

of the year.¹ Other sublittoral species again are plentiful everywhere throughout the whole sublittoral zone, but rarely descend below its lower limit, so that we find at a depth of 100 to 200 metres a mixed fauna, consisting partly of forms that have here reached their upper or lower limit of vertical distribution, and partly of forms which find here the most favourable conditions of life. The sublittoral zone accordingly ranks first in number of species.

The continental deep-sea zone for all practical purposes coincides with the deeper parts of the fjords, whereas out among the skerries, with their comparatively shallow water, we either do not find it at all or else meet with it merely in very limited areas. A feature of the fjords is their very great depth, usually increasing as we proceed inwards, and in their deepest parts, so far as the nature of the bottom and the physical character of the water are concerned, we get what are practically Atlantic conditions.

The
continental
deep-sea zone.

In the fjords the greatest depth is met with along the middle and in the innermost portions, and may be put on an average at 400 to 800 metres.² The sides of the fjords descend in some places practically perpendicularly into deep water, in other places forming more or less extensive submarine plateaus and terraces. At various depths, especially in the seaward portions, there are cross ridges, which frequently consist of hard bottom. The material covering the floor in deep water is almost invariably a soft, viscous, grayish clay or mud. It is the animal life existing upon and in this mud which I shall now describe.

The mud-fauna of the deeper parts of the fjords resembles the sand-fauna in the littoral zone, inasmuch as it consists mainly of burrowing forms, or at any rate of forms which to some extent burrow into the mud to obtain their nourishment. When we sift the mud brought up by the trawl or dredge, we obtain a number of curious little bodies (round, star-shaped, rod-like, conical, etc.), composed of sand or particles of mud. These creatures are rhizopods (foraminifera). By putting out extremely fine thread-like prolongations of their protoplasm through one or more openings in their covering, they attract to themselves small organic particles in the mud which furnish

¹ Thus Helland-Hansen has fixed the summer limit along the coasts at 75 metres, and the winter limit at 150 metres.

² In some fjords, such as the Sogne and Hardanger fjords, the depth is in places 1000 metres or more.