

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

COPPERAS ROCK, HUNTINGDON COUNTY

Stuart O. Reese, 2016



Location

Trough Creek State Park, Huntingdon Co., Todd Twp.,
lat: 40.32087, lon: -78.12152; Cassville 7.5-minute quadrangle



0 0.3 Mi



Geology

Copperas Rock, which is located along Great Trough Creek, shows the geologic phenomenon of differential weathering: grain size, degree of fracturing, or differences in bedding make some parts of the Pocono Formation (Copperas Rock's bedrock unit) erode more readily than others. The eroded material collects in the stream, and during high-water events, stronger flows remove or rearrange the debris. Where a more cohesive layer of rock is above a weaker layer of rock next to a stream, a substantial overhang can develop, as it has at Copperas Rock. Eventually the overhanging rock will fall—as has happened at nearby [Balanced Rock](#).

“Copperas” is a term for a blue-green mineral (melanterite), but it can also be applied generally to sulfate minerals or specifically to iron sulfate. Here the term has probably been used to describe the color of the rocks by the creek. The Pocono Formation with its light-gray to olive-gray sandstone, siltstone, and conglomerate

is known to have some elevated iron and sulfide content, and weathering produces iron oxides of yellow and orange hues that can give a copperlike appearance to the outcrop in the sunlight. Copperas minerals were used by early settlers as a mordant—a mineral used to fix colors in the dyeing process of fabric and yarn. Copperas may have been collected here for that purpose, but we have no record of it.



View of Copperas Rock. Photograph courtesy of Pennsylvania Bureau of State Parks.

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.

