

STRUCTURE SECTIONS

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

STATE OF PENNSYLVANIA  
REPRESENTED BY THE  
DEPARTMENT OF INTERNAL AFFAIRS  
TOPOGRAPHIC AND GEOLOGIC SURVEY

PENNSYLVANIA  
HUNTINGDON QUADRANGLE



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Control by A. H. Thompson.  
Topography by A. M. Walker and E. S. Ela.  
Surveyed in 1901.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.



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Geology by Charles Butts.  
Surveyed in 1913.

EXPLANATION SEDIMENTARY ROCKS		EXPLANATION CONTINUED	
SHEET SYMBOL	SECTION SYMBOL	SHEET SYMBOL	SECTION SYMBOL
<b>QUATERNARY</b>		<b>QUATERNARY</b>	
Qal	Alluvium (silt, sand, and gravel constituting the flood plains of present streams)	Oj	Juniata formation (chiefly red and some green fine-grained sandstone and red lumpy mud rock; non-fossiliferous)
<b>PENNSYLVANIAN</b>		<b>UPPER ORDNOVICIAN</b>	
Ca	Allegheny formation (shale and sandstone with beds of coal and clay)	Os	Owego sandstone (gray fine-grained thick-bedded cross-bedded sandstone; contains a few small quartz pebbles in lower part; non-fossiliferous)
Cpv	Pottsville formation (sandstone, conglomerate, shale, and coal; Homewood sandstone member at top; Keifer shale member; middle part containing sandstone and conglomerate; at bottom)	Orv	Reedsville shale (chiefly olive-green shale, weathering to small shaly, upper part containing argillaceous and ferruginous limestone layers; fine limestones of the Ordovician zone at top, and a few feet of black shale containing graptolites at base)
<b>MISSISSIPPIAN</b>		<b>MIDDLE ORDNOVICIAN</b>	
Cmc	Mauch Chunk formation (mostly red shale or lumpy mud rock with a few thin beds of fine-grained sandstone; Trough Creek limestone member, Cc, at bottom)	Ort	Trenton limestone (thin-bedded black argillaceous limestone weathering to small flat sandstone pieces; sparsely fossiliferous)
Cpo	Pocono formation (chiefly gray and olive-green shale with gray sandstone and a little red shale and bituminous limestone; fossiliferous throughout; includes Saxton conglomerate member, Cb, at top; coarse conglomerate at base)	Orf	Rodman limestone (thick- and thin-bedded dark crystalline limestone, weathering granular, fossiliferous)
Dha	Hampshire formation (predominantly red lumpy shale or mud rock with occasional fragments of green shale and sandstone)	Dha	Lowville limestone (thick-bedded dark, fine, even-grained limestone, with occasional fractures; mostly high-grade limestone, the upper quarry rock)
<b>UPPER DEVONIAN</b>		<b>LOWER ORDNOVICIAN</b>	
Dg	Chemung formation (chiefly green, gray, and olive-colored shale and thin beds of argillaceous fine-grained sandstone; fossiliferous throughout; includes Saxton conglomerate member, Cb, at top; includes Pines Ridge sandstone member, Dp, and conglomerate (siltite, Cc))	Dch	Carlin limestone (thick-bedded, mainly fine-grained dark limestone, the lower quarry rock; sparsely fossiliferous; lower part sandstone member; generally highly fossiliferous (Murchison means ironstone, at base, separating the two quarry beds)
Dob	Brallier shale (micaceous, siliceous slaty green shale with some thin beds of fine-grained sandstone; sparsely fossiliferous; mainly pelecypoda and cephalopoda of the Naples fauna)	Dch	UNCONFORMITY
Dh	Harrell shale (soft gray shale and black shale interbedded; highly fossiliferous; small pelecypoda and cephalopoda of the Naples fauna)	Dch	Bellefonte dolomite (dark fine-grained dolomite, thick-bedded in lower part; dark shale layers which weather to heavy chert at surface; chert commonly fossiliferous; thin limestone pieces; Stonehenge present near and southeast of Ore Hill)
Dm	Hamilton formation (principally olive-green shale with some thin beds of fine-grained sandstone and thin limestone at top; ridge-making sandstone at top; locally, sparsely fossiliferous, locally a foot or two of limestone at top with Pines faunas)	Dm	Axemann limestone (thin-bedded blue limestone with a few dolomite layers; abundantly fossiliferous)
Dm	Marcellus shale (black fossiliferous shale, grading upward into olive-green shale)	Dm	Nittany dolomite (thick-bedded light-gray fine-grained dolomite with some chert layers which weather to heavy chert at surface; chert commonly fossiliferous; thin limestone pieces; Stonehenge present near and southeast of Ore Hill)
Dp	Onondaga formation (gray shale, probably calcareous, and thin argillaceous limestone)	Dm	Larks dolomite (chiefly thick-bedded dark-blue coarsely crystalline dolomite, generally without chert; but locally weathering to heavy chert at surface; lower part is light-gray, fine-grained, and thick-bedded; contains thin laminae that weather in relief; sparsely fossiliferous)
Dp	Ridgeley sandstone (thick-bedded calcareous sandstone weathering to coarse friable sandstone; locally a little conglomerate; contains small quartz pebbles; highly fossiliferous)	Dm	Mines dolomite (coarse and fine-grained blue dolomite, largely oolitic; on weathering gives rise to great quantity of rounded quartz grains; sparsely fossiliferous, including Crinoid stems and trilobites)
Dp	Shriver limestone (thin-bedded siliceous limestone, weathering to fine-grained sandstone; black calcareous shale at bottom, sparsely fossiliferous)	Dm	Gatesburg formation (chiefly thick-bedded blue coarsely crystalline dolomite, with many layers of limestone up to 10 feet thick; Shriver dolomite member, Cc, free of sandstone, at base; Ore Hill limestone member, Cc, which contains rare trilobites, in middle)
Dp	Heiderberg limestone (lower part is thick-bedded gray limestone with thin gray chert at top, chiefly Keifer limestone member; overlying Chemung and New Scotland limestone members thin and locally cherty; contains small quartz pebbles throughout)	Dm	Warrior limestone (thin-bedded blue fine-grained magnesian limestone with shaly partings; some layers contain abundant rounded quartz grains; sparsely fossiliferous, including Crinoid stems and trilobites)
Dp	Tonoloway limestone (thin-bedded, finely laminated dark limestone; sparsely fossiliferous, chiefly Leptaenaria)	Dm	Pleasant Hill limestone (lower part argillaceous thin-bedded limestone weathering to shale; upper part pure thick-bedded dark limestone; contains trilobites, brachiopods, and Hyolithus)
Dp	Wills Creek shale (chiefly gray calcareous shale and some greenish limestone; fossiliferous)	<b>UNCONFORMITY</b>	
Dp	Bloomsburg redbeds (lumpy red shale and thick-bedded ridge-making red sandstone)	Dp	Known fault
Dp	McKenzie formation (blue thin-bedded fossiliferous limestone and soft gray and green shale; thin red shale west of Lock Mountain)	Dp	Probable fault
Dp	Clinton formation (mainly green and blue shale, weathering granular, and thin-bedded green sandstone in middle; Keifer sandstone member, Cc, near top; shale with thin limestone layers above Keifer sandstone member represents Rochester shale; Middlebury iron-ore bed just beneath Keifer sandstone member; Pennsylvanian iron-ore bed in lower half; hard quartzite sandstone, red sandstone, and Lanes Black Iron ore, Cc, at base; generally fossiliferous)	Dp	Concealed fault (covered by younger deposits)
Dp	Tuscarora quartzite (hard white quartzite and sandstone; largely thick-bedded; quartzite mainly quarried for pavement; contains scudicoid worm tubes and Arthropods at top)	Dp	T Overthrust side of thrust fault
<b>SILOURIAN</b>		Dp	Strike and dip of stratified rocks
		Dp	Strike of vertical beds
		Dp	Horizontal beds
		Dp	Axis of anticline
		Dp	Axis of syncline

ORDOVICIAN

DEVONIAN

SILURIAN

CAMBRIAN