

feet above the sea contained glacial boulders as if they had been dropped in from floating ice. Small lenses of gravel without pebbles of the trap or red sandstone betrayed their more northern origin than the area of Newark rocks. The upper layers of this section were much crumpled as if by overriding ice. The sands as a whole were yellowish and clayey. At one point a deposit of till lay in a shallow depression or channel in these sands.

The surface of this sand knob is clearly an erosion form. The crumpling of the upper layers, and the occurrence of patches of till show that it antedates the last local ice advance; yet the boulders dropped within it point to water at least 60 feet above the present sea level, during the deposit of the sand. But this water had nothing to do with the last glacial retreat.

The precise relations of these sands to the moraine at the base of the trap sheet is not shown by sections, but the evidence of ice action over the sands and the failure of sand deposits over the moraine, points evidently to the greater antiquity of the stratified deposits north of the moraine.

*Cedar pond brook and its deposits.* The clays in Haverstraw and North Haverstraw rise to about 50 feet above sea level though they are largely eroded away so that from place to place they rise to various heights below this level. In the northern part of Haverstraw between the 60 and 80 foot contours, the clays are overlain by about 10 feet of coarse gravels. South of the east and west road a pit in 1900 showed erosion of the clays before the deposition of the gravels.

Going farther north toward the valley of Cedar pond brook boulders appear in fences over the clays and also over a sand plain with foreset beds inclining to the southeast, showing the action of a stream pushing its delta out in this direction at a level as high as 60 or 80 feet above the present sea level.

Cedar pond brook has in recent times sunk its bed deeply and widely into its ancient delta the largest remnant of which forms the flat projecting point of land on which stands the village of North Haverstraw, at an elevation of about 100 feet above the sea.

This deposit evidently formerly extended farther south across what is now the path of the stream, thus uniting the coarser gravels and sands over the clays perhaps as far south as Benson's