

The isotherm of  $40^{\circ}$  was found to occupy a mean depth of 750 fathoms (ranging from 700 to 800 fathoms), or nearly the same depth as in the western portion of the Tenerife-Sombrero section. The isotherm of  $60^{\circ}$  descended steadily from 200 fathoms at St. Thomas to 310 fathoms at Bermuda, although the surface temperature decreased from  $76^{\circ}$  at the former to  $68^{\circ}$  at the latter place.

The specific gravity of the surface water rose from 1.02712 off St. Thomas to 1.02732 off Bermuda, that of the bottom water being about 1.0260. The serial determinations on the 31st March showed a similar distribution to that observed before reaching St. Thomas; the surface being 1.02739, the water at 100 fathoms 1.02782.

On the 28th March, at Station 27, a boat, anchored by the lead line with the sinkers on the bottom, found the surface current running N.W. half a mile per hour, agreeing in direction though not in rate with the current determined by the ship's reckoning. On the 2nd April, at Station 30A, the current drag showed that the water, to the depth of 100 fathoms, was moving in the same direction and with the same velocity as that at the surface. From 100 to 300 fathoms the velocity decreased, until at the latter depth there was no perceptible current.

The deposits at the depths of 625 and 390 fathoms on the plateau to the north of the Virgin Islands were Pteropod oozes, with 69 and 73 per cent. of carbonate of lime, containing a few small mineral particles and some argillaceous matter. The deposits from depths greater than 2700 fathoms contained only 4 or 5 per cent. of carbonate of lime, which consisted of a few broken shells of pelagic Foraminifera, and was mostly confined to the surface layers. A few inches beneath the surface the deposit showed only a very slight sign of effervescence when treated with weak acid. At 2700 fathoms there was 22 per cent. of carbonate of lime, at 2600 fathoms 29 per cent., and at 2475 fathoms 54 per cent. The deposits immediately surrounding the island of Bermuda in some instances contained as much as 93 per cent. of carbonate of lime, the percentage being greater the nearer the reef and the less the depth. The mineral particles in all the deposits in this section were exceedingly minute, rarely exceeding 0.07 mm. in diameter, and consisting of fragments of pumice, felspars, magnetite, and augite.

The dredgings in depths less than 500 fathoms, north of St. Thomas and around the island of Bermuda, yielded a large number of interesting animals; but the deep water dredgings were singularly unproductive, only a few Foraminifera and a few shrimps being obtained.

Floating masses of Gulf Weed were frequently met with, and were usually visited in boats while the ship was engaged in sounding and dredging. Besides the ordinary *Sargassum bacciferum*, isolated specimens of another weed, *Fucus vesiculosus*, were occasionally picked up. The following is a complete list of the