As there is no evidence of any through current in this channel, the outward tendency of the surface water must originate in the channel itself; and it appears to be balanced by an inward tendency in the under-current. The current which sets westward along the north shore, on reaching Cape Whittle makes on the whole to the north-westward. This dominant direction is more marked in the under-current than on the surface; and this inward trend of the current around Cape Whittle is to be looked upon as an indraught to make up for the outflow on the surface.

In Mingan Strait, at the other end of the channel, although the current is tidal and nearly equal in each direction, the balance of flow is in the inward direction to the north-west; which is also in accord with the inward tendency of the under-current at the mouth of the channel. Whether the two movements are continuous or not, it is clear that the balance of flow in Mingan Strait helps so far to make up for the outflow in the Gaspé Current.

Although at East Cape, the surface current makes outwards near the shore, this does not indicate the general movement of the water in the vicinity of the east end of Anticosti. At anchorages as far in the offing as 13 and 24 miles S. E. of this Cape, the body of the water was found to make on the whole to the westward. It is more than probable that this water continues westward, and that it also contributes to the return flow which compensates for the Gaspé Current. The temperature and density of this water do not furnish any positive indication to show where it comes from; and it may possibly be drawn from the central part of the Gulf, where the water coming in at Cape Ray diffuses itself, or more probably it may make its way across from Cape Whittle, in continuation of the westward movement along the north shore.

It may therefore be concluded that some water makes inward through Mingan Strait; and some also makes inward at the eastern end of Anticosti, and may continue to work inward along the south shore of that island. This would accord with the frequent on-shore set of the current on the south side of Anticosti, near its eastern end. It would also appear that the inward movement occurs either at the surface or as an under-current at a moderate depth; as in the channel between Gaspé and Anticosti which has a depth of 150 fathoms, no movement in the deep water could be detected.

MOVEMENTS OF FISH, IN RELATION TO TEMPERATURE AND DENSITY OF THE WATER.

It is probable that the temperature and density of the water and the direction of the currents, may have important bearings upon the movements of fish, which as yet are imperfectly understood. This opinion is held by the countries bordering on the North Sea; and the information afforded by the investigation of the movements and other characteristics of the water, are there used as a basis in arriving at the reasons for the distribution and migration of fish at different seasons. This information has its chief application in the North Sea to the herring fishery; and yet a practical return is expected for the outlay which is made in obtaining it: and the investigation is of such importance that arrangements are being discussed for international co-operation amongst the countries bordering on the North Sea in carrying it on. In our fisheries, the cod and mackerel have a greater importance relatively than the herring; which would warrant the expenditure of larger sums in proportion to increase the catch by such investigations.

As an example of the importance of knowing where cod are to be found, and why they prefer one region to another in different seasons, it may be mentioned that in 1896 fishing schooners were returning from Labrador in September with half cargoes, while within the Gulf we found on the surveying vessel that cod were everywhere abundant throughout the summer on the 30 and 40-fathom banks, which no schooners were taking advantage of.

It is held by fishermen that fish are never caught while the water is clear; and its clearness must have some relation to physical conditions which could be ascertained. It is also known that the cod are caught in shallower water in the spring, and further from shore as the season advances. This may depend more directly on the movements of the herring or capelin which they follow; but these fish may themselves be influenced in