rivers, which under the high slopes of the Glacial period had produced profound channels, into quiet streams that made fluvial deposits along the way, and often, when in gentlest flow, still-water deposits. It has been shown that when Champlain time began, the ice had already retreated to the mountains, and, with this exception, had left New England and the states to the westward. Enough ice still remained, however, to give waters freely, and some floating ice also, to the streams which had their sources near the borders.

The absence of the ice sheet from the St. Lawrence valley after the making of the lower fourth of the deposits, is proved by the presence in the beds of shells of Mollusks and relics of other species that lived in the waters when the 100-foot level, near Montreal, was in progress; and also in Lake Champlain, when but 50 feet of the beds had been laid down. Seals and Whales would not have gone beneath the ice hundreds of miles for a Champlain resort. Moreover, since the St. Lawrence River makes four degrees of northing on its way to the sea, the evidence proves that the clearing from ice extended as far north as the borders of Labrador.

But it is important to remember that the river valleys were to some extent the courses of streams in the Glacial period, and therefore that beds of the Champlain period may rest on others of clay or sand which are Glacial in period of formation. Sometimes these fluvial beds of the Glacial period may be distinguished by the presence of bowlders; but this criterion is not altogether safe, since floating ice of the Champlain period may have been the source of the bowlders. At the North Haven clay-pits, a few miles north of New Haven, the straticulate clays contain a few bowlders two or three feet in diameter; and it was in one of these clay-pits that the two bones of Arctic Reindeer were found, mentioned on page 946. The time of deposition was probably in the earliest part of the Champlain period or the later of the Glacial.

Deposits of clay appear to have been most abundant in the early part of the Champlain period, after the subsidence had reached its extreme limit, when the flow of the streams having a southward course was feeble. The later increase in the waters, raising the flood level, involved an increase in the pitch of the surface, and therefore a quicker flow; and then sands succeeded to the clays, and in many regions still coarser deposits, ending often with the coarsest cobblestone deposits when the flood was at its height.

The stratification of the deposits hence varies from the most regular, or that of gently-moving waters, to that which could form *only under a vast simultaneous supply of gravel or sand, and water*. The *flow-and-plunge* style of deposition (page 93) is common. Beds of this kind occur with others of horizontal bedding, or sometimes locally in the midst of coarse gravel deposits, such stony gravel not participating in it because of its coarseness. Very often, also, the beds indicate that after deposition large portions had been washed away by some local rush of the flooded stream, and that later the excavations thus made became filled.