

Sea in the west, at Spitsbergen in the north, and in deep water, even close to the banks of Norway and the North Sea, excludes all boreal species (see Fig. 310, p. 436).

In the boreal area, as thus limited, we find not a single species of fish, perhaps not even a single animal-form, which may be said to be entirely oceanic.<sup>1</sup> The only oceanic community in the Norwegian Sea would perhaps be the arctic deep-sea fauna. Among the boreal species, however, we find several gradations between the purely oceanic and the purely coast forms of life.

Of all invertebrates the minute crustacean *Calanus finmarchicus* *Calanus finmarchicus.* is undoubtedly the most important in the boreal community. If during spring or summer a hoop-net is towed along the surface in the warm part of the Norwegian Sea off the coast banks, a practically uniform catch is obtained, consisting almost exclusively of this species, indicating a "monotonous" pelagic life, as Haeckel calls it. G. O. Sars, in his reports on the "Vöringen" Expedition, drew attention to this fact and to the wealth of life peculiar to the open ocean, and this monotonous fauna has recently been investigated by Gran and Damas during the cruises of the "Michael Sars." *Calanus finmarchicus* occurs both above the coast banks and in the fjords, but in these localities its preponderance is less pronounced than in the open sea.

In the coast waters we notice many pelagic forms belonging to various groups, along with many larval forms of bottom animals, thus introducing a strange variety into the pelagic life. Coast water forms. Want of space prevents a full discussion of this animal community, and in regard to the various groups I refer the reader to my preceding review. Besides *Calanus finmarchicus* there are many other Copepoda, especially the genera *Centropages*, *Temora*, *Acartia*, *Anomalocera*, and *Euchaeta*. Of Schizopoda *Thysanoëssa*, *Meganyctiphanes*, *Mysis*, and of Decapoda *Pasiphæa* and *Pandalus*, occur. Vast numbers of Medusæ are found at the surface and in the deep water of the fjords, in the Norwegian depression or gut, and in the Skagerrack. Two species of jelly-fish, the brown stinging jelly-fish *Cyanea capillata*, and the transparent *Aurelia aurita*, are frequent. Of Pteropoda we meet with *Clione limacina*, *Limacina retroversa*, and *L. balea*. The most important squid is *Ommatostrephes todarus*. Of fish the following species may be noted: mackerel (*Scomber scomber*), sprat (*Clupea sprattus*), herring (*Clupea harengus*), salmon

<sup>1</sup> According to Damas even *Calanus finmarchicus* is to some extent dependent on the configuration of the bottom (in the spawning time).