

500 feet, but on the eastern side of the bay no fossils have yet been detected at such high levels, owing perhaps to the scarcity there of marine deposits and to the fact that but little search has yet been made for them. In the sandy deposits among the hills about 20 miles south of Cape Wolstenholme I saw abundance of *Saricara rugosa* and *Tellina granuladica*, with smaller numbers of a few other species, at heights varying from the sea level up to about 200 feet; and last summer I found brackish water varieties of a number of the commoner species of our northern marine shells up to 70 feet above the sea in the clay banks along the lower portion of the Noddawai River.

Around the head of James Bay and up its western side the encroachment of the outer lines of the forest upon the wide alluvial flats which extend all along these shores and are constantly broadening toward the sea is good evidence that a rising of the land is now going on. The existing condition in this part of the bay is well described by Mr. A. P. Low in speaking of Agoomski Island. On page 24, J. Geol. Survey Report for 1887, he says:

"The island closely resembles the adjoining mainland in physical character, being very low and swampy. The shore line above high-water mark is made up of muddy flats covered in part with grasses and sedges, followed farther inland by thick growths of small willows, these in turn giving place to small black spruce and tamarack as slightly higher ground is reached. The line of these trees is often over 2 miles inland from high-water mark, itself a long distance from the sea at low water."

No living mollusks are to be found in James Bay, except perhaps in the northern part, owing probably to the muddy and brackish nature of the water, but abundance of the dead shells of a considerable number of kinds are washed out of the clays forming the present shores. Some of these belong to moderately deep-water species and are well preserved, retaining the epidermis. This, of course, shows a recent elevation of the sea bottom.

Richmond Gulf, on the eastern side, is separated from the main bay by a high bar of stratified rocks, which strike with its length and dip westward or toward the open sea. This bar is cut through by several gaps, all resembling one another, except in their heights above the sea, and all bearing evidence of their having been well-worn channels of communication at more or less remote times according to the greater or less elevation of their beds above the sea. Only one narrow passage now remains open or low enough to admit the water, but two others are as yet only slightly raised above the tides.

Some of the aboriginal geographical names around the head of James Bay are significant of considerable changes in the topography since these shores became inhabited by the natives who still occupy them. The large peninsula between Hannah and Rupert bays is called Ministik-oo-watum, which means wooded island with a cove or hole in it, ministik being the Cree for a wooded island and watum for a cove or

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