

COLUMNAR SECTION

GENERALIZED SECTION OF THE SEDIMENTARY ROCKS OF THE ELKLAND AND TIOGA QUADRANGLES.
SCALE: 1 INCH=200 FEET.

SYSTEM.	FORMATION NAME.	SYMBOL.	COLUMNAR SECTION.	THICKNESS IN FEET.	CHARACTER OF ROCKS.	CHARACTER OF TOPOGRAPHY AND SOILS.
PENNSYLVANIAN	Pottsville formation.	Cpv		30	Greenish argillaceous sandstone with a thin streak of black shale and coal.	Caps plateau remnant at western edge of Elkland quadrangle. Soil sandy and rather barren.
	Sharon conglomerate member.	Cps		60-100	White quartz conglomerate and sandstone.	Caps the higher plateau remnants and frequently forms cliffs. Soil highly siliceous, generally with bowlders, and of very limited distribution.
	UNCONFORMITY.					
	Mauch Chunk formation.	Cmc		0-100	Red and green shales and green and buff sandstones, with a thin bed of fire clay and a three-foot bed of limonite.	Gently undulating cappings to some of the plateau remnants in the Tioga quadrangle. Soil variable, frequently clayey, and generally rather poor.
CARBONIFEROUS MISSISSIPPIAN	Oswayo formation.	CDo		1000±	Heavy beds of green and gray flaggy sandstones with some green and gray shales and local beds of red shale.	Steep hillsides with frequent projecting ledges. Slopes generally covered with talus of sandstone plates. Soil stony and barren.
	Cattaraugus formation.	Dcr		500±	Persistent red shale alternating with red, brown, and green sandstones and gray and green shales.	The lower moderately steep slopes of hillsides, frequently covered with talus of sandstone from its own beds or from the overlying Oswayo formation. Soil generally sandy or stony. Poorly situated for farming.
DEVONIAN	Chemung formation.	Dch		2000+	Relatively thin beds of gray or greenish fossiliferous shales and sandstones in rapid alternation with occasional streaks or thin beds of more or less impure limestone.	The lowest slopes of steep hillsides and well-rounded hills of moderate slope and height, free from talus. Soil yellowish and of good quality. Contains many platy fragments of shale and shaly limestone.

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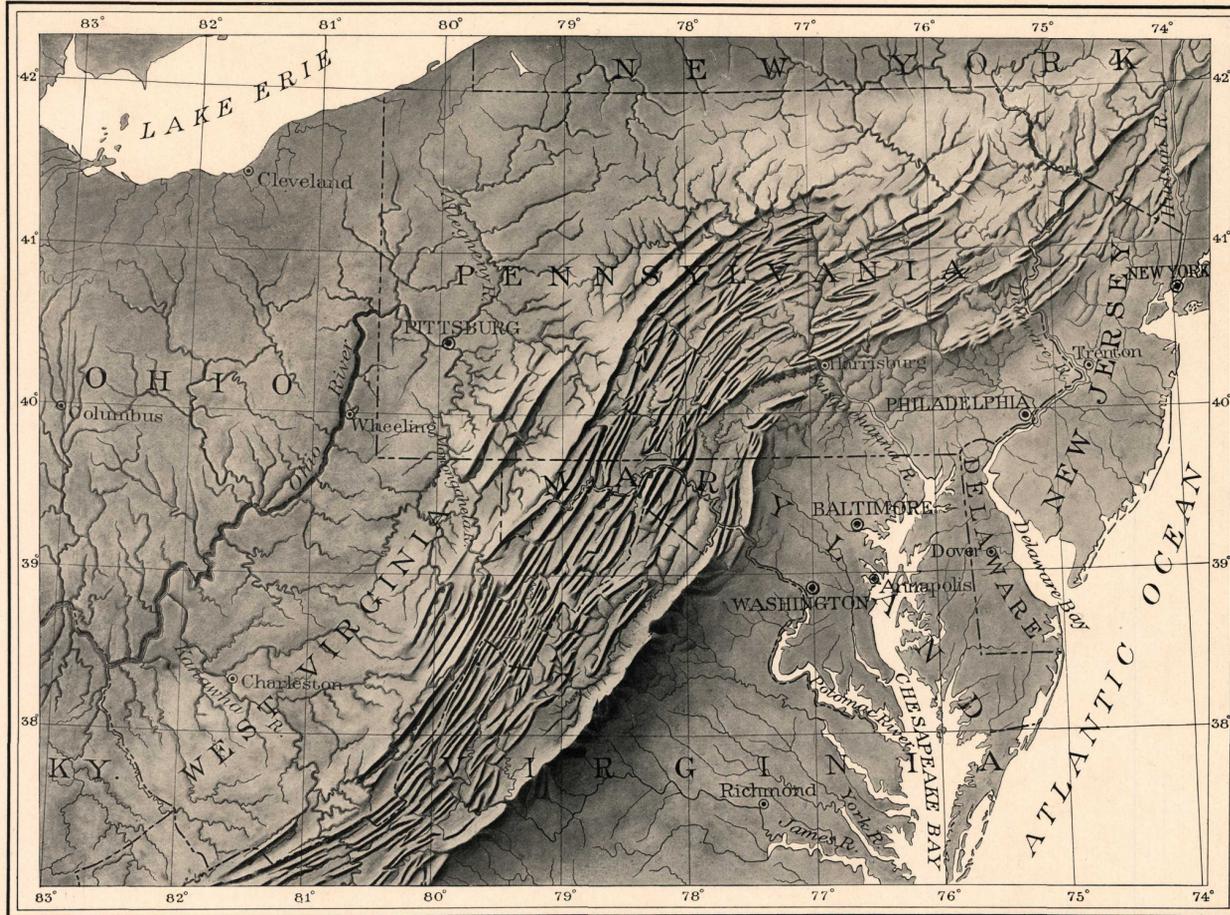


FIG. 5.—RELIEF MAP OF THE NORTHERN APPALACHIAN MOUNTAINS.
 The Elkland and Tioga quadrangles are situated on the plateau lying north of the belt of ridges, in the north-central portion of Pennsylvania



FIG. 6.—FLAGSTONE QUARRY AT HEAD OF CORY CREEK, EAST OF MANSFIELD.
 Showing character of rocks near base of Cattaraugus formation. (From photograph by Dr. E. M. Kindle.)



FIG. 7.—ROUNDED HILL OF CHEMUNG FORMATION.
 Showing characteristic rounded outline of the hills of this formation and landslide scars. (From photograph by Dr. E. M. Kindle.)

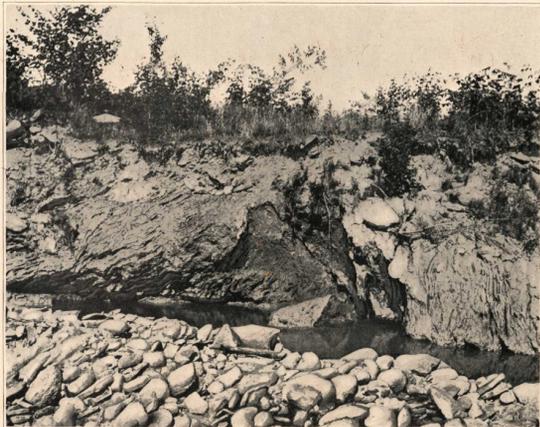


FIG. 8.—TORRENT GRAVEL IN BED OF STREAM AND SECTION OF GLACIAL CLAY SHOWING CONTORTIONS DUE TO CREEP.



FIG. 9.—CONCRETIONARY MASSES IN THE CHEMUNG FORMATION A FEW MILES NORTHEAST OF THE TIOGA QUADRANGLE.

(From photograph by C. A. Hartnagel.)