



# The Geology of Cave Hill Cemetery: What Lies Beneath

Photo of Cave Hill Cemetery Quarry. Courtesy Michael Higgs

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When limestone caves are mentioned in Kentucky, we often think of Mammoth Cave in the west-central part of the state. But cavernous limestone formations of a different sort also exist below the ground of Cave Hill Cemetery. Beneath the earth, under the grass, the shrubs, the trees, and their roots, much lower than the soil and most of what we think of as life, lie the geological phenomena that give the land above its form and shape. An 1868 article, “Geological History of Cave Hill,” notes that what lies beneath the cemetery “singularly adapted it for those lines of gracefulness and beauty that are essential elements of a garden or rural cemetery.”

Provisionally, the topology of the land donated for the cemetery by Louisville officials in the mid-19th century was ideally suited for its new purpose. Its underpinnings of cavernous limestone provided the perfect foundation for Cave Hill Cemetery’s picturesque basins, terraces, and gently rolling hills. And those caverns don’t end at the cemetery

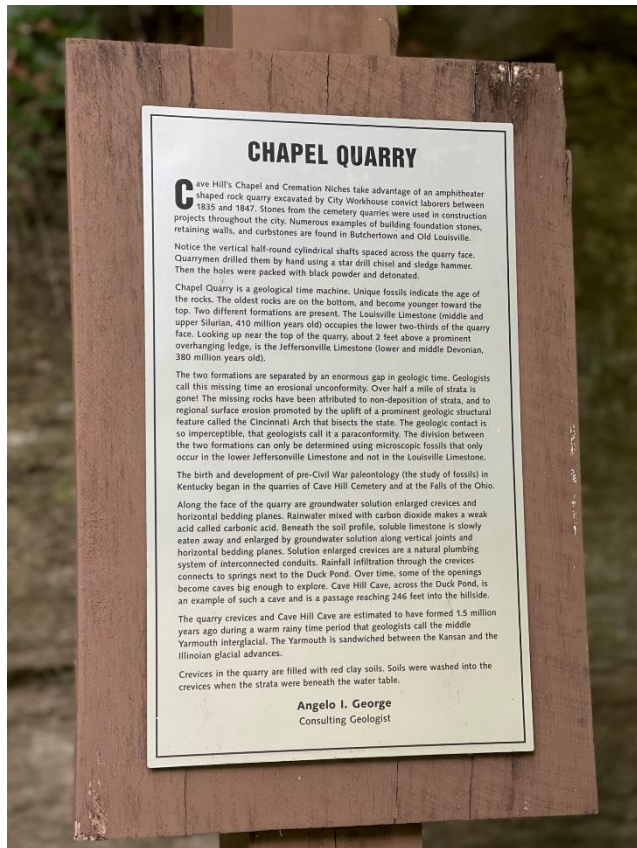


Cave Hill Cemetery cave entrance.

walls—the well-shaped and proportioned limestone formations that run under Cave Hill extend along the banks of Beargrass Creek and continue northeast through Trimble County, Kentucky.

Though limestone was the primary rock forming the caverns of both Cave Hill and Mammoth Cave, the composition of the rock and the geologic events that created each were significantly different. The explored and mapped underground passages of the Mammoth Cave system have a combined length of at least 400 miles (650 km), making it the longest cave system in the world ([www.britannica.com/place/Mammoth-Cave-National-Park](http://www.britannica.com/place/Mammoth-Cave-National-Park)). The largely rural terrain surrounding the park bears some physical resemblance to the Cave Hill Cemetery landscape. However, proximity doesn't necessarily dictate similarities in the final structure, form, and content of geological formations.

Over millions of years our planet was subjected to earth-rending geologic movement. The forces



Information sign at Chapel Columbarium

that acted on underground formations differed in intensity and force from place to place. The rock formations were affected by factors such as major climate shifts, the type and quantity of vegetative matter that percolated into the rocks, and the quantity and size of accumulated fossils. Another factor was the source of water and its strength of movement. The water could be an underground river, rainfall seeping in from above, or even the submersion of rock formations in an inland sea. The acidity of the water, the rock's mineral content, and a variety of other factors contributed to the geological formations that exist underground today. Time and natural forces produce the ultimate shape, size, and make-up of the geological formations below ground and the corresponding topography of the surface.

The unique limestone cradling Cave Hill Cemetery is called “chain-coral and upper magnesian cliff limestone.” Chain-coral is found in abundance in the excavated rock of the cemetery's quarries east of Beargrass Creek.

This rock was originally buried in seawater. The corals found at the top of Cave Hill's quarries are a variety that only could have existed at least 120 feet below the surface of a tropical sea.

For a long period of time, our planet was in flux. Mountains were heaving up, seas rising and then disappearing, volcanos building miles of lava, and the earth taking on the contours that we live with now. We tend to think that the earth is done, that it will stay as it is. But our planet continues to change. The change is almost unnoticeable, but only almost. A small stream runs down the face of the quarry wall across from Cave Hill Spring, recreating changes like those that occurred over

millions of years. In other places in the cemetery, carbonated rainwater trickles down and creates another sink hole.

In the meantime, the “valleys, hills, basins, ridges, and terraces of Cave Hill present many advantages for a garden cemetery” (“Geological History of Cave Hill”). The rocks beneath the cemetery were used by nature as burial-places for numerous forms of life long before human beings appeared. The rocks of Cave Hill are a mausoleum for some of the earliest forms of life on the planet.

After millions of years, the rocks beneath Cave Hill brought forth a landscape that seems to be purposefully designed as a resting place for human souls representing a cross section of Louisville’s history. And fittingly, the cemetery quarries continue to display beautiful records of earth’s earliest life forms. As Ralph Waldo Emerson wrote in one of his essays,

Everything in nature is engaged in writing its own history: the planet and the pebble are attended by their shadows, the rolling rock leaves its furrows on the mountain side, the river its channel in the soil, the animal its bones in the stratum, the fern and the leaf inscribe their modest epitaphs on the coal, the falling leaf sculpts its story on the sand and on the stone, not a footstep on the snow or on the ground, but traces, in character more or less enduring, the record of its character.

The rocks that lie beneath Cave Hill Cemetery are writing their own history, as did the persons laid to rest at Cave Hill whose remains are cradled in the rocks’ embrace. The millions of years of geologic formation seems to have been time well spent. Sean Patrick Hill mused on the history of Louisville’s rocks in a 2021 article in *Leo Weekly*. Hill reminds us that the study and observation of what lies beneath the earth can help put our human lives in perspective. “What the rock says, I think, is this,” he writes: “Pay Attention. Act while you have the ability. Our time on earth is brief.” Certainly briefer than that of the rocks.

Sources:

“Geological History of Cave Hill,” Cave Hill Cemetery Dedicatory Address and Historical Sketches, c. 1868

“In Geologic Time: The History and Significance of Louisville’s Rocks,” by Sean Patrick Hill; *Leo Weekly*, March 31, 2021