

of the previous day. All the isotherms from that of $1^{\circ}5$ C. had risen palpably, most of them, between 100 and 200 fathoms. Even the surface participated in the fall of temperature, having sunk from $21^{\circ}6$ C. to $19^{\circ}9$ C. This is evidently a space in the Brazil Current occupied by cold water, like the peculiar cold interdigitations which are so marked in the Gulf-stream. The position of this sounding was lat. $37^{\circ} 3'$ S., long. $44^{\circ} 17'$ W. A serial temperature sounding on the following day, at a distance of 80 miles to the eastward, where the depth was 2900 fathoms and the bottom temperature $-0^{\circ}3$ C., showed by the sinking of all the isotherms that we had again entered the normal flow of the Brazil Current.

On the 6th of March it was blowing hard from the southwest with a heavy sea. We sounded in 2000 fathoms, with a bottom of gray mud, and a bottom temperature of $-0^{\circ}3$ C.; but the weather was too boisterous to admit of a serial temperature sounding. On the 7th the sea was more moderate, and we sounded in 2675 fathoms, with a bottom temperature of $-0^{\circ}6$ C., and took a series of temperatures. The bottom was again a fine gray or slightly reddish mud, almost free from calcic carbonate. Samples of water were obtained for specific-gravity determinations and analysis down to 2000 fathoms.

On the 8th of March we sounded in 2440 fathoms, with a bottom of light-red mud and a bottom temperature of $-0^{\circ}3$ C.; and on the 9th, somewhat to our surprise, we sounded in 1715 fathoms, with a bottom of globigerina ooze and a temperature of $1^{\circ}3$ C. The sea was heavy, and trawling operations consequently difficult. The trawl was lowered, however, on account of the remarkable shallowness of the sounding; but it unfortunately came up foul, and the observation was lost. It seems that this sounding was on the central meridional rise which separates the western from the eastern trough of the Atlantic at a depth apparently nowhere much beyond 2000 fathoms, near