

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

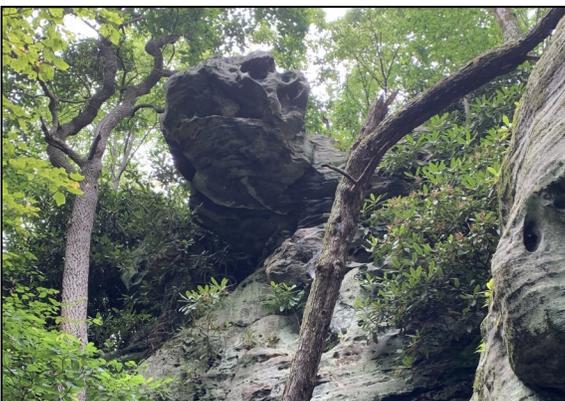
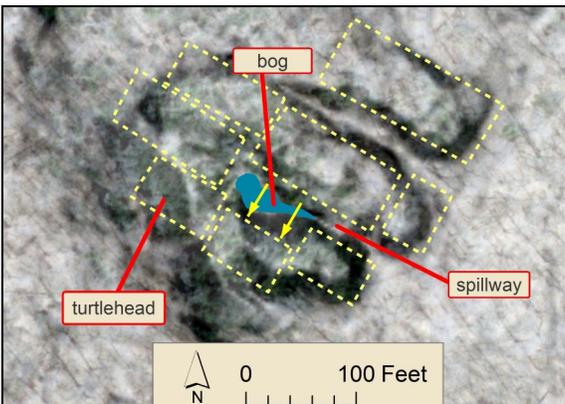
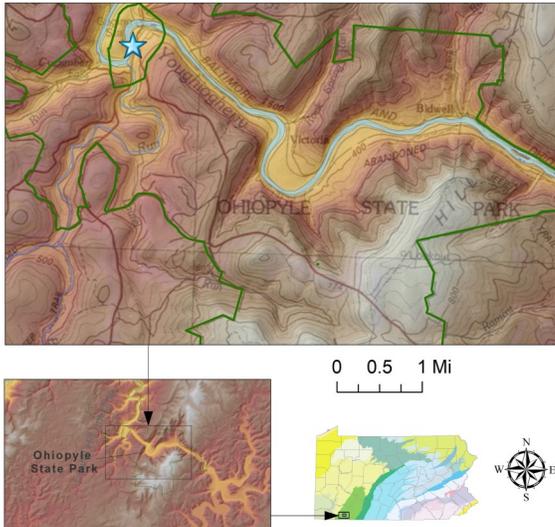
TURTLEHEAD ROCK BOG, FAYETTE COUNTY



James Shaulis and Stuart O. Reese, 2021

Location

Ohiopyle State Park, Fayette County, lat: 39.866793, lon: -79.494598 (park office); Ohiopyle 7.5-minute quadrangle



Geology

Turtlehead Rock Bog is located in the southwest corner of a rock city, a group of large sandstone blocks that are separated by narrow passageways or “streets.” The site is composed of blocks of Homewood Sandstone of the Pennsylvanian Pottsville Formation. Viewed from below, one pinnacle of resistant quartz sandstone takes on the appearance of the head of a turtle. Cosmogenic dating with beryllium 10 indicates that the turtlehead has been exposed for more than 200,000 years.

Turtlehead Rock and the other sandstone blocks separated from bedrock and traveled downslope during the Pleistocene glacial periods, moving slowly through repetitive freeze-thaw cycles over partially frozen ground. Movement created a separation cavity that filled with fine-grained material at its base where a bog formed. The climate warmed and plants like mosses and ferns began to accumulate about 12,000 years ago. The bog has a measured maximum depth of 13 feet, but may contain deeper pockets. A floating vegetative mat and actively growing sedges, ferns, and moss are surrounded by a thick buffer of mountain laurel and mixed hardwood trees. The depth of the bog is controlled by a spillway outlet at the southeastern corner.



Middle left: Map view of the rock city showing sandstone blocks (outlined by yellow dashed lines) and movement (yellow arrows). Lower left: Turtlehead Rock. Above: Turtlehead Rock Bog. Photographs by Shaulis. If you are interested in visiting this site, please contact the park office for more information at 724-329-8591.

Recommended Reading

- Li, Christy, 2018, Age and retreat rate of Ohiopyle Falls: Bethlehem, Pa., Lehigh University, Senior thesis, 23 p.
- Speicher, Renee, 2019, Rocks and water—the conflict of a typist in a geologist’s world—Reflections from the Pennsylvania Geological Survey staff field trip to Ohiopyle State Park, Pennsylvania, April 2019: [Pennsylvania Geology](#), v. 49, no. 1, p. 12–19.