

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

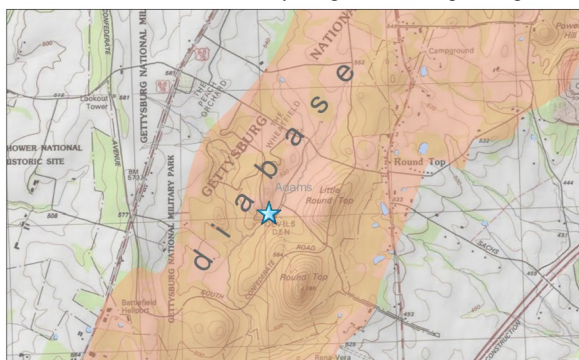
DEVILS DEN, ADAMS COUNTY

Stuart O. Reese, 2016



Location

Gettysburg National Military Park, Adams Co., Cumberland Twp.,
lat: 39.7917, lon: -77.2421; Gettysburg 7.5-minute quadrangle



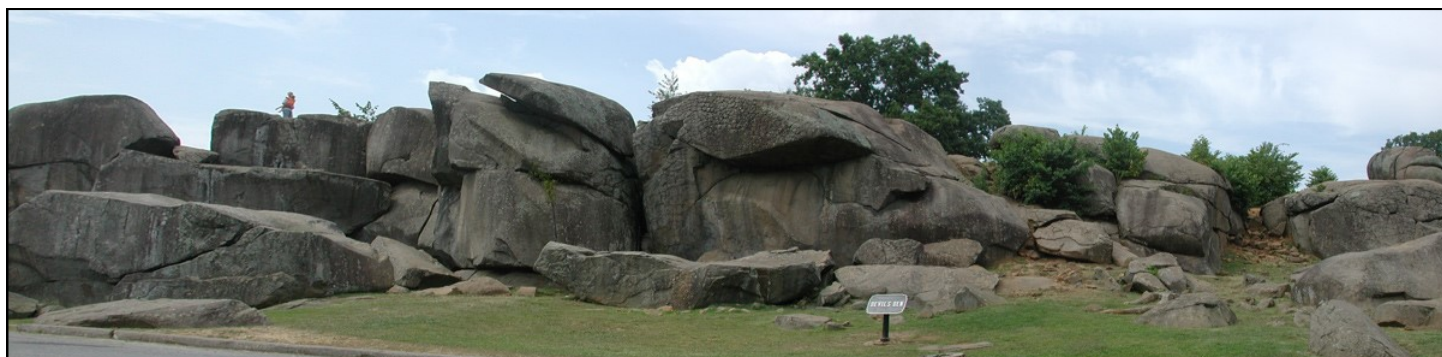
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Geology

Devils Den is one of the most famous rock formations in the state. It was the site of some of the fiercest fighting in the heat of the Battle of Gettysburg in July 1863. The rocks are opposite the hills of Little Round Top and Round Top on the battlefield. The outcrop is a rock city of boulders, and it provided soldiers numerous hideaways with its narrow fissures and hollows. The Confederates drove out Union troops who were in this location on the late afternoon of July 2 in heavy fighting. Once in position, the Confederates used the boulders of Devils Den for protection as they shot at Union forces on Little Round Top.

The boulders are composed of diabase, a dark and very hard igneous rock. This diabase is an outcrop of the underlying York Haven Diabase sill that intruded the red sandstone and shale of the Gettysburg Formation about 200 million years ago, at the beginning of the Jurassic Period.



Looking west at Devils Den. Photograph by Natalia DelaRosa, Pennsylvania Geological Survey intern.

Devils Den also is a good location to see the weathering and mineralogy of the diabase. The outcrop is fractured by joints, which separate the rock into large blocks. The blocks are weathering by a process called exfoliation, where thin sheets peel off the rock typically giving the boulders a rounded appearance. Exfoliation also produces polygonal cracks on some of the rocks as they weather. The dominant minerals in the diabase here are coarse crystals of pyroxene and feldspar (plagioclase).

Recommended Reading

Brown, Andrew, 1962, Geology and the Gettysburg campaign: Pennsylvania Geological Survey, 4th ser., [Educational Series 5](#), 14 p.

Cuffey, R. J., Inners, J. D., Fleeger, G. M., and others, 2008, Geology of the Gettysburg Battlefield—How Mesozoic events and processes impacted American history: Pennsylvania Geological Survey, 4th ser., [Open-File Report OFGG 08-01.0](#), 16 p.

[Gettysburg National Military Park](#) web page of the National Park Service.

