

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

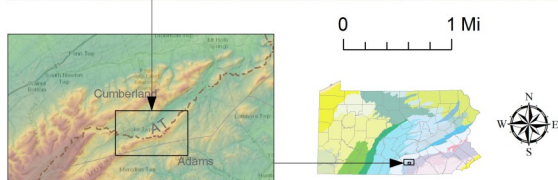
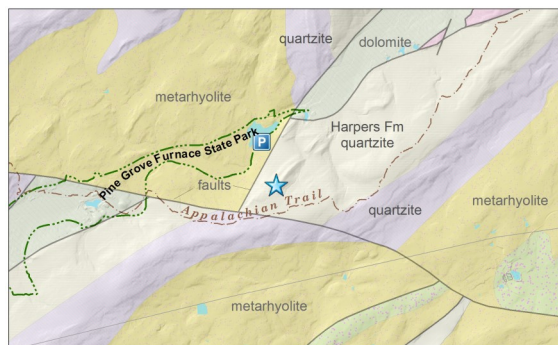
POLE STEEPLE, CUMBERLAND COUNTY

Stuart O. Reese, 2016



Location

Michaux State Forest, Cumberland Co., Cooke Twp.,
lat: 40.03841, lon: -77.26998 (Pole Steeple trail parking lot);
lat: 40.03237, lon: -77.26744; Dickinson 7.5-minute quadrangle



Geology

Pole Steeple is a resistant pinnacle of rock that provides a spectacular view of the South Mountain section of the Ridge and Valley physiographic province. The spires are strongly resistant, light-gray quartzite of the Montalto Member of the Harpers Formation. To the north, less resistant rocks around Laurel Lake are metarhyolite and dolomite. These two rock types were faulted upward against the quartzite, and because they erode more rapidly than the quartzite, they now occupy a lower topographic position. Evidence for faulting can be seen in the slickenside surfaces along the base of Pole Steeple, where rock slid on rock and polished it to a smooth surface. There are also abundant trace fossils of *Skolithos*, vertical sand-filled worm burrows made before the sediment was hardened into rock. The quartzite is thought to have been deposited in coastal areas during the Neoproterozoic Era, about 550 million years ago.

Pole Steeple is in Michaux State Forest, south of Laurel Lake, which is in Pine Grove Furnace State Park. It can be accessed by the 0.75-mile-long Pole Steeple Trail from the lake or from the Appalachian Trail.

Recommended Reading

Way, J. H., 1986, Your guide to the geology of the Kings Gap area, Cumberland County, Pennsylvania: Pennsylvania Geological Survey, 4th ser., [Environmental Geology Report 8](#), 31 p.

[Michaux State Forest](#) and [Pine Grove Furnace State Park](#) web pages of DCNR.



Above: View to the northeast of the Harpers Formation, Montalto Member quartzite.



Left: View to the north of Laurel Lake and the South Mountain ridge in the distance. Pole Steeple is about 565 feet above Laurel Lake.