

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

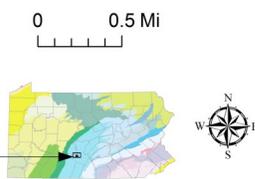
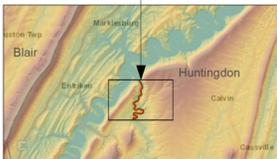
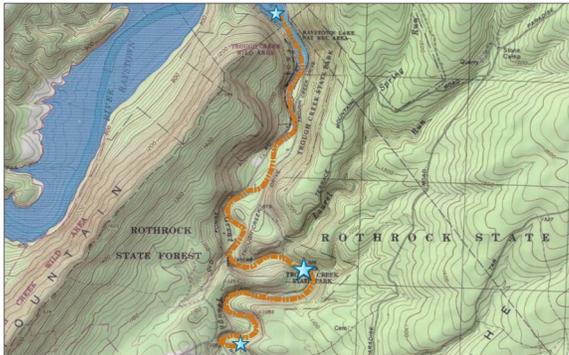
GREAT TROUGH CREEK GORGE, HUNTINGDON COUNTY



Stuart O. Reese, 2016

Location

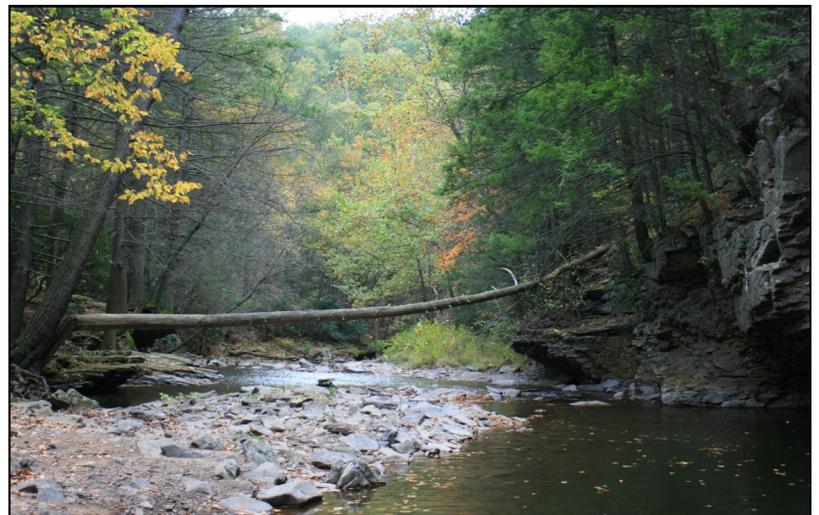
Trough Creek State Park, Huntingdon Co., Todd Twp.,
lat: 40.32098, lon: -78.12234 (bridge); Entriaken and Cassville
7.5-minute quadrangles



Recommended Reading

Wilshusen, J. P., 1969, Trough Creek State Park—
Ice mine and balanced rock: Pennsylvania
Geological Survey, 4th ser., [Trail of Geology](#)
[16-001.0](#), 4 p.

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



Great Trough Creek gorge at Trough Creek State Park (above left). Note the flat-lying rocks on both sides of the creek (above right).
Photographs courtesy of the Pennsylvania Department of Conservation and Natural Resources.

Geology

Great Trough Creek gorge is situated in the folded rocks of the Ridge and Valley physiographic province. Streams and rivers have carved and etched through and along the layers of folded rocks. These folds developed over millions of years through great forces associated with colliding tectonic plates in the Alleghanian mountain-building event. Great Trough Creek gorge is found in a syncline (downfold) and consists of a deeply entrenched stream flowing through sedimentary rocks of sandstone, siltstone, and conglomerate. The main geologic units in the gorge are the Pocono and Rockwell Formations.

The rock layers cropping out along the creek in the center section of the fold are almost horizontal and are not tilted as in adjacent areas along Terrace Mountain and Sideling Hill. Great Trough Creek meanders back and forth, cutting into the sides of hills on its outer bends. The hard sandstone and conglomerate resist the erosion by water, but joints and fractures, a result of the mountain-building forces, aid the erosional process. Freeze and thaw of rock and soil, gravity, and work by roots and other living things contribute to the erosion. These geologic processes produce remarkable features along the stream, including waterfalls, spectacular cliffs, meanders, and the geologically interesting [Balanced Rock](#), [Ice mine](#), and [Copperas Rock](#).