

The serial temperature sounding gave a bottom temperature of $0^{\circ}0$ C.; at 1725 the temperature was $1^{\circ}0$ C., at 600 fathoms $3^{\circ}0$ C., and at 50 fathoms $20^{\circ}0$ C. The trawl was not very successful, but it brought up a few things of some interest, among them an example of a small sea-urchin (*Aceste bellidifera*), of which we had previously taken single specimens at widely different stations, off the coast of Nova Scotia, near Gomera Island, near New Zealand, and near Japan. The bottom was chiefly river-mud, with very little carbonate of lime.

On the following day we sounded in 2800 fathoms, and again lowered the trawl. The bottom was a grayish mud with little or no carbonate of lime, and the bottom temperature was $-0^{\circ}4$ C. The trawl-line parted near the ship in heaving in.

On the 1st of March we proceeded on our course, and on the 2d we sounded in 2650 fathoms with a bottom of gray mud and a bottom temperature of $-0^{\circ}4$ C. The trawl was put over, and a series of temperature observations were taken to 1500 fathoms. This sounding is very instructive: the isotherm of 3° C. is found at 600 fathoms, so that we have a mass of water at a lower temperature than 3° C. 2000 fathoms in thickness; $2^{\circ}5$ C. occurs at 1900 fathoms, and zero at 2400. A very marked hump on the curve which extends from a depth of 125 fathoms to a depth of 255 fathoms, and corresponds with the wide spaces between the isotherms of 15° C. and 6° C., evidently indicates the position and volume of the Brazil Current, the southern deflection of the equatorial current after its bifurcation at Cape St. Roque. The trawl came up containing an unusually large number of organisms for this depth, including two specimens of an undescribed species of *Euplectella*, some corals, several echinoderms illustrating three of the orders, some beautiful examples of a species of *Stylifer* commensal on one of the holothurians, and several fishes.

Next day we sounded in 2775 fathoms, and took temperature soundings. This series presented a marked difference from that