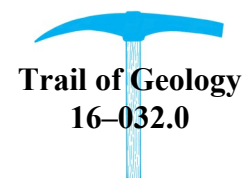


OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

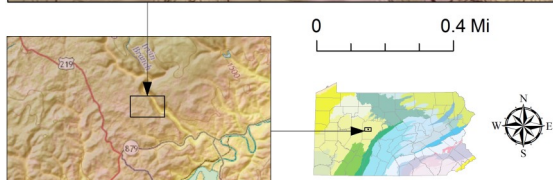
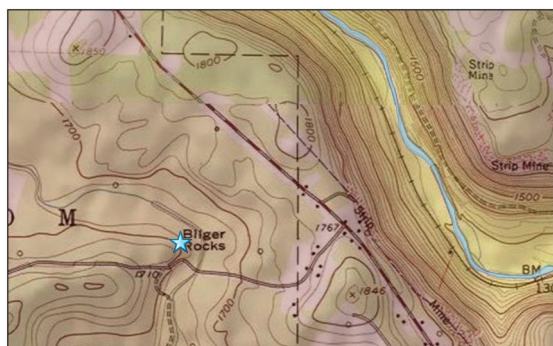
BILGERS ROCKS, CLEARFIELD COUNTY

Stuart O. Reese, 2016



Location

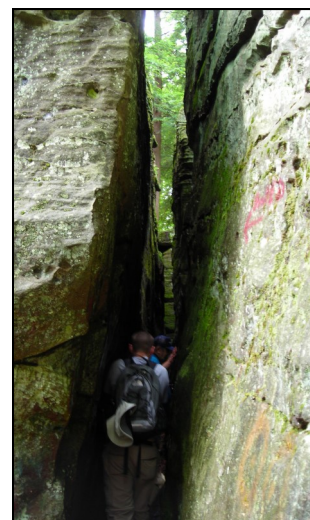
Bilgers Rocks Park, Clearfield Co., Bloom Twp., lat: 40.9941, lon: -78.5920; Curwensville 7.5-minute quadrangle



Geology

Bilgers (aka Bilger) Rocks is a classic “rock city” made of large sandstone blocks. The rocks have been split by vertical fractures called joints that have widened over time. Today, the sandstone blocks are separated by narrow passageways, wide “streets,” and “rooms.” The large rocks were not deposited by glaciers but rather were detached from the parent mass by the freezing and thawing of water infiltrating along fracture and bedding planes.

Movement of the blocks was probably much more substantial during glacial times when the ground thawed to a shallow depth during brief summers. The thawed material would have had a high water content, which allowed the blocks of rock to slowly move down any slope, however slight. Frost wedging during the movement phase broke and shifted the blocks. Additional fracturing and shifting of the rocks occurred along horizontal bedding planes.



Rooms and passageways at Bilgers Rocks. The center photograph shows the crossbedded nature of the sandstone, where layers lie at an angle to other layers. The crossbed patterns were produced by stream action, as sand was deposited on migrating, inclined planes. Photographs by Richard Campbell, Pennsylvania Geological Survey intern.

The rock unit is the crossbedded Homewood Sandstone of the Pottsville Formation. Its sand grains were fluvial in origin, deposited in the Pennsylvanian Period more than 300 million years ago. The sandstone is typically 20 to 25 feet thick. Joint separations vary from a few inches to as much as 15 to 20 feet. As a result, chambers and passageways may be found throughout the rocks. Chamber rooms have vertical walls 15 to 25 feet high. The rooms are connected by narrow passageways 15 inches to 3 feet wide and up to 50 feet long.

Recommended Reading

[Bilgers Rocks](#) website.