Clockwise from top left: Condor Agate, Argentina ; Amazonite with quartz, Colorado; Amethyst on Calcite, Uruguay; Tourmaline, Afghanistan.

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Treasured Minerals

by Russ Behnke

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Introduction

I recently attended a local club meeting of mineral collectors where the discussion centered on "Why collect?" and it seemed that there were as many reasons for collecting as there were collectors. One individual enjoyed the historic importance of minerals; another concentrated on learning a mineral's elemental components; and yet another was fascinated by their structures. My own introduction to minerals was through my father, who one day brought home a book with colored drawings of minerals, one of which was a multicolored tourmaline crystal. I was amazed that such things could exist in nature, and I wondered whether we might be able to find some for ourselves. Forty years ago when I began my search, the world was a very different place, and we had access to many quarries in the state of Connecticut. Gem-quality tourmaline crystals had been found in several of the old mines. My father and I paid a few visits to these quarries, and it was not long before he uncovered the 1-inch-tall green-and-yellow specimen shown here. Seeing that crystal come out of the earth is one of my most vivid memories, and it inspired me to find out all I could about Connecticut's minerals. My mother came with us from time to time, and she found the 0.75-inch purple fluorite crystal on matrix from near the Durham and Wallingford town lines. I especially like this piece, as most of the fluorites from the quarry are green, and this one is truly atypical. After learning what I could in those early years of going to local mines, I went on to study geology at the Colorado School of Mines and then became a collector and dealer.

Today, in 2008, the only place in Connecticut where such finds can be easily collected is Green's Farm, otherwise known as the Roxbury Garnet Mine, which is on the border between Roxbury and Southbury. A garnet in matrix 2.75 inches tall is shown here. This specimen is from the collection of Frederick Augustus Genth (1820-1893) and is typical of what could still be found in the mine. To me, its label "makes" this specimen.

I am very taken with the beauty of minerals because their colors and forms are incredible. I hope this book will serve as your introduction to the beauty of minerals. To me, not everything has to be perfect or absolutely the best. It is nice when that happens, and I do look for it, but I try to see things in context. There is value in memories and history as well as in the mineral itself. I hope my photos will inspire a few new collectors and please the old-timers, and that is my ultimate goal. I begin with photos of my favorite specimens from the Northeast and head west and then on to Mexico, South America, and on to the rest of the world. These are the specimens I decided to make my own. I use no rules to guide me other than that I buy what I suspect will stand the test of time.

ON THE COVER: gold on quartz, 4.5 inches tall, Placer County, California

Dedication

This book is dedicated to my parents, Walter A. Behnke and Doris L. Behnke.

Acknowledgements

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The Garnet from Russell, Massachusetts

I was named after a great uncle who, in turn, was named for Russell Mountain—a place his father loved. The mountain is in the small town of Russell, Massachusetts, and I feel that I have a link to the area. I was surprised when I first read about the important find of garnets in that town in 1885. George Kunz reported in his "Gems and Precious Stones" that the garnets had brought the lofty sum of $1,000 at that time. It seems that two men, Daniel Clark and F.S. Johnson, worked the small deposit and sold specimens to all the area museums, including the American Museum of Natural History and the colleges of Yale and Amherst. Like many collectors, Johnson kept the best for himself. Many years later, Joel Sweet happened upon the collection in the family estate, and I was able to buy all the remaining specimens, including this one, which I regard as the best single specimen from Russell. The crystal is utterly sharp and smooth faced—truly like a textbook drawing in its perfection. This rarely happens in nature, and I cannot think of any crystal of equal size that is as sharp as this one. The crystal alone is 2 inches across, and it sits on a matrix of feldspar. The specimen was shown in the September 1994 issue of *Earth* magazine and in the garnet issue of *Extra Lapis.* Although it is a little illogical to think that the discoverers of this deposit would have left behind anything of value, many people have hunted for the locality. No one, to my knowledge, has ever found anything truly significant in the general area. One of Daniel Clark's nicest Russell garnet specimens is on display in the museum in Pittsfield, and Russell garnets are in many private collections. I had the crystals analyzed years ago, and they are almandine, an iron-bearing garnet, rather than spessartine, which they are sometimes labeled as.

Two New England Amethysts

One winter day, this 6-inch-tall, pagoda-shaped amethyst was collected by Cliff Trebilcock while he was wearing snowshoes! He was collecting at the famous Deer Hill near Stowe, Maine. This specimen is regarded as the best amethyst ever found there. He made his big discovery of this jewel of a specimen and many large flat plates of amethyst and struggled through the snow to take them all home. I acquired this choicest piece from Cliff quite a few years later in 1982, and the specimen has since been shown in the *Mineralogical Record*, Volume 14, page 175, and in "The Mineralogy of Maine" (plate 17). It is among the most photogenic specimens from Maine, and its unusual form and great color combine to make it a singular specimen to me.

I have spent considerable time in the field looking for my own specimens. The choice one shown below is the best I have uncovered. Robert Pagini and I were looking for crystal-lined pockets in the unfinished Route 11 road cut in Salem, Connecticut. We found one crystalline vein, and while digging along it, we each found one of the amethyst crystals of this specimen. It was immediately evident that the two amethyst crystals and the small clear quartz crystal of an earlier generation had been one specimen that had separated! Bob had a stellar collecting day and went home with several other amethysts in his cache. So I had the good fortune to keep the crystals together. The reconstructed piece measures just under 3 inches tall; it may not be a very significant amethyst to the rest of the world, but it surely has significance to me and to other collectors of Connecticut minerals who share the dream. There is nothing quite like prospecting for your specimens to get a reality check on just how rare it is to find a first-rate mineral! They are uncommon and elusive, and that is a part of our fascination with searching for our own specimens!

Amethysts from Rhode Island

Rhode Island is not generally known for its minerals but, like many East Coast states, it has produced some good amethysts; a few of these are astoundingly good and very different from those found in other states. Perhaps, most obviously, the amethysts are associated with a pure white milky quartz that almost looks like porcelain. When the amethyst is deeply colored, the contrast is amazing and very pleasing. The two specimens shown here and opposite were found in 1982 and were dug by Sal Avella and Fred Corcoran. I was luckily able to buy most of the best pieces from this early find. These two pieces are shown in the *Mineralogical Record* in Volume 14. I also sold the specimen that went to the Smithsonian Institution and appeared on the front cover of *Mineralogical Record*. The scepter shown here is 2.75 inches tall and is one of the most beautiful I have ever seen.

The specimen of white quartz with the single crystal of deep amethyst measures 3.75 inches across, and in my opinion, it is the most striking piece from the find. Certainly, there were larger pieces, but I was taken by the strength of the color contrast, which seemed strongest in this piece.

It's interesting that the site where the specimens were dug is in someone's front yard in a residential area of Hopkinton. There are probably more specimens to be found, but Sal and his friends have dug the locality for one weekend a year for many years now, and they have not found anything to equal their earliest finds. Sometimes, a few large crystals are encountered, but they pale in comparison.

Remarkable Calcite from New York

Regular mining at the White Rock Limestone Quarry near the now forsaken village of Lewisburg, New York, ceased when a huge vug of rose and amethystine calcite crystals opened high above the quarry floor; it was a rose-hued grotto! On that fall day in 1906, perhaps the most important find of calcite ever made on the East Coast of the United States was revealed.

The astonished miners had never seen anything like this plethora of vibrant crystals. Miss Sterling, a mine owner, called in a state geologist, and it was soon decided that this historic find should be relocated in its entirety to the State Museum in Albany.

A part of this tremendous find was reassembled in the museum; it was of great public interest and drew visitors to the museum for many years. Museums regularly "refresh" their displays, and at some point, the exhibit of the calcite grotto was disassembled and stored. Then, in 1989, museum curator James E. Campbell was offered a collection of more than 1,500 New York State specimens in exchange for the one magnificent calcite pictured here; to Mr. Campbell, the offer was too good to resist. To this day, very few specimens from this find, generally referred to as the "Sterlingbush discovery," have left the museum.

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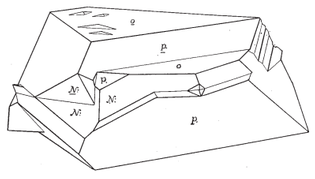
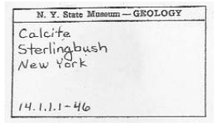
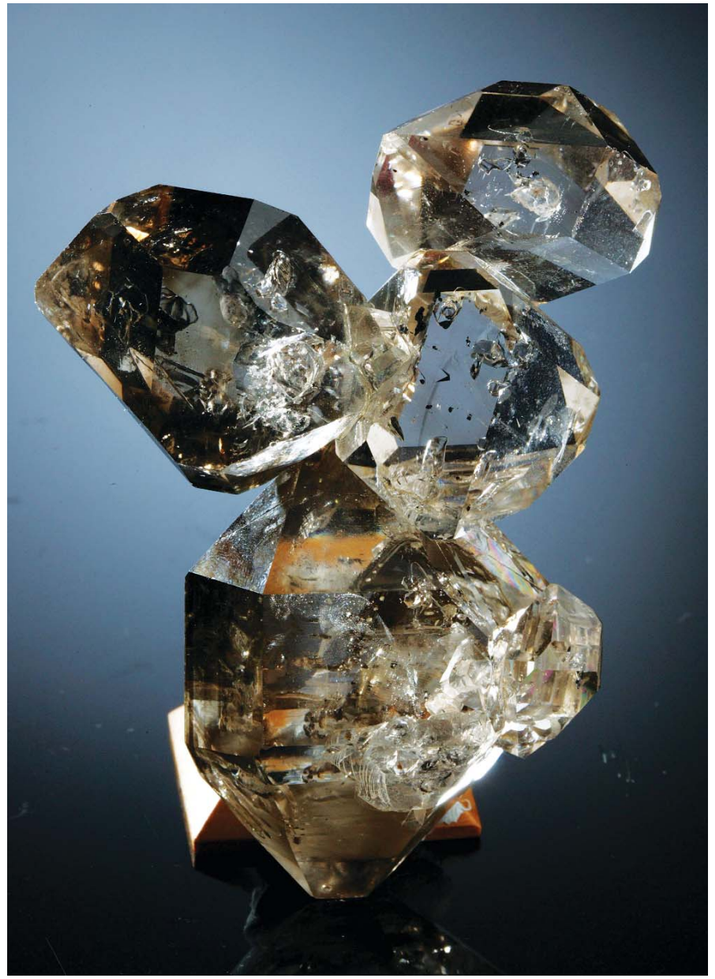


A chemical analysis done at the time of the find suggested that the extraordinary color of these crystals was caused by the presence of neodymium. In 1910, Whitlock published his "Calcites of New York" in which there are drawings of these amazing calcites. One of the twinned crystals illustrated here as number 5 closely resembles this marvelous specimen.



While the museum still has single crystals weighing up to 1,000 pounds, this specimen, which measures 13 inches across, is the best collector-size crystal in the entire find. It is in exceptionally fine condition, as it was collected with unusual care; the crystal faces are as sharp and as flat as they should be. The lilac color the crystal exhibits is rarely encountered anywhere in the world. To add further glory to the specimen, the crystal is a doubly terminated and twinned floater with almost no point of attachment. It is unlikely that more specimens will be recovered here, as the mine is now a part of Fort Drum. The Sterlingbush find, while limited to this one pocket, was otherwise as important in its day as the Elmwood Tennnessee calcite discovery of modern times. I regard this specimen as the best collector-size calcite from the USA's East Coast.



Herkimer “Diamonds”

Herkimer County in New York State has long been noted for producing countless beautifully crystallized transparent quartz crystals. These are known as “Herkimer diamonds” for their brilliant crystalline nature, but they are really quartz that often has great luster.

The 4.5-inch-tall specimen on the facing page is from the appropriately named “Ace of Diamonds Mine” in Middleville, Herkimer County. Most of the quartz crystals from this mine are colorless, but this specimen has an unusual smoky aspect. Although this piece has been repaired as most similar groups have been, one of the local miners considers it to be the nicest he has seen during his many years of collecting.

Other types of quartz are found in the area. The Treasure Mountain Mine was operated for only a short time, but it produced a few exceptional scepter quartz specimens, some with calcite or dolomite. The 2.5-inch specimen shown below is an exceptional black scepter on a simple calcite. It is the nicest combination of the two minerals that I have been able to acquire from this area.

Also from the area but rarely seen are inclusions of pyrite or marcasite in clear quartz. These occur in several of the mines. A 1-inch crystal collected by Ken Silvy is shown above.

I have other specimens from the Herkimer mines; I treasure them, but these are my favorites. I have chosen to show pieces that are more unusual than standard finds.

Fluorites from Illinois

Say "Hardin County" to any mineral collector, and he will think of the great blue, yellow and purple fluorites from the now closed mines there. Many collectors' first mineral purchase was of a fluorite octahedron that had been cleaved by the local miners. This 2-inch polished yellow and purple octahedron with inclusions of a sparkling sulfide mineral may be exceptional, but it shows how the fascination with minerals was often ignited.

The 4-inch example of deep blue fluorite with calcite is a neat example of how fine the blues are; they are the world's best. When this piece came out in 1993, I told everyone that they would be great investments, and I think that has been proven to be sound advice.

I recently acquired this piece from Donald Fisher, a now retired geologist for the state of New York.

All of these fluorites were found in the Minerva Mine, which produced the most colorful and wonderful specimens of the district—at least, in my opinion. Slices were made of some of the damaged fluorites. I looked for years to find one with all three colors, and this is the nicest example I found. The section shown is 4.5 inches long. I found it at a small gem and mineral show in Massachusetts, suggesting that, like gold, treasure is where you find it.

Michigan Coppers

Michigan's Upper Peninsula has produced many fine copper specimens. Some of the forms observed are really beautiful, and I have chosen these two pieces as representative.

The 4-inch "Swan" (facing page) consists of a number of large copper crystals that come together in a perfectly zoomorphic form. The specimen was in the collection of Benjamin Shaub, a professor of mineralogy at Smith College in Massachusetts. He lived from 1893 to 1993 and wrote many papers on mineralogy, including articles on agates—a passion that we shared. He had an impressive collection of minerals and agate and agate-like minerals. To me, the "Swan" is a pleasant reminder of a man who wrote his last book at the age of 96.

The 1.25-inch-tall copper tree shown here is from the Hancock Mine, Houghton County, Michigan. Tree-like forms in copper are actually fairly common, but this one exhibits sharper crystals than most and is in absolutely perfect shape.

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