and Easton being a case of piracy on the part of the Delaware, cutting more rapidly than the Lehigh and forcing the low col about Glendon westward till the Lehigh drainage level was reached."

Describes a thickness of 165 feet of glacial deposits in West Bethlehem resting on the pre-Cambrian crystalline rocks. Believes that the "Monocacy (Monocacy) flowed westward into the Lehigh and passed under West Bethlehem ridge on a line running through the intersection of 12th avenue and Broad street."

1903

CAMPBELL, MARIUS R. Geographic Development of Northern Pennsylvania and Southern New York.


Describes the Harrisburg and Somerville peneplanes as developed in Lehigh County. Says they are probably of early Tertiary age.

DALE, T. NELSON. The Slate Industry at Slattington, Pa., and Martinsburg, W. Va.


Short account of the physical characteristics, mineral composition and structure of the slate of the Slattington region.


809 pp., 86 plates. Bethlehem, 1903.

Contains much geographic information and descriptions of the industries of the Lehigh Valley.

PECK, FREDERICK B. Basal Conglomerate in Lehigh and Northampton Counties, Pennsylvania.


A short description of the distribution and characteristics of the Cambrian quartzites, sandstones and conglomerates composing the Hardyston formation as developed in Lehigh and Northampton Counties.

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98 pp., illustrated, New York, 1904.

Contains much historical matter concerning the iron industry of the Lehigh Valley.

ECKEL, EDWIN C. Cement-rock deposits of the Lehigh District of Pennsylvania and New Jersey.


A short description of the geology of the Lehigh cement district with several analyses of cement rock.

GARRISON, F. LYNWOOD. The Genesis of Limonite Ores in the Appalachians.


Discussion of origin of limonite ores with brief mention of Lehigh County.

PECK, F. B. The Cement Belt in Lehigh and Northampton Counties of Pennsylvania.


Lists and describes the following formations of the Lehigh Valley: Pre-Cambrian crystalline rocks, Cambrian basal conglomerate, Trenton limestone, cement rock, Hudson River slate, Onondaga and Medina sandstone. Gives several chemical analyses.

1905


Contains biographic sketches of many men who were concerned in the development of the mineral resources of the Lehigh Valley.