

cuspidata, far south in the Norwegian depression, is probably also due to the same cause, as they have most likely been carried there by one of these blended currents and have managed to adapt themselves to more boreal conditions. That larvæ may be transported in quantities to areas where they are unable to develop was proved during the autumn of 1903, when the fjords near Bergen were found to be full of *Actinotrochæ* (larvæ of *Phoronis*, a form related to the bryozoans, which occurs in the south parts of the North Sea and other southern waters), but in the following year repeated dredgings failed to reveal a single full-grown animal either there or anywhere else on the coast of Norway.

Currents also carry nourishment to the bottom-animals and sweep away the finer particles of mud and other soft substances, leaving, in sounds especially, nothing but the bare rock, or perhaps a slight covering of coarse sand and shells. This enables attached forms to thrive, since the current prevents their being buried, and at the same time supplies them with the nourishment they require.

It is strange that a few boreal forms are peculiar to the plateaus and do not enter the fjords, for the fjords and plateaus have most of their forms in common. Whether it is due to the fact that these peculiar forms develop at a time when the Atlantic water, in which they probably live during both their larval and full-grown stages, does not penetrate into the fjords, or whether the physical conditions of the fjords are in some way uncongenial, is unknown. Similarly we are unable to explain why a number of boreal forms, which are widely distributed elsewhere, avoid the North Sea and Skagerrack, or why some plateau-forms enter fjords north of Stat, like the Trondhjem fjord, but are absent from fjords farther south.

Distribution is of course very much affected by the character of the sea-floor, since whole groups of animals are limited by their structure or mode of living to some particular kind of bottom. No doubt there are forms which appear to be equally at home everywhere, but there are others again which are extremely exacting in their requirements. This is especially the case with burrowing forms, like the lancelet and numbers of mussels and worms, and as a result we find, when conditions are favourable, that extensive stretches of the bottom are occupied by one or more of these. Some forms like sponges and corals, belonging to groups most of whose members are attached and therefore confined to rocky bottom, have developed special organs in the

Effect of
bottom-
deposits.