

detected. The results were interesting and useful for comparison with the more consecutive observations. The drift of icebergs was also serviceable as an indication of the general movement of the water. Few of them were seen this season, but their movements were always observed by sextant angles, as ordinary bearings were not sufficiently close for the purpose. Some information was thus obtained, but it cannot be said that the results repaid the amount of trouble taken.

Fog.—No systematic observations of the fog were taken, to ascertain its prevalence with winds from various quarters, of which explanations are given in the Sailing Directions. It may be noted, however, that the fog is of all kinds, from a dry fog to a wet drizzle, and also that any kind of weather may come up during fog. It may vary from calm to a whole gale; and it will also range from a clear sky overhead, with the sun breaking through at noon, to heavy rain; but these changes were without marked effect. Rain made the most difference, and it was always welcome; as it partially cleared the air, and extended the view. So far as we noticed therefore, the weather seemed to have very little influence upon the fog; but with the progress of the season it became somewhat less persistent.

We also met with some curious examples of echo and deflection of sound; but this question is being more systematically investigated than we had opportunity to do.

Subdivisions. Time. Bearings.—For convenience in reference, a division is made into two parts: (1) The currents in the south coast region, and (2) the Polar current to the eastward of Newfoundland. This division is the more permissible, as it could not be definitely ascertained that the Polar current had any influence upon the westward movement of the water along the south shore. Throughout the observations the time used is Atlantic standard for the 60th Meridian, or four hours slower than Greenwich mean time. It is reckoned on the twenty four hour system from midnight to midnight. All bearings are magnetic, the variation being 26° to 28° west.

PART I.—THE SOUTH SHORE.

At the beginning of the season, as soon as general observations of the temperature and density of the water had been secured, for comparison with results at later dates, four stations were chosen for a general examination of the currents off the capes separating the bays on the south coast of Newfoundland, between Cape Race and Placentia bay. These stations were so located as to be outside the line of the headlands on the coast, and also within the general line of the shore on one side of the bay; and thus to lie in the set of any current parallel to either of these directions. The positions chosen are marked A. B. C. D., on the map, Plate IX.

An anchorage was made for one or two days at each of these stations, to ascertain in a general way, the nature of the currents on this coast as a basis for the work. It was found in general that the current was tidal, flowing N. W. and S. E. (magnetic) with the flood and ebb respectively. There was a slight preponderance in the north-westward direction on the whole. This result is confirmed by observations secured at a