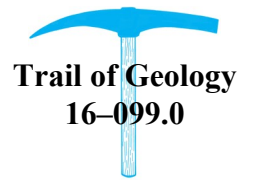


OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

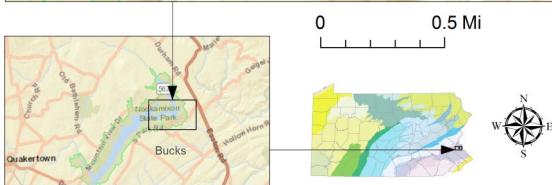
SENTINEL ROCK, BUCKS COUNTY

Stuart O. Reese, 2016



Location

Nockamixon State Park, Bucks Co., Nockamixon Twp., lat: 40.4691, lon: -75.1808; Bedminster 7.5-minute quadrangle

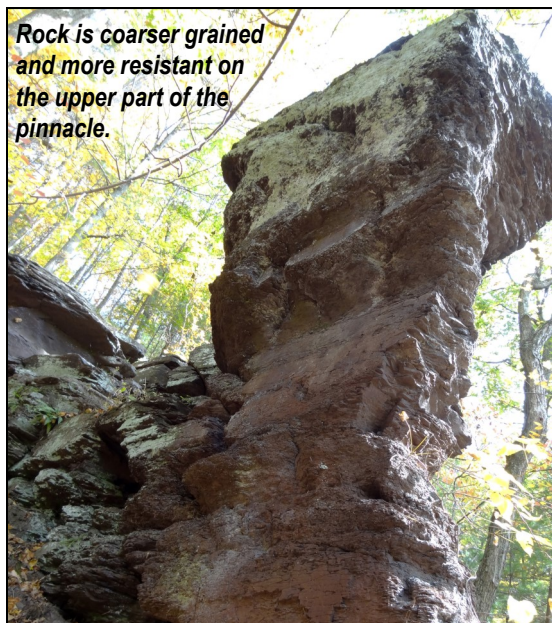


Geology

Sentinel Rock is a prominent pinnacle of bedrock on the hillside just east of the spillway for the Lake Nockamixon dam in Nockamixon State Park. The pinnacle has been separated along a vertical, northeast-oriented joint from a blocky outcrop of Brunswick Formation, which is composed of brownish-red shale, mudstone, and siltstone. Very close to the northwest and beneath the spillway, the overlying rock unit is the Lockatong Formation—a dark-gray argillite with some black shale. These sedimentary rocks are Triassic in age and were deposited in the Gettysburg-Newark basin that formed as Africa broke apart from North America about 225 to 200 million years ago.

Differential weathering along rock joints (fractures) is a factor in the development of rock pillars such as Sentinel Rock, and similar though less conspicuous erosional outcrops occur along the hillside above Tohickon Creek.

To visit Sentinel Rock, park along the road near the spillway overlook at latitude 40.46673 and longitude -75.18529. Walk along South Park road toward Tohickon Creek for 0.3 mile. After crossing the bridge, follow the trail into the woods to the northwest, keeping to the left along the crest of the hill above the creek.



View from below showing differential weathering of brownish-red shale and siltstone.



View to the southwest of Sentinel Rock from uphill. Tohickon Creek is in the background. The rocks dip gently 4 to 6 degrees to the northwest in this immediate area. The strike of the rocks is about 50 degrees northeast. Note the joint face on the rocks to the left.

Recommended Reading

Inners, J. D., 1980, Nockamixon State Park, Bucks County—Rocks and joints: Pennsylvania Geological Survey, 4th ser., [Trail of Geology 16-014.0](#), 5 p.

[Nockamixon State Park](#) web page of DCNR.