

occurring at Station CCCXVIII. at a depth of 125 fathoms. At Station CCCXIX. the 2° C. line is at 1100 fathoms, and the other isothermobaths up to 5° C. show a corresponding rise. I attribute this remarkable difference between two soundings so near one another to the banking of the cold water against the submarine cliff by the Brazil Current. Sounding CCCXVIII. seems to have fallen directly upon the "cold wall."

At the deeper sounding (CCCXIX.) the thermometer fell, for the first time in our experience in the South Atlantic, below the freezing-point; but the relations of this very low bottom temperature will be better understood when we consider the section between Montevideo and Tristan d'Acunha.

On the line between Montevideo and Station CCCXXXV. fifteen observing stations were established. The first three of these, CCCXXI. to CCCXXIII., were on the estuary of the River Plate, or (CCCXXIII.) just beyond the edge of the delta at its mouth; the next seven, CCCXXIV. to CCCXXX., gave a section of a wide inlet into the western trough of the South Atlantic with a mean depth of 2750 fathoms; and the remaining five stations, CCCXXXI. to CCCXXXV., were on the central rise, with an average depth of 1850 fathoms. The mean bottom temperature of the seven deep soundings is $-0^{\circ}.4$ C., and that of the five soundings on the rise $+1^{\circ}.3$ C. The isothermobath of $0^{\circ}.0$ C. is at a depth averaging 2400 fathoms, a depth which it never much exceeds except where the cold water rises against the American coast, as at Stations CCCXIX. and CCCXXIII.: it therefore occurs in the line of the seven deep soundings only; and there it forms the upper limit of a mass of water with a temperature below zero, 320 square miles in section. Perhaps the isothermobath of $1^{\circ}.5$ C. may fairly be taken as the upper limit of the very cold water; the section of the Antarctic indraught below that temperature is here about 800 square miles. (The transverse section of the Gulf-stream is about 6 square miles. There is no volume of water at all in