Generalized

GEOLOGIC SECTION OF ROCKS

In Ohio

INFORMATION CIRCULAR

No. 4

Nomenclature and other information for rocks of Mississippian age and older have been superseded by the Generalized Column of Bedrock Units in Ohio <http://www.dnr.state.oh.us/Portals/10/pdf/stratcol.pdf>.

DIVISION OF GEOLOGICAL SURVEY
Horace R. Collins, Chief

GENERALIZED SECTION OF OHIO

System	Series or group	Formation division or stage	Member	Kind of Material	Thickness Ft.	Thickness In.	Interval Ft.	Interval In.
			Gilmore	Sandstone	20	0		
				Shales, variable	32	0		
			Gilmore	Limestone, local	2	0		
				Shales, variable	61	0	178	0
			Nineveh	Sandstone, local	52	0		
				Shales, soft to hard	10	0		
			Nineveh	Coal, local, shaly	1	0		
			Nineveh	Limestone, irregular	8	0		
				Shale and shaly sandstone	91	0	100	0
		Greene	Hostetter	Coal, thin, shaly, local	1	0		
				Shales, variable	39	0		
			Fish Creek	Coal, very local	1	0	40	0
				Shale, soft to hard	10	0		
			Fish Creek	Sandstone, local	20	0	45	0
				Shales, variable	14	0		
			Dunkard	Coal, local, impure	1	0		
				Shale, irregular	7	0		
			Jollytown	Sandstone, local	25	0	42	0
				Shales, variable	8	0		
			Jollytown "A"	Coal, local, impure	2	0		
							405	0
			Upper Washington	Shales, variable	1	0		
				Limestone, irregular	5	0		
				Shale, variable	3	0		
Permian			Hundred	Sandstone, local	17	0	49	0
				Shales, variable	3	0		
			Upper Marietta	Sandstone	16	0		
				Shale, siliceous	2	0		
			Washington "A"	Coal, shaly, local	2	0		
				Shales, local	8	0		
			Middle Washington-Creston-Reds	Limestone	7	0		
				Shales, soft to hard	26	0		
			Lower Washington	Limestone	9	0	63	0
				Shale, calcareous	3	0		
		Washington	Lower Marietta	Sandstone, local	6	0		
				Shale, siliceous	1	0		
			Washington	Coal, shaly	3	0		
				Shales, soft to hard	15	0		
			Little Washington	Coal, shaly	1	0	16	0
				Shales, irregular	4	0		
			Mannington	Sandstone, local	30	0	42	0
				Shales, variable	6	0		
			Waynesburg "A"	Coal, unsteady	2	0		
				Shales, soft to hard	9	0		
			Waynesburg	Sandstone, rather steady	30	0		
				Shale, gray, siliceous	5	0	51	0
			Elm Grove	Limestone	2	0		
			Cassville	Shale, gray	5	0		
							221	0
			Waynesburg No. 11	Coal, fair purity	1	4		
			Gilboy	Shale and sandstone	14	6	16	0
			Little Waynesburg	Coal, persistent		2		
			Waynesburg	Limestone and marly shale	10	0		
			Uniontown	Shale or sandstone	28	7	39	5
			Uniontown No. 10	Coal		10		
			Uniontown	Shale, siliceous, and limestone	5	0		
			Arnoldsburg	Sandstone	8	0		
			Arnoldsburg	Coal wanting				
			Arnoldsburg	Limestone and calcareous shale	37	0		
			Fulton	Shale, green, or shaly sandstone	4	0	110	2
			Benwood	Limestone and calcareous shale	34	4		
			Upper Sewickley	Sandstone, local	20	0		
		Monongahela	Sewickley Mapletown Meigs Creek No. 9	Coal	1	10		
				Clay shale, calcareous	3	0		
			Lower Sewickley	Sandstone	19	6	23	1
			Fishpot	Coal, persistent, thin		7		
			Fishpot	Limestone and marly shale	20	1		
			Fishpot or Pomeroy	Sandstone	12	0	33	5
			Redstone Pomeroy	Coal, unsteady	1	4		
			Redstone	Limestone and marly shale	13	0		
			Upper Pittsburgh	Sandstone, local	9	0	25	7
			Pittsburgh No. 8	Coal, persistent	3	7		
							247	8
				Clay shale		6		
			Upper Pittsburgh	Limestone, irregular	5	0	19	0
				Clay shale	13	5		
			Upper Little Pittsburgh	Coal, very local		1		
				Clay shale	4	0		
			Bellaire	Sandstone, local	10	6		
				Shale, siliceous	2	5	17	0
			Lower Little Pittsburgh	Coal, seldom present		1		
				Shale, variable	8	0		
			Summerfield Lower Pittsburgh	Limestone	12	0		
				Shales, variable	26	0	69	0
			Connellsville	Sandstone, local	20	0		
				Clay shale	2	10		
			Clarksburg	Coal, local		2		
			Clarksburg	Limestone and marly shale	4	0		
			Morgantown	Sandstone, local	30	0	34	1
			Elk Lick	Coal, usually wanting		1		
			Elk Lick	Limestone and marly shale	5	0		
				Shale, variable	5	0		
			Birmingham	Shale, siliceous	10	0	20	5
			Skelley	Limestone, local, marine		4		
			Duquesne	Coal, seldom evident		1		
				Shale, variable	9	0		
				Shale, siliceous	11	0		
			Gaysport	Limestone, siliceous, marine	1	0		
		Conemaugh		Shale, siliceous	16	0	54	6
			Ames	Limestone, marine	1	6		
				Shale, siliceous	15	0		
Pennsylvanian			Harlem	Coal, persistent	1	0		
			Round Knob-Pittsburgh	Clay, calcareous	2	0		
				Clay shale, red	12	0		
			Saltzburg	Sandstone, local	8	0	26	0
				Shale, siliceous	3	0		
			Barton	Coal, local	1	0		
				Clay shale	4	0		
			Ewing	Limestone, ferruginous	1	0		
				Shale, siliceous	3	0		
			Cow Run	Sandstone, local	15	4	29	0
				Shale, siliceous	2	0		
			Portersville	Limestone, marine	2	0		
			Anderson	Coal, persistent	1	8		
				Clay shale	3	7		
			Bloomfield	Limestone, local	1	5		
				Shales, variable	19	0	30	0
			Cambridge	Limestone, marine	4	0		
			Wilgus	Coal, unsteady	2	0		
				Clay shale	3	8		
			Buffalo	Shale or sandstone	23	0		
			Brush Creek	Limestone, marine	20	0	47	0
			Brush Creek	Coal, local, thin		4		
				Shales, variable	10	6	11	0
			Mason	Coal, local		6		
			Upper Mahoning	Shale or sandstone	10	0	11	0
			Mahoning, Groff	Coal	1	0		
			Thornton	Clay, irregular	5	0		
			Mahoning	Limestone, local	2	0	32	0
			Lower Mahoning	Shale or sandstone	25	0		
							400	0
			Upper Freeport No. 7	Coal, patchy	3	0		
				Clay and shale	7	0		
			Upper Freeport	Limestone and marly shale	2	0	12	3
			Bolivar	Coal, local, thin		3		
			Bolivar	Clay, flint and plastic	5	0		
			Upper Freeport	Shale or sandstone	33	0	39	0
			Lower Freeport, Rogers	Coal, patchy	1	0		
				Clay, impure	2	6		
			Lower Freeport	Limestone, local	1	0	29	6
			Lower Freeport	Shale or sandstone	25	0		
			Upper Kittanning	Coal, seldom present	1	0		
				Shale and sandstone	10	0		
			Washingtonville (Yellow Kidney ore)	Shale, marine	4	0	18	0
			Middle Kittanning No. 6	Coal, persistent	4	0		
				Clay, siliceous	3	6		
			Salem	Limestone, impure, local		6	14	6
			Red Kidney ore	Shales, siliceous	10	0		
			Strasburg	Coal, local		6		
			Oak Hill	Clay, flint and plastic	4	0		
				Shales, siliceous	3	0	13	4
			Hamden	Limestone, unsteady, marine	4	0		
			Lower Kittanning No. 5	Coal	2	4		
		Allegheny		Clay, plastic	5	0	5	4
			Lawrence	Coal, shaly, local		4		
				Clay, flint and plastic	6	0		
			Kittanning	Shale and sandstone	8	2		
			Ferriferous	Ore, irregular		8	21	4
			Vanport	Limestone, marine	6	0		
			Scrubgrass	Coal, seldom present		6		
				Shale, carbonaceous	5	0	9	0
			Clarion No. 4a	Coal, patchy	4	0		
				Clay, flint and plastic	5	0		
			Canary	Ore, very local		6	17	0
			Clarion	Sandstone, irregular	10	6		
			Winters	Coal, very local	1	0		
			Zaleski	Flint, impure, marine	1	0	2	0
			Ogan	Coal, local	1	0		
				Shale and sandstone	25	0		
			Putnam Hill	Limestone, marine	4	0	31	0
			Brookville No. 4	Coal, steady	2	0		
							212	3

System	Series or group	Formation division or stage	Member	Kind of Material	Thickness Ft.	Thickness In.	Interval Ft.	Interval In.
				Clay, plastic	4	0		
			Homewood	Shale or sandstone	10	0	15	0
			Tionesta No. 3b	Coal, local	1	0		
				Clay, plastic	5	0		
				Shale and sandstone	24	0		
			Upper Mercer, Big Red Block	Ore, irregular		4	32	0
			Upper Mercer	Limestone or flint	1	8		
			Bedford	Coal, patchy	1	0		
				Clay, siliceous	3	0		
				Shale and sandstone	7	0		
			Sand Block	Ore, siliceous, local		6	15	0
				Shale and sandstone	3	6		
			Upper Mercer No. 3a	Coal, local	1	0		
				Clay, siliceous, plastic	3	0		
				Shale and sandstone	11	0		
			Lower Mercer, Little Red Block	Ore, Kidney		3		
				Shale, siliceous	1	9	18	6
			Lower Mercer	Limestone, steady, marine	2	0		
			Middle Mercer	Coal, steady, thin		6		
				Clay, siliceous, plastic	3	6		
				Shale and sandstone	5	0	9	0
			Flint Ridge	Coal, thin, local		6		
				Clay, plastic and flint	4	0		
				Shale and sandstone	5	0		
			Boggs	Ore and limestone, marine		6	11	6
				Shale, siliceous	1	0		
			Lower Mercer No. 3	Coal, steady, thin	1	0		
				Clay, siliceous	3	0		
				Shale and sandstone	23	0	28	0
			Lowellville, Poverty Run	Limestone or ore, marine	1	0		
			Vandusen	Coal, thin, unsteady	1	0		
				Clay, impure	2	0		
				Shale and sandstone	17	0	20	6
			Bear Run	Coal, local	1	6		
				Clay, siliceous	3	0		
			Connoquenessing or Massillon	Shale or sandstone (*Jackson*, *Sand Block*, and *Lincoln* ores in interval)	24	0	29	0
			Quakertown No. 2	Coal, patchy	2	0		
				Clay, siliceous	5	0		
				Shale and sandstone	12	0	17	3
			Huckleberry	Coal, thin, local		3		
				Clay, siliceous	3	0		
				Shale, argillaceous	1	0	10	3
			Guinea Fowl	Ore, local		3		
				Shale, gray, siliceous	5	9		
			Anthony	Coal, thin		3		
			Sciotoville	Clay, flint and plastic	4	0		
				Shale and sandstone	20	0		
			Sharon	Ore, local, marine		3	32	0
				Shale, siliceous	4	9		
			Sharon No. 1	Coal, patchy	3	0		
				Clay, impure	2	0		
				Shale, siliceous, irregular	5	0	18	0
			Sharon	Conglomerate, patchy	10	0		
			Harrison	Ore, local, impure, marine	1	0		
							256	0

System	Series or group	Formation division or stage	Member	Kind of Material	Average thickness in feet	Variation in feet
		Maxville		Limestone, hard, with some shale	?	0–200
		Logan	Vinton	Sandstone and shale, bluish gray	80	30–150
			Allensville	Conglomerate, fine, with sandstone and shale	16	10–30
			Byer	Sandstone and sandy shale	70	50–100
Mississippian		Cuyahoga	Berne	Conglomerate, coarse, local	4	0–10
			Black Hand	Conglomerate or sandstone, massive	120	50–200
			Portsmouth	Shale with thin sandstone lenses	95	70–120
			Buena Vista	Sandstones, gray to brown, with some shale	80	60–100
			Henley	Shale, gray, with thin sandstone lenses	40	30–50
		Sunbury		Shale, brown to black, fissile	20	15–35
		Berea		Sandstones with shale partings	20	15–50
				Shale, gray, siliceous, local	3	1–8
				Sandstone, with shale partings	12	5–20
		Bedford	Sagamore	Shale, soft, pinkish, ferruginous, not persistent	40	0–80
			Euclid	Shale, firm, gray, siliceous	45	30–40
		Ohio	Cleveland	Shale, carbonaceous, brown to black, fissile	120	80–150
			Chagrin	Shale, gray, siliceous	70	10–2,000
			Huron	Shale, carbonaceous, brown to black, fissile	410	250–500
		Olentangy		Shale, light, soft, with some nodular and occasional bedded limestone	20	15–30
Devonian		Delaware		Limestone, dark to bluish gray, hard, with some flint and shale	45	30–70
		Marcellus		Shale, black, fissile	?	0–50
		Columbus	Venice	Limestone, light gray, massive, very fossiliferous. Bone-bed at top	35	30–40
			Marblehead	Limestone, dolomite, earthy, massive	45	30–50
			Bellepoint	Dolomite, limy, brownish, massive, few fossils	25	20–35
	Detroit River group	Lucas		Dolomite, medium bedded, gray to drab, few fossils	?	0–140
		Amherstburg		Dolomite, drab to brown, massive layers, few fossils	?	0–75
		Oriskany		Sandstone, local, except in southeastern Ohio	?	0–40
	Bass Island group	Raisin River		Dolomite, thin bedded, drab, few fossils		0–50
		Put-in-Bay		Dolomite, thin to massive bedded, gray to brown	570	200–250
		Tymochtee		Dolomite, thin to massive bedded, gray to brown		125–175
		Greenfield		Dolomite, thin to massive bedded, gray to brown		175–225
Silurian	Niagara group	Guelph		Dolomite, light, massive, very pure	80	50–100
		Cedarville		Dolomite, light to drab, massive, pure	70	50–100
		Springfield		Dolomite, drab to bluish gray, medium bedded	10	6–16
		Euphemia		Dolomite, drab to bluish gray, massive	6	2–11
		Alger	Massie	Shale, bluish gray, calcareous	5	5–6
			Laurel	Dolomite, limy, hard, medium bedded	6	5–9
			Osgood	Shale, bluish gray, calcareous	45	10–80
		Dayton		Dolomite, limy, gray to drab, medium bedded	8	7–13
	Clinton	Brassfield		Limestone, light to pink, irregularly bedded	67	20–80
				Shale, soft, variable, gray to pink	10	1–20
	Medina	Clinton		Sandstone, light to pink, fine grained	20	0–100
		Elkhorn		Shale, soft, red to variegated	63	10–200
	Richmond	Whitewater	Upper Whitewater	Calcareous shales with thin roughly bedded limestones		
			Saluda	Calcareous shales with thin bedded limestones	75	60–100
			Lower Whitewater	Calcareous shales with thin bedded limestones		
		Liberty		Calcareous shales with some thin bedded limestones	35	30–40
		Waynesville	Blanchester	Calcareous shales with thin bedded limestones		
			Clarksville	Calcareous shales with thin bedded limestones	95	85–140
			Ft. Ancient	Calcareous shales with thin bedded limestones		
		Arnheim	Oregonia	Calcareous shales with thin bedded limestones		
			Sunset	Calcareous shales with nodular limestones	60	50–75
Ordovician	Maysville	McMillan	Mt. Auburn	Calcareous shales with thin bedded limestones		
			Corryville	Calcareous shales with thin bedded limestones	90	80–120
			Bellevue	Calcareous shales with thin bedded limestones		
		Fairview	Fairmont	Calcareous shales with thin bedded limestones		
			Mt. Hope	Calcareous shales with thin bedded limestones	115	100–150
	Eden	Latonia	McMicken	Calcareous shales with nodular limestones		
			Southgate	Calcareous shales with nodular limestones	245	225–275
			Economy	Calcareous shales with nodular limestones		
	Utica	Fulton		Calcareous variegated shales with small quantities of shaly limestones	170	50–400
	Trenton	Point Pleasant		Limestone or dolomite, dark, parts shaly		
				Covered, reached only by the drill	185	155–225
				Limestone or dolomite, massive, dark		
	Black River			Limestone or dolomite	425	375–475
	Glenwood			Dolomites with green shales	20	10–40
	St. Peter			Sandstone, local	?	0–50
	Lower Magnesian			Dolomites with some sandstone formations	450?	?–?
Cambrian				Dolomites with some massive sandstones	720?	?–?
Pre-Cambrian				Crystalline rocks, mainly gneisses and schists		

There have been a number of changes in classification and nomenclature since the original printing of this column but pending a comprehensive revision it was deemed advisable to reprint this chart without revision for general use. Reprinted from: Stout, Wilber, 1943, Ohio Geol. Survey Bull. 44.

Nomenclature and other information for rocks of Mississippian age and older have been superseded by the Generalized Column of Bedrock Units in Ohio <http://www.dnr.state.oh.us/Portals/10/pdf/stratcol.pdf>.

DIVISION OF GEOLOGICAL SURVEY
HORACE R. COLLINS, CHIEF