

Hudson gorge. At various places near Crugers glacial boulders repose on the clays and frequently in positions where it is impossible to suppose that they have slidden down from the slopes which overlook the clay deposits. This distribution of boulders is quite in accord with the evidence found on the west side of the river which points to the overriding of certain clays in this part of the Hudson valley by the ice at least in those stages of its retreat which are marked by moraines and frontal washed deposits in the vicinity of Haverstraw and Croton point. It is quite possible that each one of these frontal moraines and attendant out-washed deposits marked a slight advance of the ice remnant following a retreat somewhat farther up the river, and the mere overrunning of clays in this manner by the ice itself and the sheeting over them of gravels and sands contemporaneous with the retreating ice as a whole does not of itself demand that these clays be placed anterior to this last ice epoch. But the difference in the geologic position of these clays and those which still form broad plains about Albany and as far down the river as Kingston is sufficient to demonstrate that the clays in the Hudson valley south of the Highlands belong to an earlier stage in the melting of the great glacier than those from Kingston to Albany. In other words, the clays in the lower Hudson were laid down before the final disappearance of the glacier from this part of the valley; those south of the Mohawk from Albany down to Kingston are later than the disappearance of the ice from the region which they occupy.

There is thus no continuous deposit of glacial clays in the Hudson valley precisely equivalent in age to the marine beds of the Champlain area on the north.

Terraces about Peekskill bay. Well defined terraces of glacial gravels and sands occur in the vicinity of Peekskill bay at the southern edge of the Highlands; at Tomkins Cove and Jones Point on the west shore, and in Peekskill and Peekskill creek on the east shore. These deposits will now be briefly described in the order named.

Terrace at Tomkins Cove. The topographic map shows a narrow terrace developed on the side of the valley at Tomkins Cove. This terrace is delimited by the 120 and 140 foot contour lines and agrees very closely in level with the preglacial or inter-