

March 2022



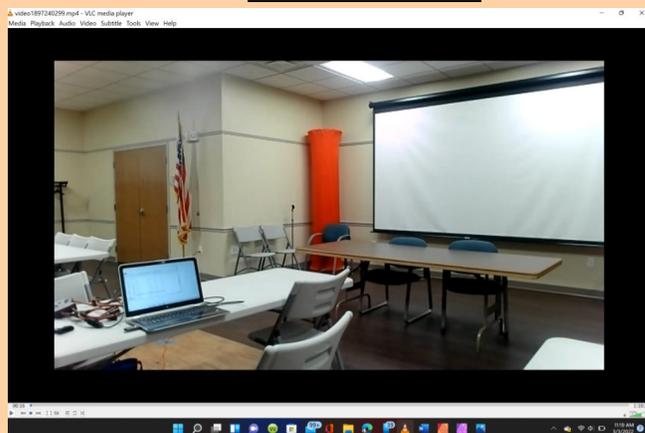
OCMS SHALE MAIL



**Welcome to our hybrid Meeting Friday
March 11th, 2022 at 6:30 pm!**

If your joining us in-person see you at: 81 Laroe Rd Chester, NY (Town of Chester Recreation Senior Center), (From KINGS HWY, Turn left on Laroe Rd by UPS office building)

[CLICK FOR MAP](#)



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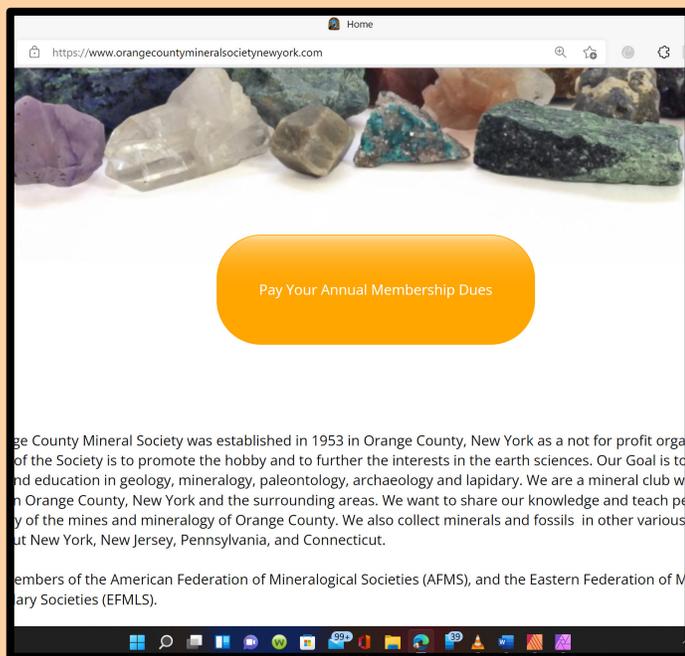
Mailing Address:

254 Rt. 17K, Suite 204, Newburgh, NY 12550-8300

President's Message!

By: Mike Tedford

Three months until our annual Mineral Sale and Show at Museum Village! Please share your ideas for running a successful show June 4 & 5, 2022. Also, please contribute your ideas for updates, activities, posts, shares and likes for our OCMS Shale Mail, website OCMSNY.org or <http://www.orangecountymineralssocietynewyork.com/> and [facebook page Orange County MineralHome Society of NY](#). Please like and share our pages and mention our website in your posts to build awareness. We had a discussion at our meeting regarding including the word SALE in our advertisements to attract shoppers and buyers. You will not find a more scenic location for an outdoor mineral sale than Museum Village in June!



Please join our OCMSNY March 11, 2022 meeting at the senior center this Friday. We are planning a full-scale live meeting following the senior center guidelines. The agenda includes Annual Show discussions, committee reports, old business, new business, refreshments and a mineral raffle. Thank you, Eric Orłowski, for your colorful presentation on fluorites at our February meeting.

Minutes of the Meeting!

By: Mike Tedford

Meeting hall and OCMSNY attendance sheets were completed, and Name tags were issued Feb 11th.

Chester senior center COVID 19 precautions were observed including hand sanitizers, mask and social distancing.

Meeting preparations included refreshments and the hybrid live meeting with zoom component. The mineral book and journal swap table and the 16 raffle specimens were set out.

Thank you, Mark Kucera, for accomplishing the zoom component. This is not a simple accomplishment!

OCMSNY president Mike Tedford called the meeting to order at approximately 6:35 PM, welcoming the attendees. (Meeting attendees did not introduce themselves at this meeting.)

Mike Tedford introduced the mineral book and journal table for free use, borrowing or swapping by members.

Members confirmed they are receiving the emailed Shale Mail and appreciate the breadth and quality of the articles. The meeting minutes in the Shale Mail were reviewed by members and accepted.

Ron Nelson read the balances of the main checking account and show account. The Treasurers report was accepted.

Ron Nelson reported the Annual Mineral Show and Sale June 4 & 5, 2022 at Museum Village is scheduled and confirmed with Museum Village. He has begun contacting vendors. We need to update the show flyers for distribution at upcoming shows. Our website and Facebook page have been updated. Please review and suggest any more updates. Thank you.

This business portion of the meeting adjourned at 6:55 pm for the presentation, refreshments and raffle. Discussions continued while the zoom set up was modified.

Eric Orłowski presented Fluorites in slides and specimens in which he also demonstrated some fluorescence.

The mineral raffle included 15 unique items, including one multi-colored fluorescent that dove-tailed with Eric Orłowski's presentation. Dr Tedford thanked Willie Stedner for contributing many beautiful specimens for the raffle.

Gold Mining History & Geology of the Sierra Nevada Ridge!

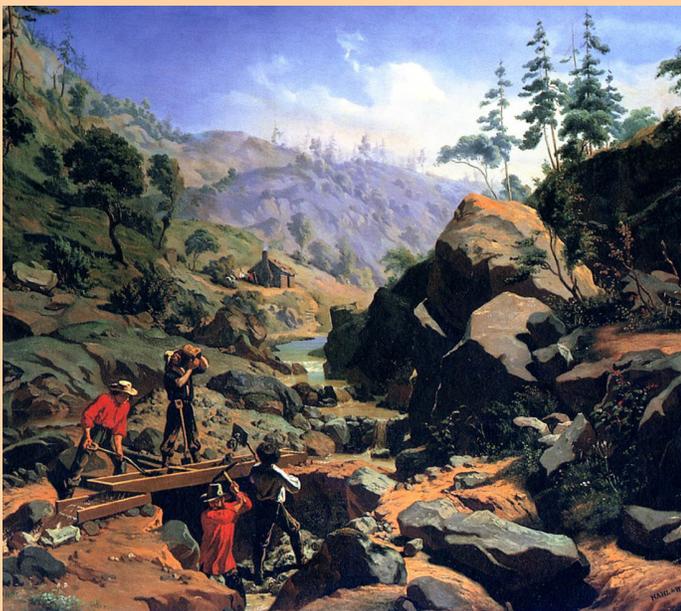
By: Dr. Charles Merguerian, PG

Join Dr. Charles Merguerian, PG, in person or from home via Zoom for this exciting lecture on March 11th, 2022 @ 6:30 pm.

During the Cretaceous Era, gold-bearing fluids associated with the geotectonic development of the Sierra Nevada range introduced gold+quartz veins into the Earth's crust. Erosion related to the Cenozoic uplift and tilting of the range exposed these veins toward the surface and concentrated the dense gold in stream beds where a serendipitous 1847 discovery at Sutter's Mill in northern California led to the greatest rush of people, equipment and resources to the region ever witnessed. There's "gold in dem thar hills!" – an expression that spread like wildfire around the world and caught the eye of savvy investors and entrepreneurs on the East Coast who gave the thumbs up – thus, the Gold Rush had begun. Within five years, the terrain was dug up, overturned and searched by many different cul-

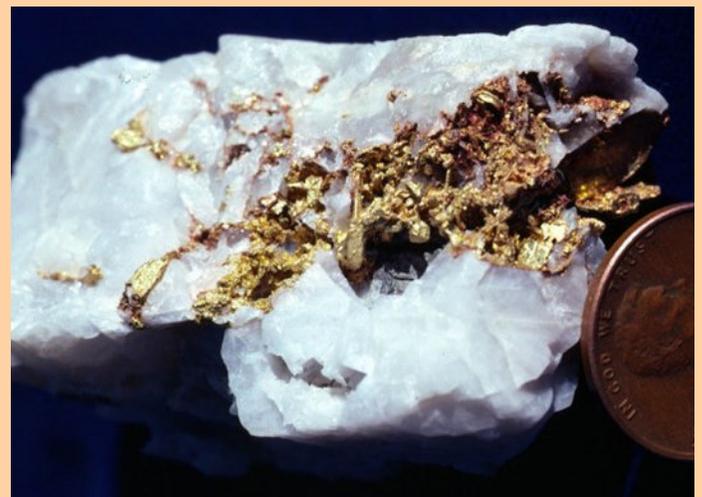


ture speaker who shows no resistance to sharing his knowledge) has intimate knowledge of the geology and mining history of the region. His PowerPoint lecture in 2022 will explain the genesis of gold-bearing fluids and their injection into the roots of the Sierra and the geological processes that resulted in gold concentration in the wall-rocks of the Sierra Nevada batholith. While discussing the geology, terrain and human migration to the area the lecture will explain the various methods of gold mining and end with images taken of the old hard-rock and placer mines and



tures using very different techniques.

Having spent four summers mapping in the Sierra Nevada range (1978-82) and specifically in the central California gold belt the speaker (an 8-



gold venture sites and show the result of the gold miners efforts – in the form of crystalline gold.

Goldfield Nevada!

By: Keith Allen

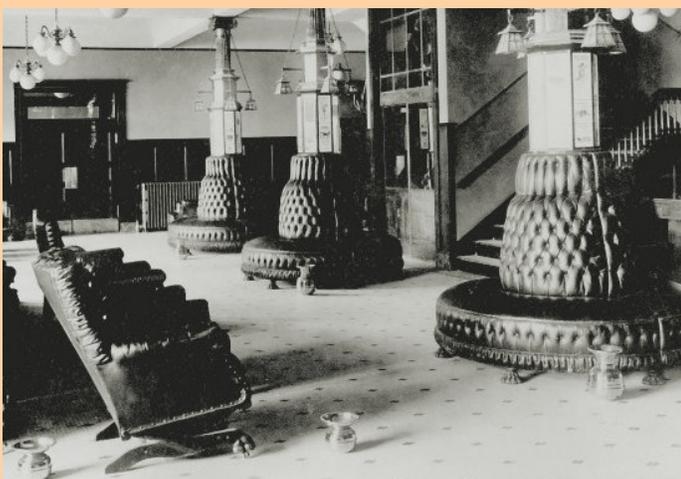
Goldfield was the site of a rare post 1900 major gold discovery in Nevada. The ore initially was very rich, spurring rapid growth of the town from 1904 to 1908. Goldfield became Nevada's largest city with over 20,000 people. Virgil Earp was made sheriff here in 1904 and Wyatt Earp also called Goldfield home.

Goldfield experienced one of the most dramatic rises and subsequent crashes of all the mining towns of the West. By the 1910s ore production was already in steep decline. The ore deposits were discovered to be very rich near the surface, but very shallow as well.

By 1910, the population of Goldfield dropped below 5,000. In 1923, a catastrophic fire burned most of the town to the ground. Goldfield was never again a city of any significance.

In 1902 a Native American prospector by the name of Tom Fisherman brought gold samples to Tonopah. Two young prospectors got word of Fisherman's find and decided to investigate the source of the samples at Rabbit Springs. These young men, Billy Marsh and Henry Stimler, would make the discovery that would result in the greatest mining rush in Nevada since the Comstock four decades earlier.

Marsh and Stimler traveled to the area in a fierce windstorm thick with dust. They discovered gold on Columbia Mountain, naming their claim the Sandstorm after the harsh conditions they were forced to prospect in.



Initial Assays of the Sandstorm ore came back with values up to \$97 dollars per ton. Once

word of this got around, a minor rush to the area started in spring of 1903. In May of that year the district was named Goldfield.

Development of the district in 1903 was somewhat slow, primarily with capitalists attempting to open the mines on leased claims. These initial efforts had mixed success, and the camp did not see a major boom until the following year.

1904 was the year that defined Goldfield as a boom town. The mines were starting to produce rich returns and thousands of men arrived in the camp to work at the mines or try their own luck at prospecting. By August the mines were producing over \$10,000 in gold ore every day.

By 1905, the hastily built town of Goldfield



was transforming into a proper city with buildings constructed of brick and stone. Miners homes were generally built of wood, and construction occurred 24 hours a day to keep up with the demand. The arrival of the Tonopah and Goldfield Railroad in September further increased the camp's fortunes.

New discoveries in 1906 intensified the excitement at Goldfield. No expense was spared constructing impressive commercial buildings that rivaled any in the state in size and amenities. A 1906 newspaper article stated that Goldfield had "250 incorporated mining companies, and instead of the barren desert of four years ago, is a hustling, bustling up-to-date city of 8,000 inhabitants."

Goldfield Nevada! - cont.

Early in 1907 the county seat was moved from Hawthorne to Goldfield. The years of 1907 and 1908 were Goldfields peak years. This modern city of over 20,000 people had three railroads, five banks, five newspapers, two mining stock exchanges, four schools, and dozens of saloons.

Starting in 1906, fierce labor disputes hit Goldfield as a result of the Industrial Workers of the World and the Western Federation of Miners efforts to control labor in the district. These events culminated with federal troops being brought in to restore order in December of 1907.

In 1908 many of the district's mines that had been operated on a leasing system were consolidated by the Goldfield Consolidated Mining Company, which built a hundred-stamp mill northeast of town. This consolidation started the era of large-scale industrial mining in the district, which boosted ore production but also reduced the need for labor.

With most the mines now consolidated, and no new discoveries were being made, Goldfields boom years were over. By 1910 Goldfield has settled into the role of important mining center, but the city was already in decline from the peak just a few years earlier.

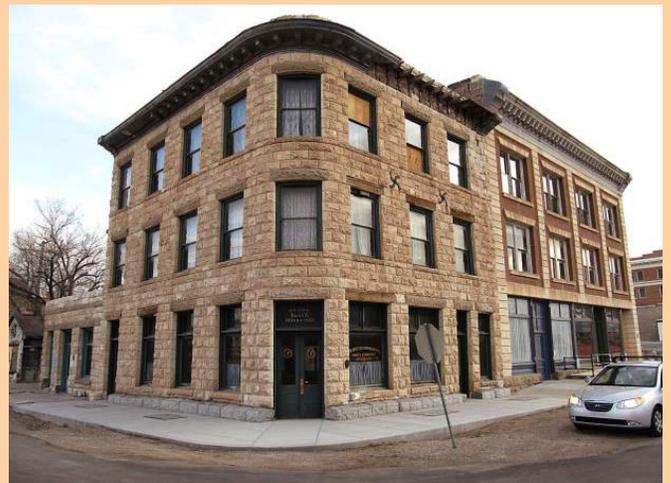
Goldfield is one of the most dramatic tales of



boom and bust in the West. While the city did not decline as fast and as spectacularly as nearby Rhyolite, ultimately its demise was larger in scale more impactful on the region.

Consolidation of the mining industry in 1910 kept ore production up, but required less labor. No new discoveries were being made and smaller mines had played out. Despite the mines producing record amounts of ore, the city of Goldfield had declined to around 5,000 residents.

A major flood in 1913 damaged many of the buildings in town. By 1918 Goldfield Consolidated ceased operations, and Goldfields mining industry was all but dead. In 1923 a fire swept the city, destroying 53 square blocks. Most of Goldfield's notable commercial buildings were destroyed.



In the years following the devastating fire, the mining industry at Goldfield had various periods activity that kept the town from dying out completely. However, the days of being Nevada's largest city, and one of the West's richest mining towns, were over.

Today Goldfield still has a few hundred residents and some commercial buildings remain. The enormous brick building that was the Goldfield Hotel still stands, although it is not open for business. The hotel was built starting in 1907 at the enormous sum of around \$400,000. The hotel is one of the largest and most notable "ghost buildings" in the West.

Headframes, mill foundations, and mine dumps still surround this historic mining town. Goldfield is a must-see destination for any history enthusiast.

Many Faces of Fluorite!

February 11th Eric Orlowski gave a brilliant presentation on the mineral we call fluorite. He brought along with him many samples for live members to view and touch after the conclusion of his presentation. Thank you Eric!

The Etymology of "Fluorite"

- Fluorite has been known and used/carved since at least the time of the Romans
 - Pliny the Elder described it in Book 37 of his *Naturalis Historia*
 - The ancient terms "murrina" and "myrrhina" are known to refer to Fluorite
- Originally named "fluorspar"
- The name is derived from Latin: *fluere* (to flow)
- First discussed in print in 1530 by Georgius Agricola
 - The name was coined due to the mineral's use as a smelting flux
- The name was officially credited in 1797 to Carlo Antonio Galeani Napione, an Italian mineralogist/mining expert



C.A.G. Napione
1757-1814
Image Credit: geotalliani.it

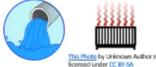


Georgius Agricola
1494-1555
Image Credit: Wikipedia

Fluorite comes in every color of the rainbow. Sometimes the same specimen will be multiple colors. The luster is glassy and they often have an octagonal cleavage. It is fluorescent. It can be phosphorescent which means it can continue to luminescence after the UV light has expired. It can be thermoluminescent which means it will emit visible light when you heat it. It can also be triboluminescent which means it will emit visible light when you strike it with something. Fluorite will not necessarily perform all these activities at the same time.

Fluorite Formation/Deposition

- Fluorite is almost always a **HYDROTHERMAL** product



This Photo by unknown Author is licensed under CC BY-SA

- This is where the impurities can get in – in the hot fluid or partially-crystallized state, and can change the crystal color
- The chemistry can also change as the solution cools and crystals start forming, and these changes can in turn be affected by differing rates of cooling – the end result: rainbow/color-zoned fluorite!

With fluorites simple structure it can be dissolved in hot water housing solutions and re-deposited elsewhere. As the material is flowing

around it's picking up impurities from other rocks. Not all changes occur when the fluid is hot, some changes take place as the crystals cool. Depending what impurities the crystals pick-up on their journey and the rate of cooling decides what colors and how many you will find in any particular specimen.

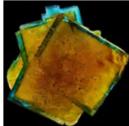
Color-zoned and Rainbow Fluorite Examples

Coloration via fine inclusions or coatings

- Fluorite can also be colored by fine inclusions within crystals/masses or by thin coatings on their surfaces
- This specimen is from the Clara Mine, Wolfach, Germany



From Saxony, Germany
Photo Credit: geologyin.com

From Southern Illinois
Photo Credit: geologyin.com



Photo Credit: madagascandirect.com

Now fluorite is a 4 on the Mohs scale of harness so if you want to see if your specimen will triboluminescent don't hit it too hard or it may crumble.

Coloration via fine inclusions or coatings

- Fluorite can also be colored by fine inclusions within crystals/masses or by thin coatings on their surfaces
- This specimen is from the Clara Mine, Wolfach, Germany



Fluorite is the source of the term "fluorescence" ...

- The term "fluorescence" was coined by Irish mathematician/physicist George Gabriel Stokes in 1852
- He studied both fluorite and uranium ore – his source of UV radiation to excite the materials and produce visible light was the Sun
- The term "ultra-violet" is named for him – it refers to the light in wavelength from the type of light being applied to the type being emitted



G.G. Stokes (1819-1903)

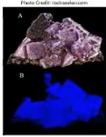


Photo Credit: unknown.com

March Gemstone-Aquamarine

The aquamarine is a gem variety of the mineral beryl. It is vitreous, meaning it has the luster of glass, and the name aquamarine (aqua meaning water & marinus meaning marine) is from Latin meaning sea water. That is because of the aquamarines blue green color.

Beryl is a common mineral containing a rare element-beryllium. Beryl may be considered an ore of beryllium. The chemical composition is $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$. A beryllium aluminum silicate. Specific gravity is 2.75 to 2.80 and its hardness on Moh's scale is 7.5 to 8. Thus it is a bit harder than ordinary quartz.

The crystal form is hexagonal - having six sides and is one of the few species that is almost always in distinct and characteristic form, making it very easy to identify. There are other color phases to the beryl and the rarest of all is the emerald. Colors other than the green emerald are clear, pink and golden.

Some of the best localities are Maine, Connecticut, Brazil, Siberia and Madagascar, as well as few locations in Colorado.

This article came directly from the March 14, 1972 Garnet Gazette. By Crystal Lil Berbino

"Aquamarine"

Birthstone for March

Aquamarine is a Beryllium Aluminum Silicate, it is of the Beryl family. The color is blue green and its color is attributed to a minute amount of chromium. The hardness is 7 to 8 or a little above quartz; the specific gravity is 2.75 to 2.80; the luster is vitreous and in this respect resembles quartz. It is a gemstone, and the pegmatites of New England and North Carolina afford many beautiful specimens, but the finest come from near Musco, Colombia, South America. Brazil is also a source of beautiful specimens.

This article came directly from the March 1973 Garnet Gazette

Aquamarine. Aquamarine is the blue member of the beryl group and is so named (Latin - water of the sea) because of its sea water color.

It was also a talisman for sailors. A dark blue is the most desired color. It is brittle and sensitive to pressure.

There are aquamarine deposits on all continents. The most important ones are in Brazil. The host rocks are pegmatite and coarse-grained granite. In the United States, important local deposits of aquamarine have been found in Colorado, Connecticut, California, Maine and North Carolina.

The largest aquamarine of cut table quality was found in Marabaya, Minas Gerais, Brazil. It weighed 243 pounds.

The preferred cuts for aquamarine are the emerald or the scissor cut with rectangular or long oval shapes. In the photo the gem is 36cm long.

Found in the March 1993 Garnet Gazette. Source: "Gemstones of the World"



This is Dom Pedro, the worlds biggest aquamarine gem. The obelisk-shaped, blue green gem, which was designed by famed German gem cutter Bernd Munsteiner, known as the "father of fantasy cut", this beautiful gem stands at 14 inches tall and weighs 10,363 carats.

Beryl and Pegmatite Minerals at the Simpson Quarry, South Glastonbury, CT.

Posted on February 23, 2021 by rocky on "Where to find Rocks".

Sources: <https://www.mindat.org/loc-29587.html>

<http://wheretofindrocks.com/beryl-and-pegmatite-minerals-at-the-simpson-quarry-south-glastonbury-ct/>

Overview: One of many abandoned feldspar prospects in Central CT, this particular location has been a popular beryl collecting site for several decades. This location is one of the most visited pegmatites in Connecticut if not all of New England and is somewhat of a local classic for beryl.

Large, sharp blue aquamarine beryls have been found both in the dumps and in solid pegmatite at this location. A variety of other minerals can be found at this site as well, including



Quarry dumps with foliage down. Taken April 2nd 2011 by Matthew Kimball.

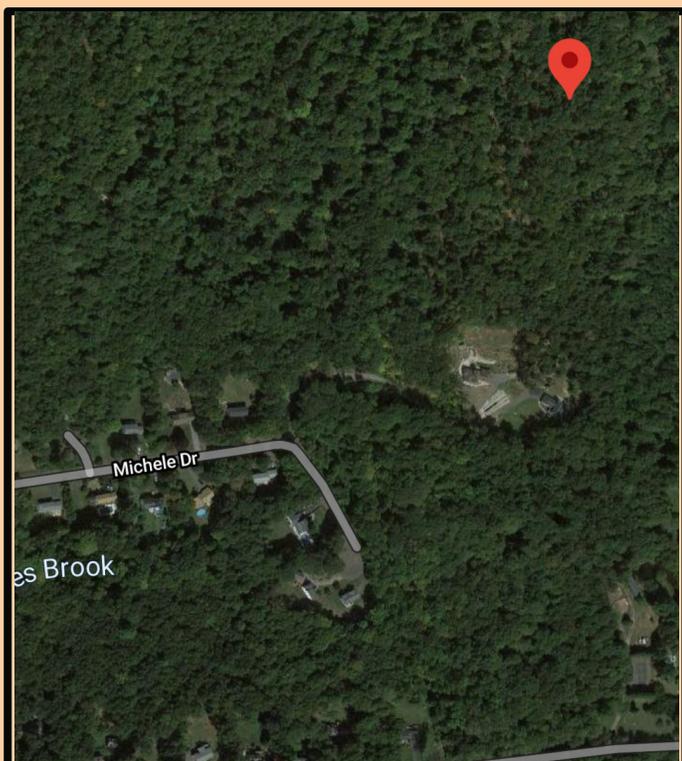
some rare species. This is one of the first sites many collectors in CT visit, and it is not hard to find something worth bringing home. The collecting status of this location is unclear (and with all sites featured on this website, you are responsible for obtaining permission and checking current property ownership), and as of early 2021 it remains unposted and is still frequented by diggers in the area.

Getting there: This mine is easy to get to. Park at the end of Michele Drive in Portland, CT. You will see a small path through the woods to your left. Follow the path until you see the very obvious big quarry dumps approximately where the pin in the photo is. You will have to cross some swampy areas. The location is approximately a quarter of a mile northeast from where you park. A word of caution, the collecting status of the location is not officially known. Many people dig here though it may be private property. The locality has been frequented by collectors on a near daily basis for decades.



Quarry dumps at the Simpson. Dig through these dumps to find nice aquamarine beryl crystals as well as many other pegmatite minerals like almandine garnet, schorl, torbernite, and columbite. (Source: <https://www.mindat.org/photo-123808.html>. Image copyright 2004 Peter Cristofono)

Beryl and Pegmatite Minerals at the Simpson Quarry, South Glastonbury, CT. - Cont.



Location of the Simpson Quarry, location of beryl crystals.

Collecting: There are two main approaches to digging this spot- dump digging and hard rock mining. At minimum you will want to bring a shovel, crack hammer and chisels to the location but other tools that may be useful are hand rakes, a sledgehammer, sifters, small bags, and a UV light. Many rare minerals are found at this site, some of which- autunite and hyalite are highly fluorescent. The mosquitoes get terrible at this spot in the summer, be prepared with lots of bug spray. Pegmatite is an extremely hard rock and will take persistence to break. The mica and quartz can be extremely sharp so wearing gloves is a good idea. Do not get discouraged if you have a difficult time working the hard rock. Digging pegmatite takes immense skill and practice. It is something that experienced New England diggers take years to hone.

A large 6mm microlite dug at Simpson by Andrew Kruegel. A unique feature about this pegmatite is the abundance of this rare tantalum mineral. This example shows the typical form and color. A loupe can help you spot these more easily. (Source: <https://www.mindat.org/photo-525514.html>)



Geology and Mineralogy: This locality is very similar to the other Paleozoic pegmatite in CT. It is linear in shape and not very pocket rich. This pegmatite also contains a great deal of heavier rare elements. Collectors often visit this site only interested in beryl, but perhaps more notable to the mineralogist is the abundant microlite found in sugary albite. Microlite contains the rare element Tantalum. These microlite occur in brown modified octahedral crystals. If you are interested in them, familiarize yourself with them on mindat.org. Microlite is often somewhat radioactive and will produce a radiation halo, which is a good way to spot them.

Western Mass Mineral Show

WESTERN MASS MINERAL * JEWELRY * FOSSIL SHOW 2022

Castle of Knights
Meeting House
1599 Memorial Dr., Chicopee, MA
2 miles off of Mass Turnpike

March 26 - 27, 2022
Sat 9:30 - 5 & Sun 9:30 - 3:30

Admission: \$5

FREE Parking

12 and under FREE with paid adult
Free mineral specimen for children
Scouts in uniform FREE

Door Prize Drawing * Exhibits

Presented by the
Connecticut Valley Mineral Club
Springfield, MA

A non-profit educational organization
Facebook – [cvmineral club](#)
[www.westernmassmineralshow.com](#)
[www.cvmineralclub.org](#)

ENTER A FREE DRAWING!!!

Fill out the form on the reverse side and drop it
in the box at the Show. No blank forms will be
available at the Show.

WESTERN MASS MINERAL * JEWELRY * FOSSIL SHOW 2022

Directions

From NORTH or SOUTH

From I-91 North or South Take Exit 11 East
(Old Exit # 14) Onto Mass Pike East to
Exit 49 (Old Exit # 5)

Stay to the right coming off the exit ramp.
At the light turn left/North on to Memorial
Dr./Route 33. Go 2 miles to second rotary.
Go right on to James St., turn right into the
Castle of Knights Meeting House lot

From The Local Area

Take Route 116 or Route 202 to Route 33.
Go South to first rotary. Go around the
rotary to James St., turn right into the
Castle of Knights Meeting House lot

Name _____

Address _____

City _____

State _____ Zip _____

E-Mail _____

Phone _____

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