well acquainted with the country, and can vouch for the accuracy of his observations, and what makes them of special value in this inquiry is, that such striations range from a few feet up to 40, 100, 200, 300, 550, 775, 1,100, and 1,375 feet above the sea, and at many intermediate elevations.

One great fact which they teach is this, that the broad and thick ice-sheet, urged onward from the north, buried the whole of the region described, and all the ground to the east as far as the sea, and further, that the glacier *moulding itself to the shape of the country* (after the manner of all glaciers), was pressed right onward with so much force, that the long northern slopes of the east and west valleys offered comparatively no more impediment to its onward march, than an occasional transverse bar of rock hinders the onward flow of a river. Occasionally there are striations that do not quite conform to the rule, but in some cases I feel convinced that these were due to *undercurrents* in the ice in some of the deeper valleys, and at a later date to minor glaciers that got specialised in the valleys during the decline and disappearance of the ice-sheet.

At Liverpool, and on the opposite side of the Mersey, Mr. Morton observed on the Keuper Sandstone certain ice-grooves, trending S. 35° E.[1], and it seems to me that this direction is connected with the circumstance that when the northern ice-sheet reached the rising ground of Denbighshire and Flintshire, it was deflected to the right and left, and while one part flowed south-easterly across the plains and undulations of Cheshire, another part flowed south-westerly, and, scraping the coast hills of North Wales, overwhelmed Anglesea and the low ground of Lleyn that forms the north horn of Cardigan

[1] 'Reports of British Association, Liverpool,' 1870.