

Several echinoderms occur numerously wherever there are currents. There are quantities of the brittle-stars: *Ophiopholis aculeata* (see Fig. 335), *Ophiocoma nigra*, and *Ophiura albida*. Two species of sea-urchins that live on the hard bottom in the littoral zone are very common among the skerries on the west coast of Norway, namely *Echinus esculentus* and *Strongylocentrotus dröbachiensis*. On the other hand, *Echinus acutus* and *Parechinus miliaris*¹ have a different local distribution, to which I shall allude later. All four species may be found up to low tide mark. This is true also of the big dark-brown holothurian *Cucumaria frondosa* (see Fig. 336), large numbers of which live on the hard bottom among the skerries, and in the outer parts of the fjords, especially where there is a strong current. They fasten themselves to the rock by means of their suckers, and often have their tentacles stretched out in order to capture pelagic organisms, which are afterwards licked off, the animal sticking one tentacle at a time into its mouth.

Together with the above forms we find a mussel, *Lima hians*, which is very characteristic of these localities. It is of interest biologically, because it lives within a nest constructed with the assistance of its byssus out of bits of empty mollusc shells, fragments of echinids or serpulids, and similar materials; in fact, no loose substances appear to come amiss.

Two starfishes are always present, namely *Asterias rubens* and *A. mülleri*. There are other species as well, of course, such as worms and serpulids, but they cannot be called particularly characteristic.

Here, too, the lobster (*Homarus vulgaris*) is equally at home, and may be met with under rocks and stones, occasionally venturing on to sandy bottom. It is distributed throughout the whole littoral zone from a depth of about one metre downwards, a certain proportion of individuals migrating vertically, descend-

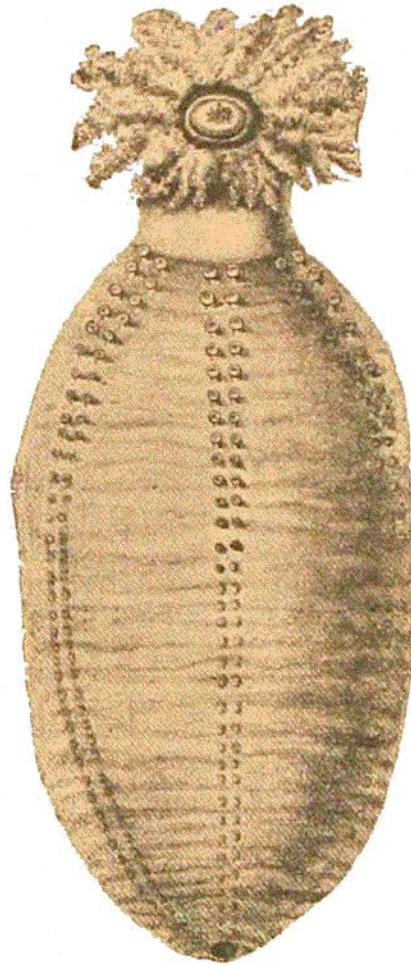


FIG. 336.
Cucumaria frondosa, Gun.

¹ In a few localities all these species may be found together.