

cooling down in winter, and the surface-water becomes so heavy that it sinks and forms the bottom-water of the Mediterranean.

Coastal  
districts.

On the other hand, there are coastal districts where the many large rivers constantly carry more water into the sea than what is evaporated from it. In such places the salinity is decreased, as, for instance, off the coasts of Scandinavia. A great part of the rain falling in Northern and Central Europe, as far south as the Alps, is carried by rivers into the Baltic and the North Sea, where it is mixed with the salt water, producing the so-called "coast-water" of comparatively low salinity. The density of the coast-water is so low that it

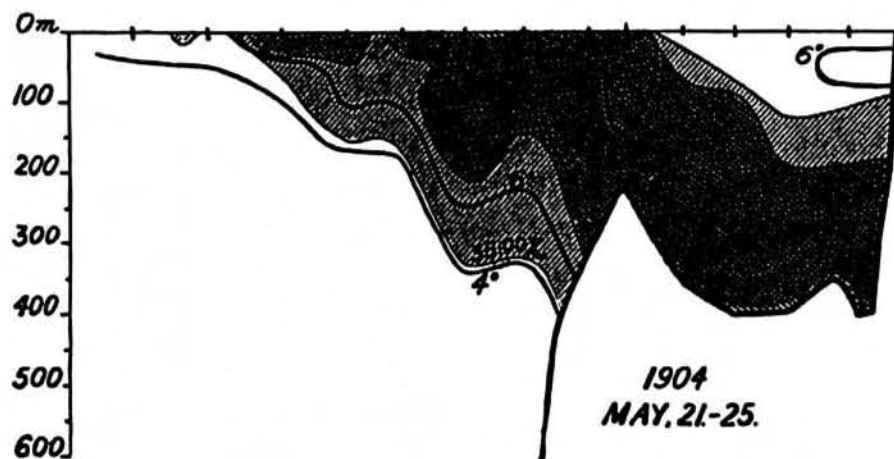


FIG. 165.—THE SOGNEFJORD SECTION, MAY 1904.

Salinities above 35.0 per thousand shown by single hatching; salinities above 35.20 per thousand shown by cross hatching.

always floats on the top, and often glides along a substratum of more saline water. Such coast-water forms the Baltic current, running out of the Baltic Sea through the Kattegat and Skagerrak, continuing on its way along the coast of Norway, above the salter and heavier Atlantic water carried north by the "Gulf Stream."

Fig. 165 represents a section from the mouth of the Sognefjord (near Feje) westwards to a little north of the Faroe Islands. The Atlantic water is marked by hatching, and we see the coast-water lying on the top, close to the land on the right. This section has been examined through a succession of years in the month of May, and we have measured the coast-water section in square kilometres. The top curve (I.) in Fig. 166 shows how this section has varied from year to year. Now it proves to be the case, as was to be expected, that these variations to a certain degree correspond to the variations in the rainfall. The other curves show the divergences