

surface was $18^{\circ}3$ C., much as before; we took a sounding in 2425 fathoms, with a bottom of gray mud and a bottom temperature of $1^{\circ}8$ C. The swell was still heavy, and sounding operations were carried on with some difficulty; we were able, however, to get a set of temperature soundings from 800 to 1500 fathoms to complete the series of the previous evening. During the day we made about five knots an hour in a westerly direction, and at 2 P.M. the temperature of the sea-surface suddenly rose from $18^{\circ}6$ C. to 22° C., showing that we had slipped over the southern edge of the Gulf-stream: owing to the cloudy and somewhat boisterous weather, little difference was seen in the appearance of the water. At 8 P.M. the surface temperature of the water had reached $22^{\circ}8$ C., while the thermometer in the air stood at $17^{\circ}8$ C. The position of the ship at noon was lat. $35^{\circ} 58'$ N., long. $76^{\circ} 39'$ W., and the distance from Sandy Hook 308 miles.

We began to sound early on the 1st of May. The surface temperature was 24° C., and the stream was very manifest, running past the ship and surging up against the "Burt's nippers" of the sounding-line with the rapidity and force of a mill-race. The sea was still running high. Two attempts were made to obtain soundings; during the first of these the wind was from the eastward, blowing with a force = 4, and the current dead against it, the ship lying broadside on, with her head to the northward. To reach the bottom as quickly as possible, 4 cwt. of sinkers were piled on the hydra tube, and a new No. 1 sounding-line was run freely from the lee side of the ship. After a short time the line went clear of the ship's side, showing that the weight and the instruments attached had got beneath the rapidly moving water, and that the ship was being carried to windward by the current faster than she was drifting through the current to leeward. Sail was made to increase her drift, but it was found, on taughtening the line, that it was still running out at a considerable angle, and before the ship's head