

ceded glaciers, but to say what might have come before the former of these agents, would only be diving deeper into the depths of a sea of speculation. From the scantiness and want of detail in their observations, it is useless attempting definitely to correlate them with those conditions observed in the adjoining continent of America, where it has been shown "that the oldest glacial deposits have yielded evidence of inter-glacial mild conditions" similar to those of the British Isles and Europe (Great Ice-age, Jas. Geikie, p. 428).

*Coast Ice of Newfoundland.*—Icebergs have an advantage over coast-ice in their imposing appearance, which has perhaps been in part instrumental in raising them to the high position which they now occupy as workers of Geological changes. Many Manuals of Geology, and many diagrams drawn to illustrate the same science, have oft-times portrayed a well-known flat-topped berg, carrying a rock, in the Antarctic regions; but neither books nor lecture-diagrams, taken collectively, give any adequate idea of coast-ice as a similar agent. From what I have seen of coast-ice and of its effects, I feel persuaded that it is an agent of at least as great, if not of greater universality than either glaciers or icebergs, and taken as a whole perhaps also as an agent of equal power. Of the various forms of sea-ice known as "berg-ice," "floe-ice," "pack-ice," and the like, the portion I would more particularly draw attention to is that variety which forms a narrow belt along the shore, known in Greenland as the "Ice-Foot."

It would appear that in the formation of the "Ice-Foot," just as in the precipitation of rain, and in the production of other natural phenomena, we may have either one or many causes called into operation. Sometimes these may all be equally active, whilst at other times the rôle taken by one cause is more important than that taken by another, all being governed by circumstances. Geikie, in "The Great Ice Age," pp. 67 and 68, tells us that the Ice-Foot of Greenland "owes its origin to the action of the tides." "The first frost of the late summer covers the sea with a crust of ice, which, carried upwards along the face of the cliff by the tide, eventually becomes glued to the rocks." It thus "grows in thickness with every successive tide, until it may reach a height of 30 feet, and sometimes even more, presenting to the sea a bold wall of ice, against which the flocs grind and crush."

In Newfoundland and the South Coast of Labrador, although the formation of the Ice-Foot is no doubt oftentimes very similar to this, there are yet other agents, besides that of the tide, which are equally active.

First we will imagine this formation taking place on a gently-sloping shore.

*The Ice-Foot.*—The blasts of December and January drive the spray high up upon the land, and there it freezes as a cake of ice; day after day and night after night this continues, and the crust grows thicker. A drift or fall of snow may help it in accumulating, until it is at last from two to three feet in thickness. Stones of all sizes, from pebbles to boulders, on which this coating may rest, are now firmly set in "an icy maw" of ice, and are ready at the first