

northern part of Gulf of St. Lawrence; also in some districts fresh-water shells and plants.⁵⁵

Lower Leda clay, fine clay, often laminated, with a few large travelled boulders (probably equivalent to "Erie Clay" of inland; "Champlain Clay," Lower Shell-sand of Beauport); contains *Leda arctica*, *Tellina groenlandica*; probably deposited in cold ice-laden water.

Boulder-clay or Till; in the Lower St. Lawrence region contains a few Arctic shells, but further inland is unfossiliferous.

Peaty beds, marking pre-glacial land-surfaces.⁵⁶

The Leda clays rise to a height of 600 feet above the sea. On the banks of the Ottawa, in Gloucester, they contain nodules which have been formed round organic bodies, particularly the fish *Mallotus villosus* or capeling of the Lower St. Lawrence. Sir J. W. Dawson also obtained numerous remains of terrestrial marsh-plants, grasses, carices, mosses, and algæ. This writer states that about 100 species of marine invertebrates have been obtained from the clays of the St. Lawrence valley. All except four or five species in the older part of the deposits are shells of the boreal or Arctic regions of the Atlantic; and about half are found also in the glacial clays of Britain. The great majority are now living in the Gulf of St. Lawrence and on neighboring coasts, especially off Labrador.⁵⁷

Terraces of marine origin occur both on the coast and far inland. On the coast of Maine they appear at heights of 150 to 200 feet, round Lake Champlain at least as high as 300 feet, and at Montreal nearly 500 feet above the present level of the sea.⁵⁸ In the absence of organic remains, however, it is not always possible to distinguish between terraces of marine origin marking former sea-margins, and those left by the retirement of rivers and lakes. In the Bay of Fundy evidence has been cited by Dawson to prove subsidence, for he has observed there a submerged forest of pine and beech lying 25 feet below high-water mark.⁵⁹

⁵⁵ For a list of Canadian Pleistocene plants see D. P. Penhallow, *Bull. Geol. Soc. Amer.* i. 1890, p. 321.

⁵⁶ J. W. Dawson, Supplement to "Acadian Geology," 1878; *Canadian Naturalist*, vi. 1871; *Geol. Mag.* 1883, p. 111; *Bull. Geol. Soc. Amer.* i. 1890, p. 311.

⁵⁷ Dawson, "Acadian Geology," p. 76.

⁵⁸ On terraces of Lake Ontario see *Amer. Journ. Sci.* (3) xxiv. p. 409.

⁵⁹ "Acadian Geology," p. 28.