

Hudson valley in the manner shown in the accompanying diagram [fig. 15].

It will be noted from the account which follows that these two terraces accord closely with the level of free deltas farther north. If these terraces were made in open water, it must have been during a temporary retreat of the ice tongue which lay in the valley, a readvance of which produced those aspects of the deposits as they now exist which point to deposition of the materials about their outer margins in the presence of ice. The limit of construction by water action in the South Bethlehem terrace was apparently a local affair. This appears evident from tracing this ice mass around the base of the hills bordering



Fig. 15 Cross-section of glacial deposit in Hudson valley from Schodack Depot to South Bethlehem, showing glacial terraces where the Moordener kill and Oniskethau creek mouthed on the ice border. The rock terrace is covered by clays of later deposition.

the west side of the Hudson valley past Feura Bush and New Scotland to the upper valley of Vly creek southwest of Voorheesville. In this region the escarpment of the west wall is indented by the New Salem valley drained by the creek named. When the ice retreated from the upland and its southern margin lay at this point, a barrier was created across the northward drainage of the Vly creek, holding up its waters in a temporary lake probably to the height of the divide between it and the Oniskethau, about 430 feet above the present sea level. The west branch of Vly creek (see the Albany quadrangle) flows in a depression approximately along the line of the ice front at this stage. From the south bank of the creek, rises a terrace of glacial materials which attains an elevation of 400 feet, at a point west of the junction with the south branch of the same stream. This plain is a rude delta built into the lake at this stage. The outflow of this lake took place apparently through the Oniskethau and thence contributed somewhat to the terrace building at South Bethlehem. These trivial details have been presented as showing that deposits which are here indicative of