

RIISING OF THE LAND AROUND HUDSON BAY.¹

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In the Provinces of Ontario and Quebec it has been found from actual levelings by Gilbert, Spencer, and Upham that the old shore lines are not perfectly horizontal, but that they slope upward in a northeasterly direction at rates varying in different regions from a few inches to a foot and even 2 feet per mile. If this upward slope were continued in the same direction to the northeastern extremity of Labrador, 1,300 miles from Lake Huron, the increase in the elevation might there amount to 1,000 or 2,000 feet. It is scarcely probable that the differential elevation is constant and regular for such a great distance. Still, it is a fact that well-preserved shore lines are to be seen at great heights in the northern parts of Labrador. In my Geological Survey Report for 1884 I have mentioned ancient beaches at Nachvak, 140 miles south of Hudson Strait, which have an estimated altitude of 1,500 feet above the sea.

The two sides of Hudson Bay present very different physical characters. The eastern is formed mostly of crystalline rocks, and, as a rule, is more or less elevated, with a broken surface sloping somewhat rapidly westward or toward the bay; while the western side is mostly very low and much of it is underlaid by nearly horizontal Silurian and Devonian strata. These low shores are accompanied by shallow water extending far to seaward. The head of James Bay, which forms the southern prolongation of Hudson Bay, is extremely shallow, but the various rivers which flow into it have cut channels through the soft shallows, and by means of these the land may be approached with seagoing vessels. The whole of Hudson Bay may be said to be shallow in proportion to its great area, as the soundings show that it does not average more than 70 fathoms in depth.

The shores of the bay everywhere afford abundant evidence that there has been a comparatively rapid rise in the land and that the elevation is still going on. I have mentioned numerous proofs of this in my various official reports on the geology of these regions from 1875

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