

1. TYPE SECTIONS OF THE MEMBERS OF THE LOCKATONG AND PASSAIC FORMATIONS

Name of unit	Latitude & Longitude	Descriptive Location of Type Section	Etymology	Depth in Cores
PASSAIC FORMATION				
Exeter Township Member (informal member VV)	40°18'37" 75°50'43"	Exposures on S side of ridge for Jacksonwald Basalt, on N side of Constitution Avenue, 360 m E of Shelbourne Rd, Exeter Twp., Berks Co., PA	Named for Exeter Twp., Berks Co., PA, the location of the type section.	Martinsville no. 1 1121.5 - 1183.7 ft
Pine Ridge Member (informal member UU)	40°18'41" 75°49'54"	Outcrops along small tributary of Antietam Creek 100 m SW of culvert for Schoffers Rd. Culvert is 303 m N of intersection of Schoffers Rd with Fabers Rd., Exeter, Twp., Berks Co., PA	Named for Pine Ridge, the hill to the south of the type section, Exeter Twp., Berks Co., PA.	Martinsville no. 1 1183.7 - 1414.0 ft
informal member TT	40°37'09" 74°34'22"	Martinsville no. 1, 1414.0 ft to 1729.0 ft.	Name follows alphabetically from below.	Martinsville no. 1 1414.0 - 1729.0 ft
informal member SS	40°37'09" 74°34'22"	Martinsville no. 1, 1729.0 ft to 2028.2 ft	Name follows alphabetically from below.	Martinsville no. 1 1729.0 - 2028.2 ft
informal member RR	40°37'09" 74°34'22"	Martinsville no. 1, 2028.2 ft to 2293.5 ft	Name follows alphabetically from below.	Martinsville no. 1 2028.2 - 2293.5 ft
informal member QQ	40°37'09" 74°34'22"	Martinsville no. 1, 2293.5 ft to 2616.6 ft	Name follows alphabetically from below.	Martinsville no. 1 2293.5 - 2616.6 ft
informal member PP	40°37'09" 74°34'22"	Martinsville no. 1, 2616.6 ft to 2876.0 ft	Name follows alphabetically from below.	Martinsville no. 1 2616.6 - 2876.0 ft
informal member OO	40°37'09" 74°34'22"	Martinsville no. 1, 2876.0 ft to 3214.5 ft	Name follows alphabetically from below.	Martinsville no. 1 2876.0 - 3214.5 ft. Weston Canal no. 2 22.0 (CT.) - 102.1 ft
informal member NN	40°32'33" 74°33'49"	Weston Canal no. 2, 102.1 ft to 339.0 ft in Weston Canal no. 1	Name follows alphabetically from below.	Martinsville no. 1 3214.5 - 3503.0 ft. Weston Canal no. 2 102.1 - Weston Canal no. 1 339.0 ft
informal member MM	40°32'33" 74°33'49"	Weston Canal no. 1, 339.0 ft to 567.5 ft	Name follows alphabetically from below.	Martinsville no. 1 3503.0 - 3770.7 ft. Weston Canal no. 1 339.0 - 567.5 ft

informal member LL	40°32'33" 74°33'49"	Weston Canal no. 1, 567.5 ft to 802.6 ft	Name follows alphabetically from below	Martinsville no. 1 3770.7 - 4015.0 ft (TD). Weston Canal no. 1 567.5 - 802.6 ft
informal member KK	40°32'33" 74°33'49"	Weston Canal no. 1, 802.6 ft to 1011.5 ft	Name follows alphabetically from below	Weston Canal no. 2 802.6 - 1011.5 ft
informal member JJ	40°32'33" 74°33'49"	Weston Canal no. 1, 1011.5 ft to 1330.5 ft	Name follows alphabetically from below	Weston Canal no. 1 1011.5 - 1330.5 ft
informal member II	40°32'33" 74°33'49"	Weston Canal no. 1, 1330.5 ft to 1568.0 ft	Name follows alphabetically from below	Weston Canal no. 1 1330.5 - 1568.0 ft
Ukrainian Member (informal member HH)	40°31'42" 74°30'49"	Outcrops in bed and banks of small S flowing branch tributary to the Raritan River on the NE side of Ukrainian Village, Franklin Twp., Somerset Co., NJ	Named for Ukrainian Village of Franklin Twp., Somerset Co., NJ, adjacent to which is the type section	Weston Canal no. 1 1568.0 - 1794.4 ft Somerset no. 2 24.0 (CT. - 260.4 ft
Cedar Grove Member (informal member GG)	40°29'31" 74°34'42"	Outcrops on E side of Canal Rd., in Millstone, Franklin Twp., Somerset Co. NJ, 1.94 km NNW of Blackwells Mills	Named from Cedar Grove Rd., Franklin Twp., Somerset Co., NJ, on the side streets to which are numerous small exposures of the member	Weston Canal no. 1 1794.4 - 2035.8 ft Somerset no. 2 260.4 - Somerset no. 1 481.5 ft
informal member FF	40°30'31" 74°33'58"	Somerset no. 1, 481.5 ft to 731.0 ft	Name follows alphabetically from below	Weston Canal no. 1 2086.3 - 2316.5 ft Somerset no. 1 481.5 - 731.0 ft
informal member EE	40°30'31" 74°33'58"	Somerset no. 1, 731.0 ft to 986.4 ft	Name follows alphabetically from below	Weston Canal no. 1 2316.5 - 2596.9 ft Somerset no. 1 731.0 - 986.4 ft
informal member DD	40°30'31" 74°33'58"	Somerset no. 1, 986.4 ft to 1140.4 ft	Name follows alphabetically from below	Weston Canal no. 1 2596.9 - 2601.4 ft (TD). Somerset no. 1 986.4 - 1140.4 ft
informal member CC	40°30'31" 74°33'58"	Somerset no. 1, 1140.4 ft to 1386.5 ft	Name follows alphabetically from below	Somerset no. 1 1140.4 - 1386.5 ft
informal member BB	40°30'31" 74°33'58"	Somerset no. 1, 1386.5 ft to 1605.8 ft	Name follows alphabetically from below	Somerset no. 1 1386.5 - 1605.8 ft
informal member AA	40°30'31" 74°33'58"	Somerset no. 1, 1605.8 ft to 1773.8 ft	Name follows alphabetically from below	Somerset no. 1 1605.8 - 1773.8 ft
informal member Z	40°30'31" 74°33'58"	Somerset no. 1, 1773.8 ft to 2213.5 ft	Name follows alphabetically from below	Somerset no. 1 1773.8 - 1927.7 ft

informal member Y	40°30'31" 74°33'58"	Somerset no. 1, 2213.5 ft to 2429.7 ft	Name follows alphabetically from below	Somerset no. 1 1927.7 - 2213.5 ft Rutgers no. 2 27.0 (CT) - 78.7 ft
Mettars Member (informal member X)	40°31'04" 74°27'25"	Outcrops on west branch of small tributary of Raritan River, running S of and parallel to Brett Rd. W of its intersection with Mettars La., Rutgers University, Piscataway Twp., Middlesex Co., NJ	Named for Mettars La., (Piscataway Twp., Middlesex Co., NJ, which is about 100 m east of the type section. Informal name follows alphabetically from below	Somerset no. 1 2213.5 - 2429.7 ft Rutgers no. 2 78.7 - 274.0 ft
Livingston Member (informal member W)	40°31'21" 74°26'42"	Outcrops in ravine N of River Rd. (NJ Spur 514), parallel and just to the east of Ross Hall Blvd. S., Piscataway Twp., Middlesex Co., NJ	Named for Livingston College of Rutgers University, which is just to the NE of the type section. Informal name follows alphabetically from below	Somerset no. 1 2429.7 - 2644.8 ft Rutgers No. 2 274.0 - Rutgers no. 1 463.5 ft
Kilmer Member (informal member V)	40°31'17" 74°26'16"	Outcrops along tributary to Raritan River, NE of River Rd. (NJ Spur 514) on boundary between Boro of Highland Park and Edison Twp., Middlesex Co., NJ	Named for the old Kilmer Army base now part of Rutgers University, which is adjacent to type section. Informal name follows alphabetically from below	Somerset no. 1 2644.8 - 2794.5 ft Rutgers no. 1 463.5 - 602.0 ft
informal member T&U	40°32'33" 74°26'00"	Rutgers no. 1 core, 606.0 ft to 1128.5 ft	Probably consist of 2 units of equal rank, the lower of which is T and the upper U, following alphabetically from below	Somerset no. 1 2794.5 - 3009.5 ft (TD.) Rutgers no. 1 602.0 - 1128.5 ft
informal member S	40°32'33" 74°26'00"	Rutgers no. 1 core, 1128.5 ft to 1301.9 ft	Name follows alphabetically from below	Rutgers no. 1 1128.5 - 1301.9 ft
informal member R	40°32'33" 74°26'00"	Rutgers no. 1 core, 1301.9 ft to 1482.5 ft	Name follows alphabetically from below	Rutgers no. 1 1301.9 - 1482.5 ft
informal member Q	40°32'33" 74°26'00"	Rutgers no. 1 core, 1482.5 ft to 1684.0 ft	Name follows alphabetically from below	Rutgers no. 1 1482.5 - 1684.0 ft
Neshanic Member (informal member P)	40°30'18" 74°43'36"	Exposures in old quarry on E side of River Rd. (NJ Rt. 514), just S of Lehigh Valley railroad trestle, about 100 m north of the intersection of River Rd and Mill St., Hillsborough Twp., Somerset Co., NJ	Named for Neshanic Station (Branchburg Twp., Somerset Co., NJ), which is opposite the type section. Informal name (P) follows alphabetically from below. Name suggested by Parker and Houghton (1990).	Rutgers no. 1 - 1684.0 - 2015.3 ft
Perkasie Member (informal member N-O)	40°20'57" 75°10'00" and 40°28'57" 75°09'54"	Exposures in Buck County Crushed stone quarry at Harrow, PA (Ottsville), and along adjacent Rapp Brook, Tinnicum Twp., Bucks Co. PA (upper part). Lower part exposed along PA Rt. 611, at Ottsville, PA	Named by Johnson and McLaughlin (1957) for the Borough of Perkasie (East Rockhill Twp., Bucks Co., PA) located on the prominent ridge that consists of the member. Informal name given by Drake and others (1961)	Rutgers no. 1 2015.3 - 2297.3 ft Titusville no. 2 27.0 (CT) - 77.1 ft

informal member L-M	40°29'08" 75°08'56"	Outcrops along E side Rapp Creek, just N of the most southern ford for Bunker Hill Rd., Tinticum Twp., Bucks Co., PA	Gray portions originally named units L and M by McLaughlin (1943)	Rutgers no. 1 2297.3 - 2532.4 ft Titusville no. 2 77.1 - Titusville no. 1 358.8 ft
informal member K	40°30'18" 75°05'13"	Outcrops on SE side of ravine SE of Geigel Rd., W of its intersection with Permanent School Rd., Erwinna, Tinticum Twp., Bucks Co., PA	Gray portions originally named unit K by McLaughlin (1943)	Rutgers no. 1 2532.4 - 2791.5 ft Titusville no. 1 358.8 - 672.2 ft
informal member I	40°29'22" 75°05'00"	Outcrops on S side of tributary to Tinticum Creek, S of intersection of Headquarters and Tinticum Creek roads, Erwinna, Tinticum Twp., Bucks Co., PA	Gray portions originally named unit I by McLaughlin (1943)	Rutgers no. 1 2791.5 - 3074.0 ft Titusville no. 1 672.2 - 1013.5 ft
Graters Member (informal member G-H-H')	40°13'39" 75°28'21"	Outcrops along Lodal Creek of USGS 1966 7.5' Collegeville, PA Quadrangle (Landis Brook of the 1895 and 1908, 15' Norristown Quadrangle in Bascom and others, 1909a), just W of bridge for Godshall Road over the brook, Perkionmen Twp., Montgomery Co., PA	Gamed for Graters Ford on Perkionmen Creek at Gratersford, Perkionmen Twp., Montgomery Co., PA by McLaughlin (1933)	Rutgers no. 1 3074.0 - 3096.3 (TD.) Titusville no. 1 1013.5 - 1430.1 ft
informal member E-F	40°28'50" 75°03'19"	Outcrops along small creek on E side of NJ Rt. 29 at Kingwood Sta., Kingwood Twp., Hunterdon Co., NJ, paralleling the Kingwood to Barbertain Rd	Gray portions originally named units E and F by McLaughlin (1943)	Titusville no. 1 1430.1 - 1699.5 ft
Warford Member (informal member D)	40°28'09" 75°03'41"	Outcrops along Warford Brook, about 800 m south of Kingwood Sta., Kingwood Twp., Hunterdon, Co., NJ	Named for the brook of the same name (Kingwood Twp., Hunterdon Co., NJ, as suggested by H. Houghton (pers. comm.)	Titusville no. 1 1699.5 - 2011.8 ft
informal member C	40°27'30" 75°04'04"	Exposure on E side of NJ Rt. 29, below Devils Tea Table, Kingwood Twp., Hunterdon Co., NJ	Gray portions named by McLaughlin (1943)	Titusville no. 1 2011.8 - 2408.4 ft
LOCKATONG FORMATION				
Walls Island Member (informal member B)	40°27'14" 75°04'04"	Exposure on E side of NJ Rt. 29 beginning at intersection with Warsaw Rd (Kingwood Twp., Hunterdon Co., NJ) and extending to SSE for 0.5 km	Named by Olsen (1986) for Walls Island (PA) in the Delaware River, which is SE of the type section. Gray portion named unit B by McLaughlin (1944)	Titusville no. 1 2408.4 - 2745.0 ft Nursery no. 1 312.0 (CT.) - 432.6

Tumble Falls Member (informal member A2)	40°26'53" 75°03'50"	Exposures on W side of PA Rt. 32 approximately opposite Village of Tumble Falls, Kingwood Twp., Hunterdon Co., NJ and 2.3 km N of Point Pleasant, Plumstead Twp., Bucks Co., PA	Named for Tumble Falls, Kingwood Twp., Hunterdon, Co., NJ by Olsen (1986). Gray portion named A2 by McLaughlin (1944)	Trusville no. 1 2745.0 - 3034.5 (TD.) ft Nursery no. 1 432.6 - 710.9 ft
Smiths Corner Member (informal member A1)	40°26'42" 75°03'49"	Exposures on W side of PA Rt. 32 1.5 km N of Point Pleasant, Plumstead Twp., Bucks Co., PA	Named by Olsen (1986) for outcrops of McLaughlin's (1944) "Smiths Corner red" in the small tributary to Tohickon Creek at Village of Smiths Corner, Plumstead Twp., Bucks Co., PA. Gray portion named A1 by McLaughlin (1944)	Nursery no. 1 710.9 - 1005.7 ft
Prahls Island Member	40°26'33" 75°03'47"	Exposures in old Busik Quarry on E side of NJ Rt. 29, about 1.7 km S of Village of Tumble Falls, Kingwood Sta., Kingwood Twp., Hunterdon, Co., NJ	Named by Olsen (1986) for Prahls Island (PA) in the Delaware River, the south end of which is just W of the type section	Nursery no. 1 1005.7 - 1300.0 ft
Tohickon Member	40°26'15" 75°03'42"	Outcrops along small tributary to the Delaware River on E side of NJ Rt. 29, about 1.6 km N of the Village of Byram, Kingwood Twp., Hunterdon Co., NJ	Named for outcrops along Tohickon Creek, Plumstead Twp., Bucks Co., PA by Olsen (1986 - misspelled as Tohicken)	Nursery no. 1 1300.0 - 1556.0 ft
Skunk Hollow Member	40°19'31" 75°12'30"	Exposures in Haines and Kibblehouse Quarry, along Skunk Hollow Rd, Hilltown Twp., Bucks Co., PA	Named by Olsen (1986) for Skunk Hollow Rd., along which is the quarry containing the type section	Nursery no. 1 1556.0 - 1870.0 ft
Byram Member	40°25'47" 75°03'39"	exposures on E side of NJ Rt. 29, about 1.3 km N of Byram, Kingwood Twp., Hunterdon Co., NJ	Named for the village of the same name in Kingwood Twp., Hunterdon Co., NJ, by Olsen (1986)	Nursery no. 1 1870.0 - 2078.8 ft Princeton no. 2 46.0 (CT.) - 48.7 ft
Ewing Creek Member	40°19'35" 74°49'27"	Nursery no. 1 core, 2078.8 ft to 2287.5 ft	Named for Ewing Creek, which passes just to the S of the Nursery Road coring site	Nursery no. 1 2078.8 - 2287.5 ft Princeton no. 2 48.7 - 223.5 ft
Nursery Member	40°19'35" 74°49'27"	Nursery no. 1 core, 2287.5 ft to 2465.4 ft	Named for Nursery Rd, which passes just N of the Nursery Road coring site	Nursery no. 1 2287.5 - 2465.4 Princeton no. 2 223.5 ft - Princeton no. 1 357.2 ft
Princeton Member	40°19'35" 74°49'27"	Nursery no. 1 core, 2465.4 ft to 2664.0 ft	Named for the Princeton no. 1 & 2 coring site	Nursery no. 1 2465.4 - 2664.0 ft Princeton no. 1 357.2 - 525.0 ft

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Scudders Falls Member	40°19'35" 74°49'27"	Nursery no. 1 core, 2664.0 ft to 2899.8 ft	Named for Scudders Falls, Ewing Twp., Mercer Co., NJ, which lies on the projected position of the member	Nursery no. 1 2664.0 - 2899.8 ft Princeton no. 1 539.0 - 736.5 ft
Wilburtha Member	40°19'35" 74°49'27"	Nursery no. 1 core, 2899.8 ft to 3078.3 ft	Named for Wilburtha, Ewing Twp., Mercer Co., NJ, which lies on the projected position of the member	Nursery no. 1 2899.8 - 3078.3 Princeton no. 1 756.5 - 834.0 ft
STOCKTON FORMATION				

II. REFERENCE SECTIONS OF THE MEMBERS OF THE LOCKATONG AND PASSAIC FORMATIONS

Name of unit	Latitude & Longitude	Locality Name	Descriptive Location of Section	Figure Reference
FELTVILLE FORMATION				
Felville Formation Washington Valley Member	40°52'41" 74°13'09"	ACE core PT-26	Corner of Francis St. and 3rd St., Little Falls, Essex Co., NJ	Fig. 27 section 3
Felville Formation Washington Valley Member	40°53'34" 74°13'19"	ACE core C-93	NW side of McBride Avenue about 100 m NE of intersection with Cardinal Dr.	Fig. 27 section 3
Felville Formation Washington Valley member	40°41'06", 74°23'09"	Watchung Reservation	Outcrops along hills and creeks in the Watchung Reservation, Union County Park Commission, Watchung, Union Co., NJ (see Olsen, 1980c).	Fig. 27 section 2
PASSAIC FORMATION				
Exeter Township Member (informal member VV)	40°52'40" 74°11'21"	R. H. Hamilton Quarry	Quarry on NE side of "The Great Notch", Clifton, NJ.	no figure
Exeter and Pine Ridge members	40°18'56" 75°51'18"	Sycamore Drive, Grist Mills and Exeter Village, PA	Upper part of section based on temporary exposures along N side of Sycamore Drive, in Grist Mills development, Exeter Township, Berks Co., PA and lower part of section is based on temporary exposures along Constitution and Pennsylvania avenues contiguous with the type exposures of Exeter Member, Exeter Township, Berks Co., PA	Fig. 26 section 2
Ukrainian and Cedar Grove member	40°16'15" 75°46'18"	W. Monocacy Hill, PA	Outcrops on E side of tributary to Monocacy Creek, just south of culvert for PA Rt. 422. Tributary intersects Rt. 422 between intersections of Monocacy Creek Rd. and Monocacy Rd. with Rt. 422, Amity Township, Berks Co., PA	Fig. 23 section 8
Ukrainian and Cedar Grove members	40°16'15" 75°45'23"	SE. Monocacy Hill, PA	Outcrops along small creek flowing down the S side of Monocacy Hill, about 400 m NW of intersection of Hill Rd. and Hill Dr., Amity Township, Berks Co., PA	Fig. 23 section 7

Ukrainian and Cedar Grove members	40°27'14" 74°52'50"	Muirhead, NJ	Outcrops along ravine feeding north into Haines Creek 400 m SW of intersection of Dunkard Church Rd and Easton-Trenton Turnpike (NJ Rt. 579), Muirhead, Hunterdon Co., NJ	Fig. 23 section 6
Ukrainian and Cedar Grove members	40°29'06" 74°51'21"	Copper Hill, NJ	Outcrops along Neshaug River, east of confluence of Second and Third Neshaug River, Copper Hill, Hunterdon Co., NJ	Fig. 23 section 5
Ukrainian and Cedar Grove members	40°31'31" 74°50'10"	Flemington, NJ	Cut on N side of Conrail line, SW of overpass for Bushkill Creek, Flemington, Hunterdon Co., NJ	Fig. 23 section 4
Neshaug Member	40°23'22" 75°17'52"	Perkasie, PA	Cut on N side of the Perkasie Tunnel, Perkasie, Bucks Co., PA	Fig. 21 section 4
Neshaug Member	40°20'17" 74°47'39"	Pennington, NJ	Cut on Conrail line, below overpass for Main St., Pennington, Mercer, Co., NJ	Fig. 21 section 3
Perkasie Member and member L-M	40°35'13" 75°08'00"	Holland Township, NJ	Exposures on N side of River Road (see Stop 5.6 in Olsen and others, 1989)	Fig. 20 section 8
Perkasie Member and member L-M	40°34'42" 75°06'10" & 40°35'05" 75°05'10"	Milford, NJ	Exposures on NE side of Milford-Warren Glen Rd. and outcrops on hillside on W side of Hakhokake Creek, NW of culvert for Miller Park Rd., Milford, Hunterdon Co., NJ, (see Olsen and others, 1969).	Fig. 20 section 7
Perkasie Member and member L-M	40°14'34" 75°35'31"	Sanatoga, PA	Pottstown Trap Rock Co., Quarry and exposures on E side of Conrail Line, just NW of Limerick Nuclear Power Plant, Limerick, Montgomery Co., PA.	Fig. 20 section 6
Perkasie Member and member L-M	40°21'14" 75°23'26"	Tylersport, PA	Cut along Pennsylvania Turnpike (PA Rt. 9), below overpass for Ridge Rd. (PA Rt. 563), Tylersport, Montgomery Co., PA.	Fig. 20 section 5
Perkasie Member and member L-M	40°29'48" 74°26'11"	New Brunswick, NJ	Abandoned Quarry on E side of NJ Rt. 18, between Richmond St. and overpass for New St., New Brunswick, Middlesex Co., NJ.	Fig. 20 section 1
Perkasie Member and member L-M	40°28'57" 75°09'54"	Ottsville, PA	Exposures along PA. Rt. 611 between the intersections of South Park Rd. and Geigel Hill Rd. with Rt. 611, Ottsville Bucks Co., PA.	Fig. 19 section 4
Warford Member	40°12'45" 75°34'56"	Linfield, PA	Exposures on NE side of Longview Rd., SE of Brook Evans Creek, Linfield, Montgomery Co., PA.	Fig. 16 section 4
Warford Member	40°33'15" 75°02'01"	Palmyra, NJ	Outcrops along tributary of Nishisakawick Creek, just NE of intersection between Creek and Tinsman Rd., SW of Palmyra, Hunterdon Co., NJ	Fig. 16 section 3
member C	40°27'50" 75°03'55"	Rt. 29 cut	Exposures on E side of NJ Rt. 29 between Warford Creek and Watsaw Rd., Kingwood Station, Hunterdon Co., NJ	Fig. 16 section 2c
Warford Member and member C	40°27'48" 75°03'18"	Smithtown Creek	Creek feeding into Delaware River on SE side of Smithtown Road, Smithtown, Buck Co., PA	Fig. 16 section 2b
LOCKATONG FORMATION				
Nursery and Princeton members	40°16'01" 75°10'56"	Eureka Quarry	Quarry between Lower State Rd. and Mill Creek Rd., Eureka, Buck Co., PA.	Fig. 12 section 4

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Ewing Creek, Nursery, and Princeton members	40°12'15" 75°16'10"	Gwynedd, PA	Cut along old Reading Railroad (present SEPTA line), north of Rt. 202, below overpass for Swedesford Rd., Gwynedd, Montgomery Co., PA.	Fig. 12 section 5
Nursery and Princeton members	40°46'16" 74°01'13"	Weehawken, NJ	East side of Kings Bluff, Weehawken, NJ, adjacent to west building for the Lincoln Tunnel (see Olsen, 1980a for details).	Fig. 12 section 1