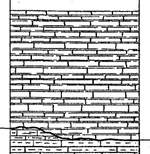
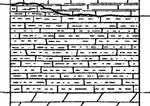
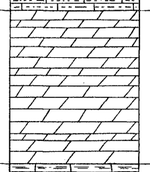
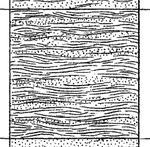
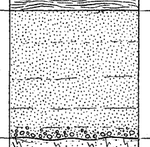
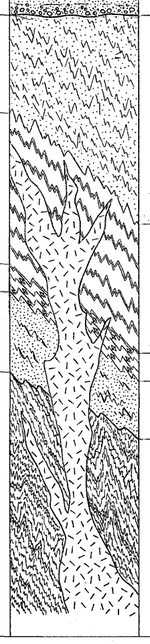
COLUMNAR SECTION

GENERALIZED SECTION OF ROCKS EXPOSED IN THE COATESVILLE AND WEST CHESTER QUADRANGLES.

SCALE: 1 INCH = 500 FEET.

System.	Series.	Formation.	Symbol.	Section.	Thickness in Feet.	Character of Rocks.
ORDOVICIAN	LOWER ORDOVICIAN ?	Conestoga limestone.	Oc		500+	Thin-bedded blue to gray granular limestone with thin dark shale and impure limestone partings; limestone in part conglomeratic at base.
		UNCONFORMITY				
CAMBRIAN	MIDDLE CAMBRIAN	Elbrook limestone.	€e		300±	Finely laminated fine-grained impure marble, weathering shaly.
	LOWER CAMBRIAN	Ledger dolomite.	€l		600	Granular, crystalline light-gray to white dolomite.
		Kinzers formation.	€k		150	Micaceous limestone and calcareous mica schist.
		Vintage dolomite.	€v		300±	Massive knotty granular glistening dark-gray dolomite.
		Antietam quartzite.	€a		150	Gray laminated quartzite, rust spotted and contains fossil molds.
		Harpers schist.	€hp		280–1000±	Gray sandy micaceous schist with thin quartzite beds.
		Chickies quartzite with Hellam conglomerate member.	€c €h		500	Vitreous to granular quartzite, massive and thin bedded, some quartz schist and mica schist; conglomerate-bearing beds at base.
		UNCONFORMITY				
ALGONKIAN (?)	GLENARM	Peters Creek schist.	pck		2000±	Green fine-grained laminated chloritic mica schist.
		Wissahickon formation.	wcs wms			
		Cockeysville marble.	cv		5000–8000±	Biotite gneiss and muscovite schist, injected by granite and gabbro.
		Setters formation.	sr			
					200+	Medium to coarse grained white saccharoidal marble, banded with phlogopite.
ARCHEAN (?)		Baltimore gneiss and Franklin limestone.	bgn fl		1000±	Quartz schist, quartzite, and mica gneiss.
						Contorted, banded gneiss, in part graphitic, injected by granite, gabbro, and serpentine. Franklin limestone is a banded white coarsely crystalline marble containing graphite.

Correlation chart

Age	Central Maryland	Eastern Pennsylvania	Southeastern New York
Ordovician	Cocalico shale. Conestoga limestone.	Cocalico shale (dark-gray shale, containing graptolites of normanskill type; gray, green, and purple slate; and green impure sandstone). Conestoga limestone (dark slaty limestone, coarse limestone and marble conglomerate, and thin-bedded granular blue limestone; probably of Chazy age).	Hudson schist (mica schist consisting of biotite and quartz, accompanied by garnet, staurolite, fibrolite, and kyanite). [The schist in the New York City area, formerly regarded as Hudson schist, is now regarded by most authors as of pre-Cambrian age and named Manhattan schist.]
Cambrian and Ordovician	Calcareous series, formerly known as Shenandoah limestone, now usually divided into several formations.	Calcareous series, formerly known as Shenandoah limestone, now divided into Beekmantown limestone, Conococheague limestone, Elbrook limestone, Ledger dolomite, Kinzers formation, Vintage dolomite (medium to fine grained white, gray, and blue limestone, dolomite, and marble, shale, and sandy limestone conglomerate).	"Wappinger limestone" (fine-grained crystalline dark-gray limestone ranging in age from Trenton to Lower Cambrian).
Lower Cambrian	Arenaceous series: Antietam schist. Harpers phyllite. Chickies formation, with Hellam conglomerate member at base.	Arenaceous series: Antietam quartzite. Harpers schist or phyllite Chickies quartzite, with Hellam conglomerate member at base.	Cheshire ("Poughquag") quartzite (silicified sandstone).
	UNCONFORMITY	UNCONFORMITY	UNCONFORMITY
Algonkian (?) (Glenarm series)	Peach bottom slate Cardiff conglomerate. Peters Creek schist (chloritic sericitic quartzite with interbedded chlorite-muscovite schist). Wissahickon formation. Cockeysville marble (coarse grained granular magnesian marble with calcareous mica schist phase). Setters formation (mica schist and mica gneiss with intercalated quartzite member).	Peach Bottom slate. Cardiff conglomerate. Peters Creek schist (chloritic sericitic quartz schist and chlorite-muscovite schist). Wissahickon formation (thoroughly crystalline quartz-feldspar-mica gneiss and mica schist. A mica schist facies was formerly known as the "Octoraro schist" and regarded as Ordovician in age). Cockeysville marble (coarsely crystalline marble, associated with gneiss and penetrated by pegmatite). Setters formation (quartzite and quartz schist, in some places dominantly a mica gneiss).	Manhattan schist (thoroughly crystalline sediments formerly supposed to be the equivalent of the "Hudson River slates" but of different physical and petrographic character; now regarded as of pre-Cambrian age). Inwood limestone (magnesian crystalline limestone, formerly supposed to be the equivalent of the "Wappinger limestone" of Paleozoic age, but now regarded as of pre-Cambrian age). Lowerre quartzite (few exposures and probably very thin; formerly believed to be the equivalent of the Cheshire quartzite, but now regarded as of pre-Cambrian age).
	UNCONFORMITY	UNCONFORMITY	
Archean (?)	Baltimore gneiss (medium-grained quartzose gneiss, altered sedimentary rock).	Franklin limestone (coarsely crystalline white marble with graphite and numerous silicate minerals). Baltimore gneiss (medium to fine grained banded sedimentary gneiss, penetrated by igneous rocks; in some places thoroughly granitized).	Marble (crystalline and very impure and tremolitic). Fordham gneiss (chiefly granitic and quartzose banded sedimentary gneisses and schist with igneous intrusives).

ILLUSTRATIONS

PLATE 1.—BALTIMORE GNEISS INJECTED BY PEGMATITE AND GABBRO IN THIN LAYERS
Road cut on east side of West Branch of Brandywine Creek half a mile north of Coatesville, Coatesville quadrangle

PLATE 2.—BALTIMORE GNEISS CLOSELY FOLDED AFTER INJECTION BY PEGMATITE AND GABBRO
About 2½ miles north of Bryn Mawr, Norristown quadrangle

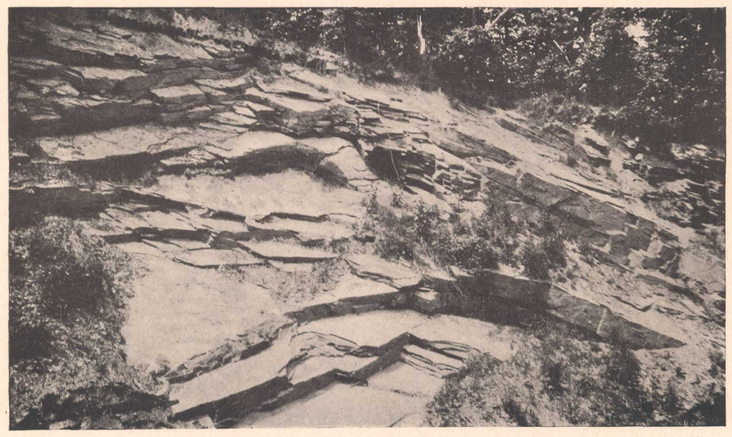


PLATE 3.—THIN-BEDDED MICACEOUS QUARTZITE OF THE SETTERS FORMATION
Quarry at Avondale, Coatesville quadrangle

PLATE 4.—SCHISTOSE CHICKIES QUARTZITE, SCHISTOSE PLANE DIPPING SOUTHEAST
Exposed in small gorge in North Valley Hills 2 miles west of Coatesville, Coatesville quadrangle

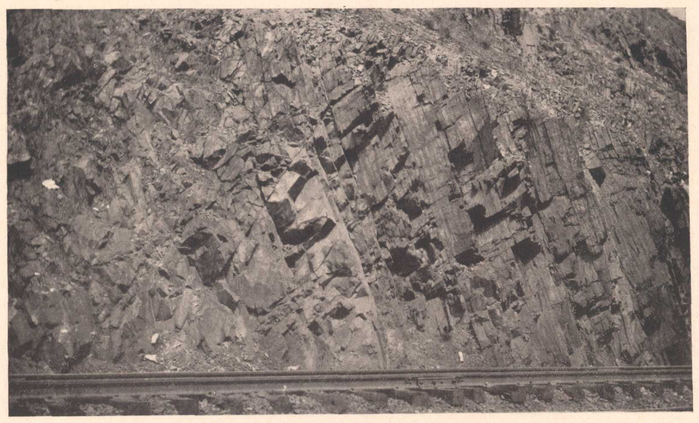


PLATE 5.—THICK EVEN-BEDDED CHICKIES QUARTZITE IN LOWER PART OF THE FORMATION
Pennsylvania Railroad cut 1 mile west of Atglen, Coatesville quadrangle

PLATE 6.—THIN-BEDDED CHICKIES QUARTZITE ABOVE THE THICK BEDS
Pennsylvania Railroad cut 1 mile west of Atglen, Coatesville quadrangle

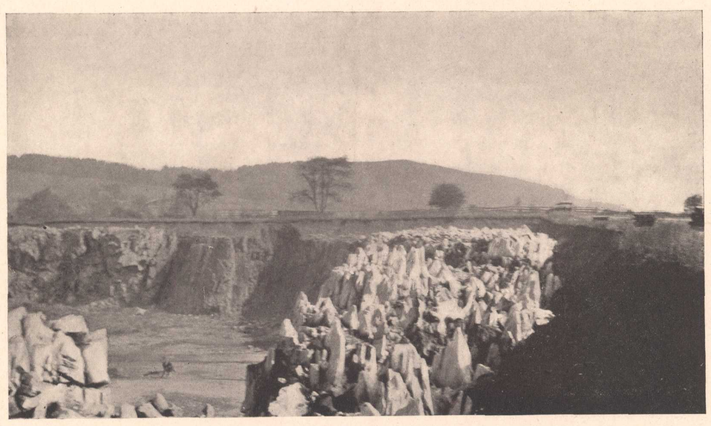


PLATE 7.—KARREN STRUCTURE PRODUCED BY SUBSOIL SOLUTION OF LEDGER DOLOMITE EXPOSED IN QUARRY STRIPPING
Quarry of Charles Warren Co., at Cedar Hollow, near Devault, Phoenixville quadrangle

PLATE 8.—LIMESTONE CONGLOMERATE INTERBEDDED WITH THIN-BEDDED DARK LIMESTONE NEAR BASE OF CONESTOGA LIMESTONE
In small quarry 2 miles west of Downingtown, Phoenixville quadrangle. The conglomerate is composed of angular fragments of white marble in a limestone matrix