

CHAPTER VIII

INVERTEBRATE BOTTOM FAUNA OF THE NORWEGIAN SEA AND NORTH ATLANTIC

THE topography of the Norwegian Sea has been briefly noticed in Chapter IV. and the hydrography in Chapter V.

The distribution of forms in the Norwegian Sea agrees with the hydrographical conditions, and we can distinguish two great regions, the *boreal* and the *arctic*, each of which has its own appropriate fauna. All those parts of the ocean-floor covered by Gulf Stream water or by coast-water make up the *boreal* region, while the arctic region is covered by water with polar characteristics. The temperature and salinity in boreal areas vary greatly in the different water-layers, and are much affected by the seasons. What chiefly distinguishes the boreal region from the arctic region is the higher temperature, which never falls below 0° C., and over large areas never sinks below 6° C. The uppermost water-layer may form an exception, for the temperature may occasionally at the very surface and for a comparatively short time fall below 0° C. High summer temperatures are characteristic of the upper water-layers, and exercise a considerable effect upon the fauna. The boreal region of the Norwegian Sea includes the North Sea with the Skagerrack and Kattegat, the Norwegian coast plateau as far as the North Cape, the coast plateau of the Faroe Islands, and the south and west coasts of Iceland.

In the *arctic* region the temperature and salinity are much more uniform than in the boreal region: the temperature is usually below 0° C., though in summer the actual surface may show higher temperatures under the influence of the sun, but the sun's heat does not penetrate so deeply as in the boreal region; the salinity varies greatly at the surface, but at the depth of a few metres it is rarely less than 30 per thousand. The arctic region comprises the coast plateaus of Greenland