

between the sea level and the highest parts of the island visible. These appeared to be partly ancient benches, and partly the outcropping edges of nearly horizontal strata. I landed at a point about the middle of the eastern shore of the island, and found the shore very flat, with shallow water for a considerable distance out. The rock proved to be a fossiliferous grey limestone, in rather thin horizontal beds. The fossils were obscure and scarce at the place referred to. Those collected, Mr. Whiteaves thinks, are Silurian. The rocks themselves resemble the Lower Silurian limestones of the Red and Nelson Rivers. I landed again near the south end of the island, and found the water very shallow in approaching the shore. No rock was detected in situ at this place; but a great extent of gravel and coarser shingle, derived from limestone like that found in situ further north was thrown into a succession of long, low ridges and terraces, all curving with the contour of the land. Behind most of the ridges I met with long ponds of clear, fresh water. A number of caches and "stands," built by the Eskimo, were seen along the shore of Mansfield Island, but none of these people were observed.

From the southern extremity of Mansfield Island we steamed to Cape Southampton, and thence coasted north eastward, in the hope of finding a suitable site for building an observatory station, but without success; and after making between twenty and thirty miles in that direction, we returned to the cape and passed round it to the westward, shaping our course thence for the opposite side of Hudson's Bay. The general character of this island, and the part of its shore which we examined, are quite like the eastern side of Mansfield Island. It has rather more vegetation upon it than the last named island, and much of the surface has a brown colour in consequence. Shallow water, having a light green colour, extends some distance out all along. The island slopes gradually up from the beach and is thrown into a great many small terraces. The highest point seen did not exceed 200 feet above the sea. I noted that the limestone is evidently exactly the same as that of Mansfield Island. Low cliffs in the upper levels break through the decayed mass and the *débris*, and horizontal ledges also make their appearance through the loose materials near the sea beach.

We did not observe any natives on the part of the island which we saw, but at four miles north-east of Cape Southampton there were three fresh houses of the Eskimo, covered completely with sods and moss, and having the doors built round with stones. About three-quarters of a mile to the north-eastward of these were five old Eskimo houses, built of stones and sods, with some sticks and bones lying on their tops.

Our first landing place on the western side of Hudson's Bay was Marble Island, but we had a distinct view of the land between it and Chesterfield Inlet. Judging from specimens which I have received through the kindness of Mr. George McTavish, of the Hudson's Bay Company, a portion of this coast is occupied by rocks, which may be referred to the Huronian series, among them being diorites, hornblende-schists and glossy mica-schists characterized by numerous cubes of iron pyrites. On the coast opposite to Marble Island, the last named rock appears to contain the veins of granular iron pyrites, an assay of a specimen from one of which, from Iñari, was made by Mr. Hoffmann in 1879. (See p. 23 H., Report Geological Survey, 1878-79.) These glossy mica-schists were found on Deadman's Island, near the west end of Marble Island. From all that I have been able to learn on the subject, a set of rocks, very like those of the Township of Ascot, in the Province of Quebec, and holding similar pyrites veins, which are of great economic value, will be found in this part of the western coast of Hudson's Bay.

The harbour on Marble Island, which is resorted to by the American whalers, and in which we also anchored, is situated on the south side of the island, about two and a-half miles from the western extremity. The outer harbour is formed by Deadman's Island, about quarter of a mile long, lying across the front of a small bay. The inner harbour is a basin, which connects with this through a narrow gap in the rock with only about one fathom of water at low tide.

Deadman's Island consists of white and light grey quartzites and glossy mica-schist, striking N. 75° W. (mag). The glacial striae on this island are well marked and run