

STOP 3 Mid Pleistocene to Holocene-age West Branch Susquehanna River Terraces Near Muncy, PA

Stop leaders: Ciolkosz and Braun

The west branch of the Susquehanna River takes a sharp southward turn in the vicinity of Muncy. On the west side of the river bend, a series of bench levels have developed. The Penn State Soil Characterization Laboratory sampled the benches from the river to the footslope area of the adjacent ridge as a part of the national cooperative soil survey of Lycoming County. These data are a part of the Penn State Soil Characterization Lab's computer database (Ciolkosz, 1999). These bench levels were subsequently studied by Engel, Gardner, and Ciolkosz (1996).

Figure S 3.1 gives an interpretive map and cross-section drawings of the bench area. Stop 3A is at the circled P site on the top of terrace Qt2a and Stop 3B is a road ditch exposure of the terrace riser descending from Qt2a to Qt2 near the circled P on Qt2. The benches below the Qt4a level were flooded by the Agnes Flood of June 1972 (flood of record for this area) and are therefore Holocene floodplain. The Qt4a level is extensive and probably Wisconsinan Age. The three levels above Qt4a are all loess covered with what appears to be Wisconsinan Age loess. Thus, the three upper benches are Pre-Wisconsinan in age and they are underlain by diamictons. Engel, Gardner, and Ciolkosz (1996) correlated them as progressively older terrace levels with the oldest being Early Mid Pleistocene age here at Muncy and Early Pleistocene (~ 770 ka to 970 ka) or even pre-Pleistocene down-river at Marietta (south of Harrisburg, PA)(Fig. S 3.2).

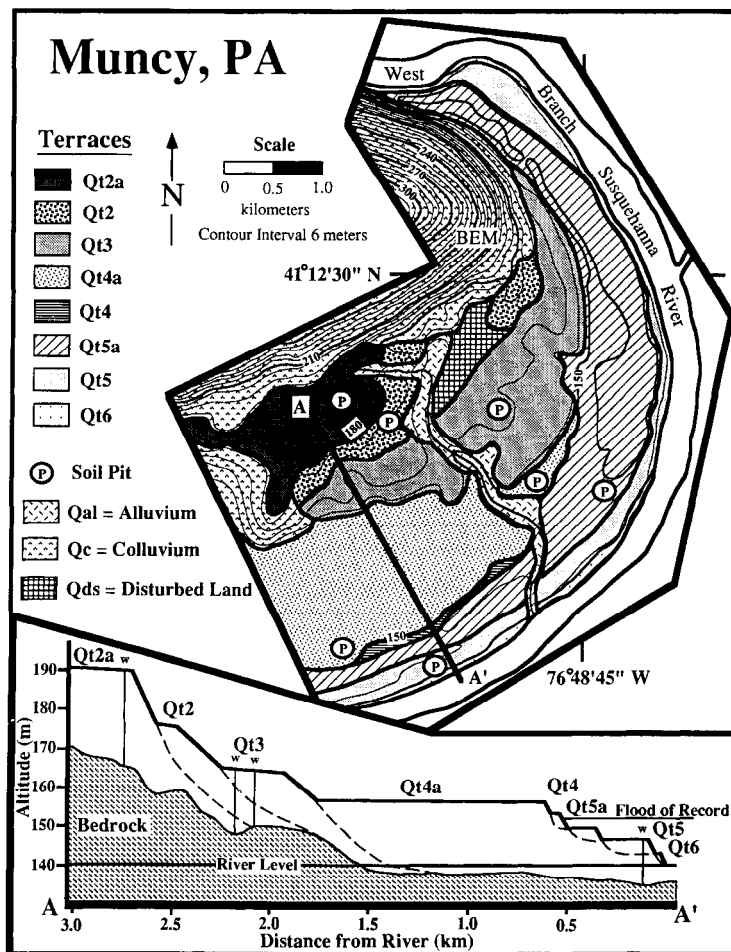


Figure S 3.1 Topographic map, surficial geology, and cross section of Muncy, PA, showing the distribution of terraces and soil pit locations.

w = Well log data showing depth to bedrock (Pennsylvania Geological Survey).

BEM is Bald Eagle Mountain. (Engel, Gardner, and Ciolkosz, 1996).

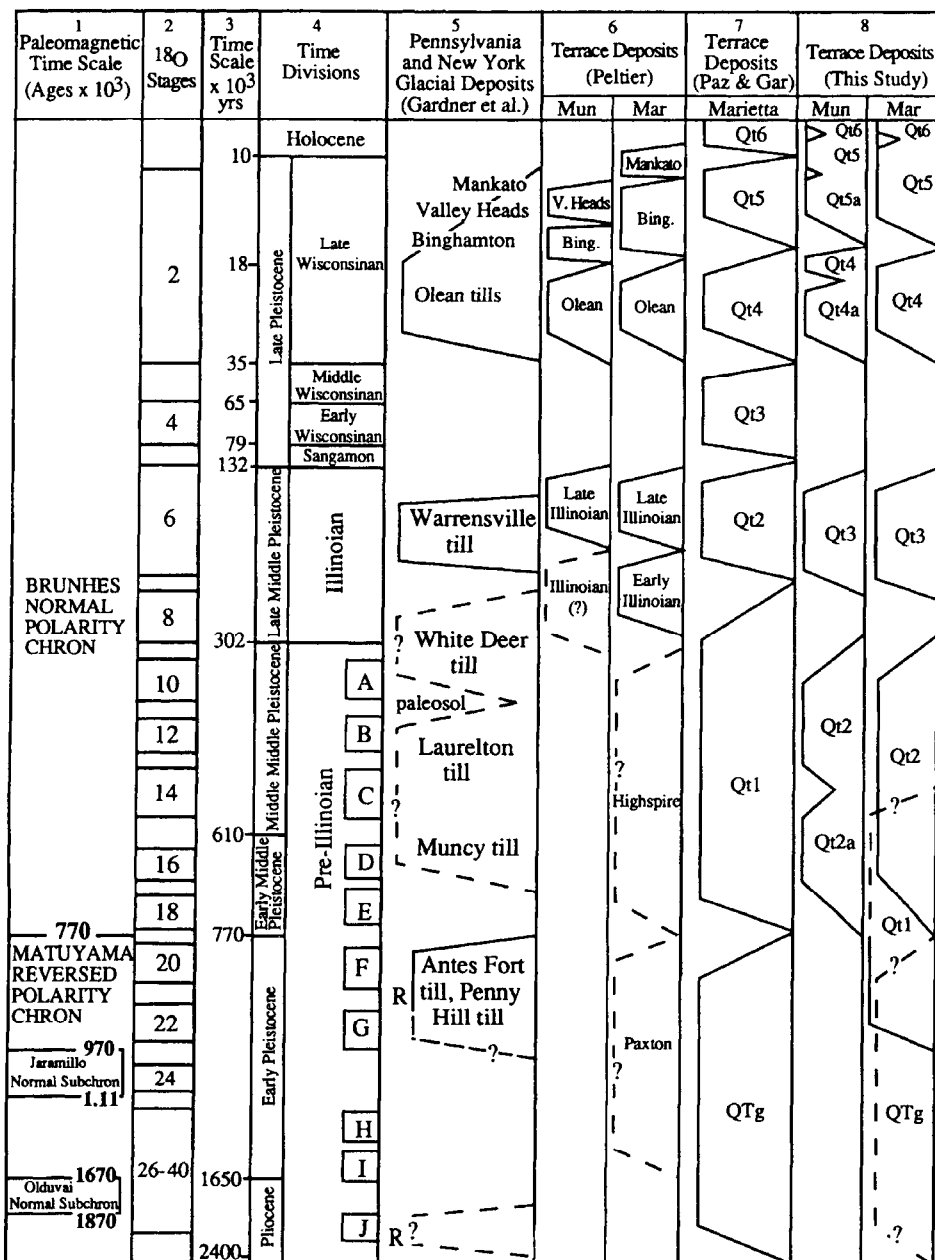
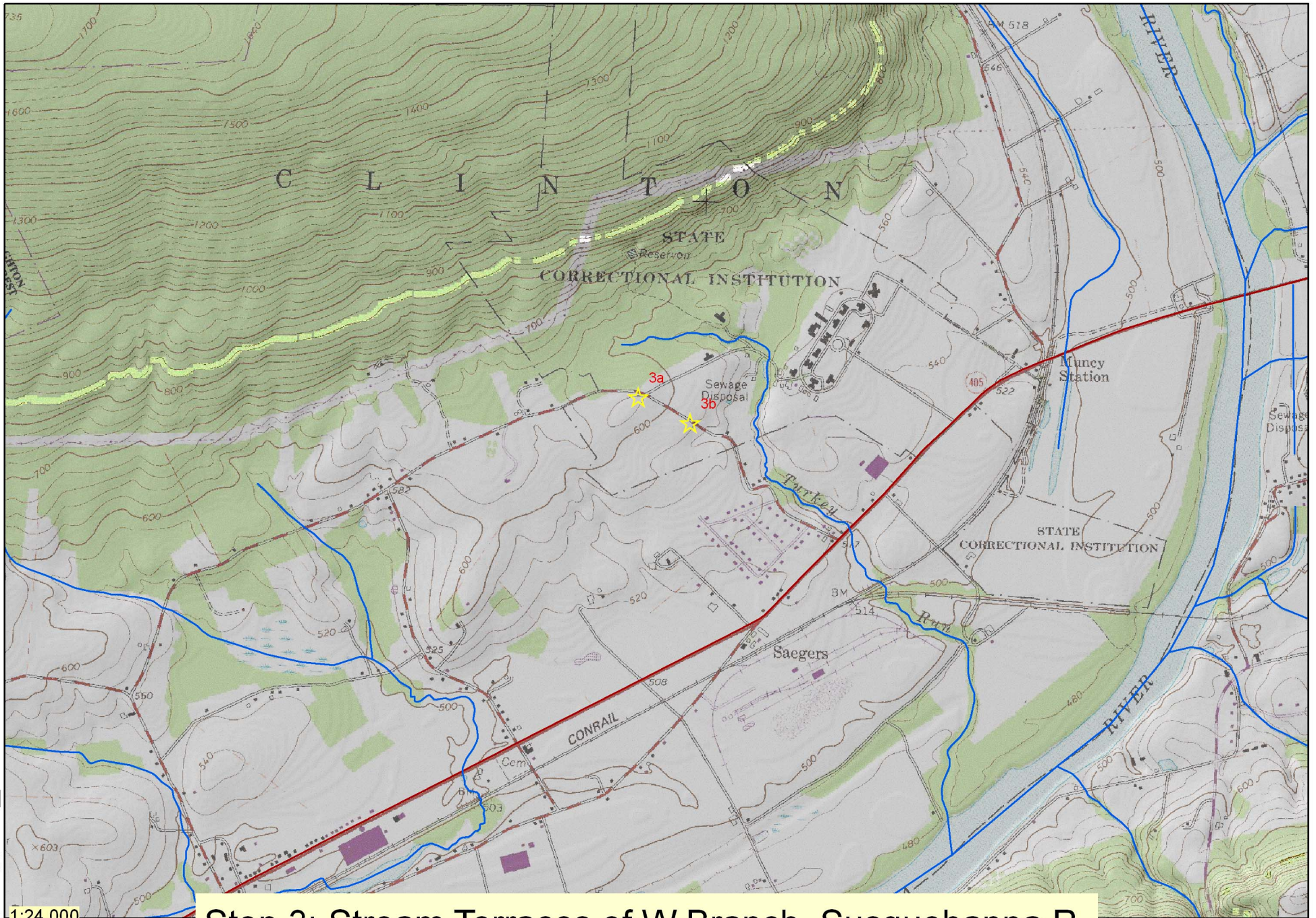
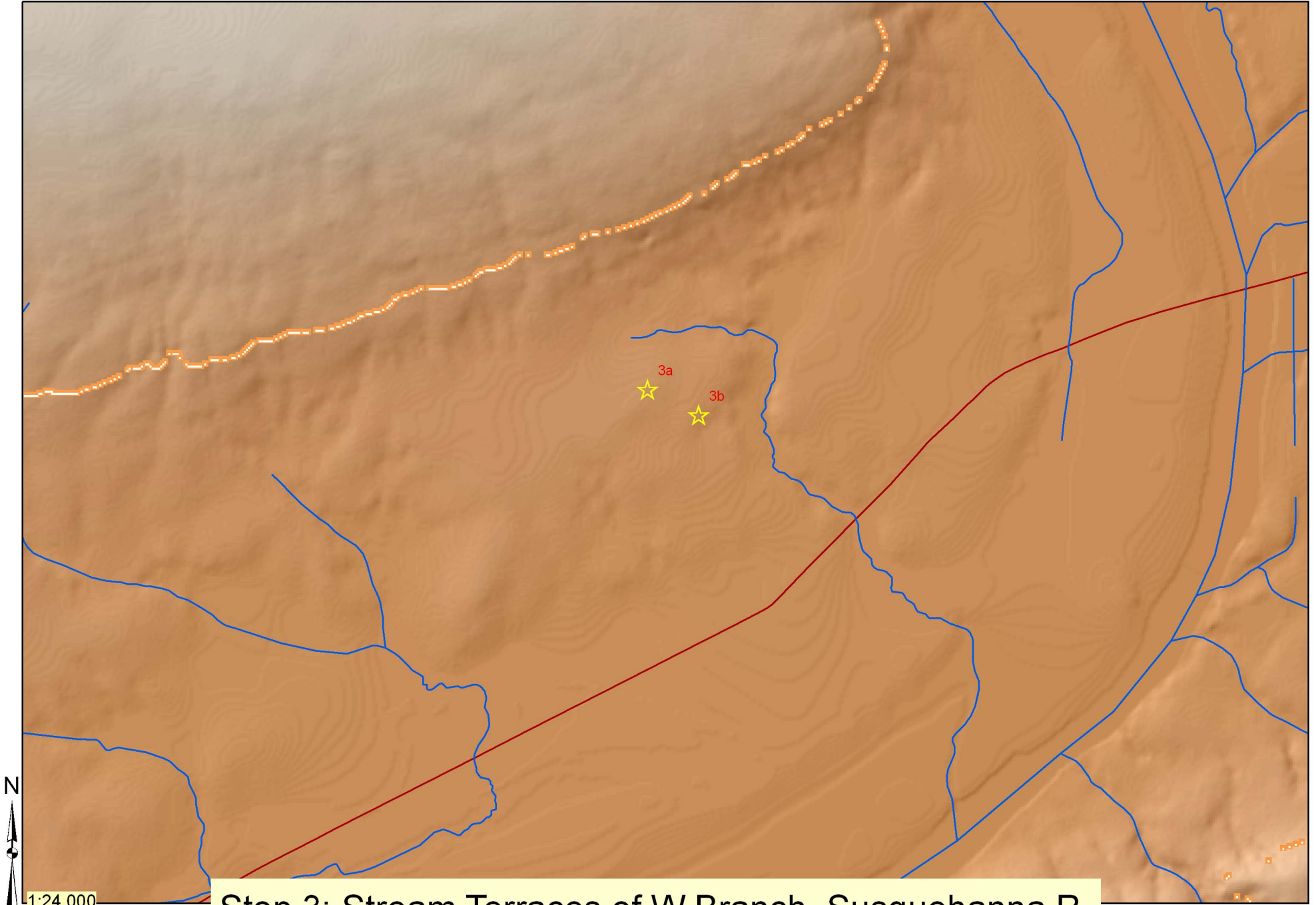


Figure S 3.2 Correlation chart showing time scales, central Pennsylvania glacial stratigraphy and Susquehanna River terraces. R = Sediments with reversed magnetic polarity. Dashed lines represent poorly-constrained ages. (Engel, Gardner, and Ciolkosz, 1996) correlated them as progressively older diamicton terrace levels with the oldest being early Pleistocene in age (~ 770 ka to 970 ka) or even pre-Pleistocene at Marietta.



Stop 3: Stream Terraces of W Branch, Susquehanna R.



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