

and northwards of the western entrance of the channel. We found that in these two areas, freely communicating with one another and in immediate proximity, two totally different conditions of climate existed at all depths below the immediate surface, where they differed but slightly. In the Færoe channel, at a depth of 500 fathoms, the bottom temperature averaged $-1^{\circ}0$ C., while at a like depth in the Atlantic the minimum index stood at $+6^{\circ}$ C., a difference of 7 degrees Centigrade, nearly 13 degrees Fahrenheit.

The conclusion at which we speedily arrived as the only feasible explanation of these phenomena was that an arctic stream of frigid water crept from the north-eastward into the Færoe channel lying in the deeper part of the trough, owing to its higher specific gravity; while a body of water warmed even above the normal temperature of the latitude, and therefore coming from some southern source, was passing northwards across its western entrance and occupying the whole depth of that comparatively shallow portion of the Atlantic from the surface to the bottom.

Several important facts of very general application in Physical Geography had been placed beyond doubt by these observations. It had been shown that in nature, as in the experiments of M. Despretz, sea-water does not share in the peculiarities of fresh water, which, as has been long known, attains its maximum density at 4° C.; but, like most other liquids, increases in density to its freezing-point: and it had also been shown that, owing to the movement of great bodies of water at different temperatures in different directions, we may have in close proximi-