

Rathlin off the coast of Antrim,<sup>1</sup> and being largely reinforced by tributary ice that descended from the Gallo-way mountains and all the high lands, the slopes of which, then filled with tributary ice, now send rivers into the Solway, the advancing mass invaded the area called the Irish Sea, where, it was still further swelled by the glaciers that descended from the mountains of Cumberland.

These facts are further confirmed by observations in the Isle of Man by the Rev. J. G. Cumming, who shows that the chief glacial striations in that island trend from NNE. to SSW. as if the ice that made them, travelled from the high ground of Kirkcudbrightshire and the northern borders of the Solway Firth.

If we now go into the interior of the country what do we find? First, it is obvious to anyone with an eye educated in glacial phenomena, that the whole of the mountains of Cumbria and Westmoreland have been buried in ice during the period of extremest cold. Though now somewhat ruined by time, their mammillated forms proclaim it, and in the time that the glacier-ice attained its maximum, that ice, pressed on by ice coming from the north, must have passed southward into and far beyond Morecambe Bay. East of this mountain-land, between the rivers Kent and Lune, almost all the striations run about SSW. while a very few trend near south-westerly, while on all the high Fells on both sides of the Ribble, the prevailing direction of the striæ is either south or a few degrees west of south, as shown by Mr. R. H. Tiddeman in his memoir 'On the Ice-Sheet in North Lancashire and adjacent parts of Yorkshire and Westmoreland.'<sup>2</sup> I am

<sup>1</sup> Vividly described by Mr. J. Geikie, 'Great Ice Age,' chap. xxiv.

<sup>2</sup> 'Journal of the Geological Society,' vol. xviii., 1872, p. 471.