low temperature depends upon their finding the conditions necessary for reproduction, namely, higher temperatures during a portion of the year.

Stenothermal forms.

With regard to vertical distribution, it should be noted that the deeper a species lives the more uniform is the temperature to which it is exposed (stenothermal forms). This is true especially of the boreal areas, whereas in arctic tracts there is, as a rule, less difference between the temperatures in deep and in shallow water. It is not so much the depth as the temperature which regulates the distribution of animals. Another factor affecting distribution is salinity. Many forms, particularly the littoral ones, can stand a considerable variation of salinity (euryhaline species), while others are limited to water varying little in salinity (stenohaline species); the former includes those littoral forms which are as much at home among the skerries as far up the fjords or even in the mouths of the rivers, while the latter are only to be found off the coast or at considerable depths.

Euryhaline and stenohaline forms.

I have already tried to make it clear that no arrangement of vertical faunal zones applies to the whole of the Norwegian Sea. Forms which near the coast inhabit the littoral zone may be met with, normally apparently, out on the plateaus, in the sub-littoral zone, or perhaps in the deep-sea zone. Thus in the northern portion of the North Sea the trawl brought up from a depth of 180 to 190 metres *Ophiothrix fragilis* and large specimens of *Eupagurus bernhardus*—forms which are distinctly littoral along the Norwegian coast, and on the Faroe plateau we found these and a number of others at 110 metres. When we compare the North Atlantic with the Norwegian Sea we find still more striking differences, some of the species belonging to the Norwegian Sea occurring at far greater depths in the Atlantic. Now if we remember that the physical conditions in the medium in which a species lives are largely responsible for its vertical distribution, we may assume that in the littoral zone of the coastal waters and in the deeper parts of the Norwegian Sea and Atlantic there are at any rate certain identical conditions—temperature is most decidedly not one of them—which permit these species to live impartially in these areas. If it were merely a question of adaptation to quite different conditions, we might expect them to adapt themselves also to the deeper water-layers along the coasts.

Effect of light.

Light is unquestionably one of the principal factors affecting vertical distribution. During the Atlantic Expedition of the