or other detritus, so that the actual depth of excavation may much exceed that obtained by soundings.

From such facts it is reasonable to estimate the elevation of portions of British North America along the Canadian watershed, or the great Ice-plateau, to have been at least 3000 feet above the present level. This subject has been recently well discussed by Upham, with this estimate as his conclusion. The author, in 1871, suggested 5000 feet, and this may not be too high for some portions of the Canadian region of highest ice. With 3000 feet for the Canada watershed south of Hudson Bay, this bay must have been largely dry land. Along the coast of Maine the elevation indicated is less than a thousand feet.

South of Maine, on the New England coast, other fiord-like indentations of the coast exist in Narragansett Bay, R.I., and the gorge of the Thames, from New London to Norwich, Conn. Besides these, there are pot-holes in the gneiss of islands off the Connecticut coast; and those of the Thimble Islands, in the bay of Stony Creek, show that this bay was formerly crossed and probably excavated by a freshwater stream. The great depth of the bays on the north side of Long Island, 50 to 65 feet notwithstanding the later drift deposits over the region, is further proof of elevation. The amount for southern New England and Long Island could not have been less than 150 feet (D., 1870). With this elevation, Long Island Sound in the Ice period would have been, instead of an arm of the sea, the channel of a river tributary to the larger Connecticut River; and Long Island with New York on the west side and the south coast of New England on the east would have been continuous dry land. (See map, page 18.) The soundings of the Sound and of the waters south of Long Island are shown on this map, and also more fully in *Am. Jour. Sc.*, xl., 1890, with explanations in the same volume.

If the fiords of the coast are proof of elevation, the absence of them farther south should be probable evidence of *little* elevation or *none*. The submarine Hudson River channel (map, page 18) indicates a former emerged condition of the sea bottom, requiring an elevation of the region and the adjoining coast of 2800′, judging from the deepest part; and it has been inferred by Lindenkohl and Upham that this elevation took place in the Glacial period. But the facts from the New England coast indicate only small elevations. Moreover, the origin of the submerged Hudson River channel appears to have been of much earlier date, as has been explained on page 744.

J. W. Spencer has inferred from the Coast Survey maps that there are submarine river channels off the mouths of several of the rivers of the coast south of Cape Hatteras, and in the Gulf of Mexico, the Mississippi included. But no satisfactory evidence of such channels exists on these charts, in the opinion of officers of the Coast Survey.

G. M. Dawson states, with reference to the fiord region of western America, that the land in the Pliocene stood relatively to the Pacific about 900 feet higher than now; and he concludes that the fiords were shaped and enlarged locally during the following Glacial period, when the amount of elevation was still further increased. The submerged river channels of the Pacific coast of North America, on the coast of California, as described by G. Davidson (1887), descending to depths of 2400, 3120, and 2700 feet, indicate a higher level of the region of 2500 to 3000 feet, and probably during the Glacial period.