

and southern series. The hydrographical conditions prevailing along the east side of the Atlantic at these depths are well seen in the chart for 500 fathoms (see Fig. 202, p. 296), which shows that the temperature at 500 fathoms to the south of the Faroe Islands is above  $7.0^{\circ}$  C., and south of the Canaries,  $8.0^{\circ}$  C. Only outside of the Mediterranean do we find a higher temperature. On the western side of the Atlantic the temperature at the same depth is only  $4.0^{\circ}$  C. These facts seem to me to throw much new light on the geographical distribution of the deep-sea fauna.

Fishes of the  
Norwegian  
Sea.

The conditions in the deep basin of the Norwegian Sea, which has been described in Chapter IV., are no less interesting. In the little chart (Fig. 309) the contour-lines for 600 and 2000 metres are shown. The 2000 metres isobath encloses the abyssal plain of the Norwegian Sea, the central parts of which are covered by 3000 and 3500 metres of water. The area between the 2000 and the 600 metres isobaths shows the region of the slopes, which are steep all the way from Spitzbergen to the Wyville Thomson Ridge, a deep channel (the Faroe-Shetland channel) running from the deep basin right down to the ridge. The hydrographical conditions in the Norwegian Sea are indicated in the vertical section (Fig. 310), which runs through the points *a*, *b*, *c*, from the east coast of Greenland across Jan Mayen to Vesteraalen in Norway. In this section the "Atlantic water," with a salinity above 35 per thousand, is shaded, and is seen to be limited to the eastern side, the depth of the layer not exceeding 600 to 700 metres (or 350 to 400 fathoms). All the water to the west, and beneath this "Atlantic water," is quite cold, most of it below  $0^{\circ}$  C., the abyssal plain itself being covered by water having a temperature below  $-1^{\circ}$  C.

Abyssal fauna  
of the  
Norwegian  
Sea.

The fauna of this cold deep basin has been extensively studied during the Norwegian expeditions on board the "Vöringen" and the "Michael Sars," during the Danish expeditions on board the "Ingolf" and the "Thor," and also by Swedish and French expeditions (Duke of Orleans, etc.). On the chart (Fig. 309) small circles denote localities where Norwegian expeditions have employed dredges or trawls, the captures everywhere being remarkably poor in species.

The abyssal plain and the slopes of the Norwegian Sea do not show a single species in common with the Atlantic. While in the Atlantic the genus *Macrurus* plays an important part in