral Club Inc
Crystals are the flowers of the Mineral Kingdom

2022 Club Officers

President: Tom Kim
president@novamineral.club
Vice President: Vacant
Secretary: Vacant
Treasurer: Roger Haskins
treasurer@novamineral.club
Communication: Vacant
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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).

Meetings: At 7:30 p.m. on the fourth Monday of each month (except May and December).* (No meeting in July or August.)

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