

100 feet. In preparing to leave the port, it was found difficult to start our anchor out of the mud, some of which came up on one of the flukes, and proved to be an exceedingly tough bluish-grey clay, containing grains of coarse sand disseminated through it.

I explored the country to a distance of about three miles in various directions from our anchorage, and found the rocks to consist of common varieties of gneiss, the only exceptions noticed being patches of a fine-grained red syenite on both sides of the inlet. The average direction of the strike is south-west (true) but there are numerous local variations which, however, seldom carry its course outside of the south-west quarter of the circle. The joints in the gneiss run about east, or nearly parallel with the glacial striae, and this is also the direction of a number of long cuts and straight valleys or gorges in the gneiss, which have, therefore, an oblique angle to the strike. The bottoms of these depressions are filled with boulder clay, which, on the surface, has a structural arrangement parallel with the walls, apparently due to a process of expansion and contraction and of heaving, on account of the intense frost of this region. In narrow cuts or gorges the heaving of the clay was greatest along the sides, which had the effect of sorting out and throwing the boulders to the centre, where they formed rows as regular as if they had been placed artificially.

The direction of the joints in these rocks may also be that of dykes and veins, which, owing to decay and subsequent glacial action, would now be concealed in the bottoms of the depressions above referred to. At a projecting point on the side of one of them, however, and running parallel to its walls, I found some straggling veins of hard grey dolomite, weathering brown and holding scales of mica.

The rocks of the lower levels are well glaciated, and from upwards of twenty trials in various situations around Port DeBoucherville, the average course of the striae across the south end of Nottingham Island was ascertained to be S. 30° E. (mag.), or only a few degrees southward of true east. That the direction of the glacial movement was towards the east is obvious from the contour of the *roches moutonnées*, the mode of the fluting of perpendicular walls and of channels cut in the rocks, as well as by the direction of the curves of the semi-circular lines across the larger grooves themselves. A valley, with a south-eastward bearing, enters the head of Port DeBoucherville, and along it the grooves partake of the same direction, showing that while the low southern portion of the island was swept by a great glacier from the west, another was traversing it from the north-west. Nearly half of the boulders, stones and gravel of the drift are grey limestone, like that of the Manitounik (Cambrian) group, indicating the proximity of these rocks to the westward. The grey quartzite of this series is also well represented. One piece of this rock contained the characteristic spherical spots of a softer nature and lighter colour, which usually weather out into hollows on exposure. There are also fragments of black slate and red jasper, both of which have been found in the Manitounik group. Two pieces of fine-grained white quartzite were noticed, which may have come either from rocks belonging to this group or to the Haronian series. A fragment of red sandstone conglomerate was also observed, of the same kind as that which underlies unconformably the Manitounik rocks, and is so largely developed at Little Whale River and Richmond Gulf. (See Report of the Geological Survey for 1877, pp. 13 and 14 C.) No shells were found in the boulder-clay, but a few common species were abundant in a bank of stratified sand, having a height of about 8 feet above high-water mark at the head of a bay.

During the interval between our two visits to Nottingham Island, the observatory party saw a few reindeer, but the numerous tracks and droppings of these animals show that they exist here in considerable numbers. Several of their shed antlers were found, and all of them had the upper tines curiously hooked and curved inwards—a peculiarity which would be incompatible with forest life. We saw a few walrus when first approaching the island, and while the station was building, but they were quite numerous upon the ice which we passed through to the south of it on our return on the 20th of September. These animals accompany the ice during the summer, and its unusual prevalence in this quarter the present season was shown by the blighted condition of even the Arctic vegetation of the island. Arctic hares and foxes were seen, and both appeared to be abundant.