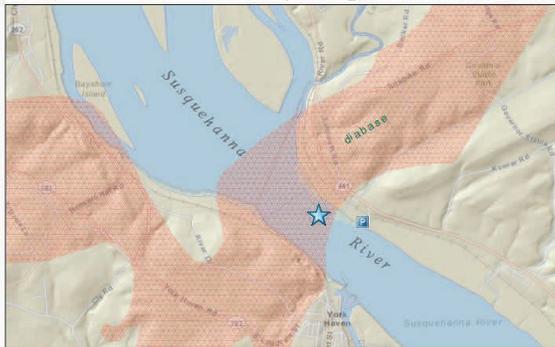




POTHOLES AT CONEWAGO FALLS LANCASTER COUNTY

Location

Falmouth, Lancaster Co., Conoy Twp., lat: 40.11921, lon: -76.70916 (Pa. Fish & Boat Commission parking and boat launch), York Haven 7.5-minute quadrangle



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Geology

Numerous examples of potholes, carved ripple marks, and smoothly sculptured rock can be found at Conewago Falls of the Susquehanna River. The rock is a tough, dark igneous rock called diabase, which intruded into the area about 200 million years ago as continental rifting stretched the crust thin. The hard diabase and adjacent rocks baked by the hot magma here constrict the flow of the Susquehanna River. The intricate sculpted forms in hard rock demonstrate the erosional power of water. Potholes are thought to originate from fast-flowing, sand-laden water that forms a vortex at a point of weakness in the rock. Swirling water with quartz sand acts as a sand-blasting drill. Some of the potholes are quite large, several feet in diameter and depth, while most are on the order of 1 to 2 feet across. The diabase is massive and durable enough to withstand the pressures of fast-flowing water, while persistent, swirling, abrasive sand grinds at the rock.

The features at Conewago were thought to have formed when the Susquehanna River was full of sediment and water from melting glaciers to the north. Additional evidence of extraordinary flow velocities is the presence of obviously moved large blocks of diabase. Some are truck-sized, weighing over 100 tons. Extreme flows may have had their origin in ice-dam breaks of glacial lakes to the north. The constriction at Conewago would have enhanced the higher flow rates.

Access: The sculpted diabase can be seen when the Susquehanna River gage height at Harrisburg is below about 3.5 feet: see [USGS Stream Gage 01570500](http://www.usgs.gov/stream-gage/01570500).

Recommended Reading

[Pennsylvania Geology](#) articles: Exotically sculptured diabase, vol. 20, no. 1; River on a rampage, vol. 24, no. 2; Cover, vol. 42, no. 4; Cover, vol. 8, no. 5.

For information regarding outstanding geologic features, contact the Pennsylvania Geological Survey:

Bureau of Topographic and Geologic Survey, 3240 Schoolhouse Rd., Middletown, PA 17057

717-702-2017 www.dcnr.state.pa.us/topogeo



Photos of Conewago: above, ripple marks in diabase (M. Brown); below, left to right: sculpted diabase (V. Neboga); transported diabase boulder (G. Fleeger); and 2-ft wide, 3-ft deep pothole (H. Delano).

