

the summer growth periods and winter stagnation periods in the scales of cod which we procured from the French fishermen. Scales (see Chapter X.) illustrate the growth of the cod by means of "summer-belts" and "winter-rings." Those which we examined had extremely distinct winter-rings, and although it was already July, the summer-belt for the year had not yet commenced. It must therefore have been the winter season still down in the deep water where the cod were taken—and this though we were in the latitude of Paris and the month was July.

On 3rd July the "Michael Sars" anchored in the harbour of St. John's.

From New-  
foundland to  
Glasgow.

It was our original intention to go from Newfoundland to Reykjavik in Iceland, as this was the nearest coaling station on our way back to Europe, and we hardly expected when starting on our expedition that the little ship would be able to steam right across the Atlantic without having to put in anywhere for coal. We had now, however, formed such a favourable opinion of her seaworthiness, and her coal-consumption had been so small, especially on the voyage from the Azores to St. John's, that we decided to venture across the ocean without a stop. The distance from Fayal to St. John's by the way we had come was about 1800 nautical miles, and from St. John's to Ireland was roughly 2000 miles, so that the difference was not so very formidable.

As far as our scientific work was concerned, the direct route to Ireland was bound to be the more interesting. It is true that very little is known about the sea leading to Baffin's Bay, but the physical conditions, and therefore also the animal life, are presumably very uniform and not likely to differ much from the conditions prevailing to the eastward of the Newfoundland Bank. The direct route to Ireland, on the other hand, would give us a fresh section across the Atlantic, and enable us to study the varying conditions in the northerly portion of that ocean. Another reason for selecting this route was the possibility of again studying the remarkable conditions in the Gulf Stream observed on our southern section between Stations 64 and 70 (see Fig. 93). We therefore filled up our bunkers once more and piled the deck with the best coal we could procure, prepared ourselves for as long a cruise as the ship was able to accomplish, and left St. John's on the 8th July.

The water-masses of the North Atlantic may be roughly