

# Serpentine: That Green Stone

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Peppered throughout Westtown and our neighboring townships are buildings made of a curious green stone. Certainly, you have noticed them—on the campus of West Chester University, several houses along New Street, maybe even as far as the University of Pennsylvania's College Hall. What is this stone? Why is it green? Where did it come from?



The yellowish serpentine façade of the stately West Chester University Library.



The blue-green serpentine of University of Pennsylvania's imposing College Hall

The stone is called serpentine, and it is exceedingly rare. It began as an igneous rock and was transformed by pressure and heat into a metamorphic rock based on three minerals: Antigorite, Lizardite, and Chrysotile. In addition to these three base minerals, additional ingredients, such as iron, talc, chromite, and magnite, among others, comprise the stone. The color of the stone can range from pale yellow to dark green and even blue-green, depending on the proportions of various minerals. More Olivine mineral will make the stone yellowish-green, while more pyroxene will make the stone appear bluish.

Only a few countries in the world contain serpentine; in the United States, only Pennsylvania, Maryland, Oregon, and California have it. And Chester County was one of the few places where it was quarried. The most successful of the serpentine stone quarries was located in the southwest corner of Westtown—the Serpentine Ridge Quarry, also known as Brinton's Quarry. While the exact timeframe of activity is a bit unclear, Brinton's Quarry was definitely operating in the early 19th century. Under the ownership of Joseph Brinton from 1870 to 1888, the quarry produced 500,000 cubic yards of serpentine. At its busiest, Brinton's Quarry employed 40 men, not including those who would haul the stone to the railroads at Westtown and Pocopson.

Joseph Brinton spent most of his life at Homestead Farm in Thornbury Township just southeast of the quarry, except for the years he attended Yale to obtain his Ph.B. in chemistry and geology. He was an agriculturalist, scientist, inventor, and savvy businessman. In addition to Brinton's Quarry, Joseph was involved with two other quarries selling other types of stone, including granite and Conestoga Pink Sandstone.



Joseph Brinton, 1929, holding his sister's great grandson, Garrison Brinton.

During peak years, Brinton's Quarry sold \$30,000 worth of stone annually, which in today's dollars is roughly \$1 million. Due to the success and demand for the stone during those peak years, a railroad line connecting the local stations to the quarry was started but was eventually abandoned. In those days, finding skilled stone masons to properly dress the stones - to surface and shape the blocks - was difficult. As a result, Joseph Brinton worked with Henry Disston, the saw manufacturer and owner of Disston Saw Works in Philadelphia, to develop a saw to dress the serpentine stone. In those days, it was typical for rough-cut stone to be delivered to a construction site, and to be dressed there by the masons under the direction of the architect. Brinton simplified this process by having the architect send him their plans for a building. With the aid of the machines he developed with Disston, Brinton would be able to dress the stones at the quarry and deliver them to the job site, ready for installation.

After nearly two solid decades of success, misfortune struck. On April 6, 1887, a fire destroyed the buildings and quarrying machinery. Pumps that stopped the pit from filling with water were compromised, and the quarry was soon flooded with 40 feet of water. The Brinton family attempted to continue quarrying operations above the water line, but after it was found that serpentine is less durable than other stones, business fell off from the glory years.

One day in 1899, when quarrying operations were nearing an end, Joseph Brinton had an argument with his foreman, accusing him of being too inebriated to work and firing him. The story has it that the man went into the borough, had some more drinks, and returned to the quarry, where he cut the boom loose from one of the machines. The boom fell into the quarry pit and has floated in the waters of the quarry ever since—and is now known as The Log.

The quarry has been repurposed as the Quarry Swimming Association, which has been in operation since the early 20<sup>th</sup> century. Over time, modern amenities have been added, including a sandy beach and a water purification and filtration system.

For more information on serpentine, Brinton's Quarry, the Quarry Swim Club, and other Westtown history, get your copy of *From Farmland to Suburbia, a History of Westtown Township*, available at the Township office for \$20.



Serpentine Stone house on S. New Street

Sources: *The History of the Quarry*, the Quarry Swimming Association, June 2002; *The Evolution of Serpentine Stone as a Building Material in Southeastern Pennsylvania 1727-1931*, Jane Dorchester, 2001; *From Farmland to Suburbia*, the Westtown Township Historical Commission, 2019.