

# OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

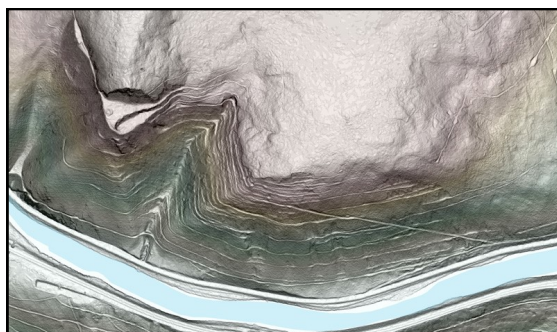
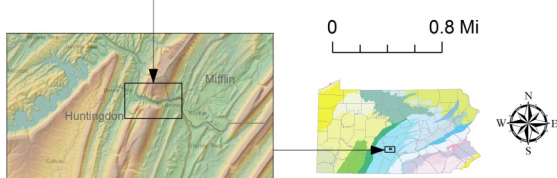
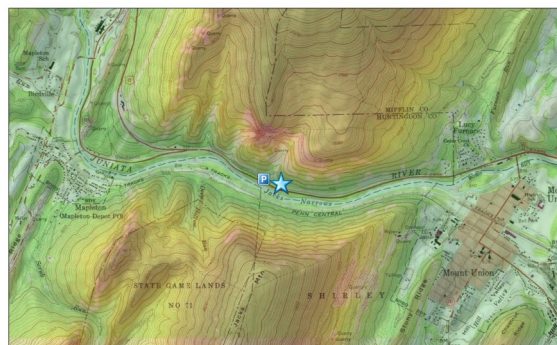
## JACKS NARROWS AND THOUSAND STEPS, HUNTINGDON COUNTY



Stuart O. Reese, 2016

### Location

Along U.S. Route 22, Huntingdon County, Brady Twp.,  
lat: 40.39174, lon: -77.91433 (parking); lat: 40.39133,  
lon: -77.91307 (trailhead); Mount Union 7.5-minute quadrangle



A slope-shade map of PAMAP elevation data reveals the etchings from past quarrying activity, which included a narrow-gauge railroad with multiple switchbacks to haul the rock down the mountain to the nearby Mount Union processing plants.

### Recommended Reading

Reese, S. O., 2008, The geologist who went into a narrows but came out through a gorge: [Pennsylvania Geology](#), v. 38, no. 2/3, p. 2–12.

[Thousand Steps Trail](#) web page of the Trail Vistas website.

### Geology

Jacks Narrows is a deep gorge and water gap in the Appalachian Mountain section of the Ridge and Valley physiographic province. The gap was likely cut by headward erosion of the Juniata River westward through the ridge of folded sedimentary rocks, made vulnerable to erosion by a prevalence of fractures. The gorge is cut through the Jacks Mountain anticline (upfold). A change in rock dip directions can be seen at road level through the narrows. The Tuscarora Formation caps Jacks Mountain, which is as much as 1,760 feet above river level.

The quartz sandstone of the Silurian Tuscarora Formation was quarried as ganister (from the German “ganster” translated “a spark,” which is what you see sometimes when the rock is hit with a hammer) during the 1900s for making silica bricks at nearby Mount Union. Around 1936, quarry workers placed flat-sided boulders as steps to improve their daily commute to and from the rock quarries about 1,000 feet above the Juniata River. “Thousand Steps” was the result. Their handiwork can be seen and walked upon today as a rigorous hike up and down the steep mountainside. The site is part of State Game Lands 112.



A few of the Thousand Steps pass through a talus or scree pile of sandstone on Jacks Mountain.