stones that form Kittatinny (Blue) Mountain. The line that separates Northampton County from Carbon and Monroe counties follows the crest of the mountain and throughout is on this formation. This formation occurs nowhere else in Northampton County. The main description of the Shawangunk formation is contained in the chapter by Bradford Willard on the water gaps and wind gaps of the region and, therefore, the discussion here is brief.

Lithologic characteristics.—The Shawangunk deposits are readily distinguishable from those of any of the other formations of the region. They are primarily coarse conglomerates composed of rounded quartz pebbles up to a few inches in diameter firmly cemented by siliceous matter. They are the hardest rocks of the county and the most resistant to erosion. This accounts for the mountain. The beds are mainly massive and joints are few so that huge blocks occur in the talus overlying the Martinsburg shales on the southern slopes of the mountain. Shale pebbles occur in certain beds.

Interbedded with the conglomerates are beds of sandstone and thin layers of black slate.

Paleontologic characteristics.—Some fossils have been found in the formation at the Delaware Water Gap as described in an earlier chapter by Willard. Recently a fucoid or worm trail, *Arthrophyaeus harlani*, has been found along the highway just south of Little Gap.

Thickness.—Only the lower part of the Shawangunk formation is present in the county and no attempt has been made to determine the exact thickness of this part. C. K. and F. M. Swartz⁹⁰ state that the entire formation at Lehigh Gap is 457 feet thick and probably 1,823 feet at the Delaware Water Gap.

Name and correlation.—The formation is named from Shawangunk Mountain in New York, with which Kittatinny Mountain is continuous. To the west the conglomerate forming Kittatinny has been termed the Tuscarora. It appears that the Tuscarora corresponds to the lowest portion of the Shawangunk.

The Second Geological Survey of Pennsylvania used the names Oneida and Medina for these deposits.

The formation is the lowest member of the Silurian period in this section.

Stratigraphic relations.—There is general agreement that the Shawangunk rests unconformably upon the Martinsburg shales. At Lehigh Gap this unconformity can be seen in a cut along the Lehigh & New England Railroad where the Martinsburg shales dipping to the