

vessels were they shown on the chart. About Conde there is a flat hill with a remarkable tree on its southwest end, and just south of this is a detached hill with a white sandy streak on its face. On the 14th, at Station 128, the sandy hills about Itapua were visible from the deck at a distance of 14 miles.

Between Fernando Noronha and Bahia twenty-two soundings, two serial temperature soundings, and nine trawlings were obtained (see Sheet 15), but for the section between Fernando Noronha and the American coast (Olinda Point, Pernambuco), only seven soundings and the two serial temperature soundings were available, the other depths having been obtained at varying distances from the coast as the ship proceeded southward along the land, from the parallel of 6° S. to Bahia.

The temperature of the surface water averaged from 77° to 78° .

The bottom temperature varied with the depth, as in the section from St. Paul's Rocks to Fernando Noronha, the lowest temperature being obtained at the greatest depth, viz., $34^{\circ}3$ at 2275 fathoms.

The serial temperature soundings showed that the isotherms of 40° and 45° remained nearly parallel with the surface at depths of 400 and 220 fathoms, but the isotherms between that of 45° and that of 78° at the surface gradually deepened as the American coast was neared.

The current at Fernando Noronha was setting to the westward at an average rate of one mile per hour. On the 9th September, at Station 121, the cutter anchored by the trawl showed the surface current to be running N.N.W. (true), half a mile per hour.

Anemometer observations at Station 115, on September 3rd, showed the velocity of the wind to be 17 miles per hour, its force being registered as 4. On the 4th September, at Station 116, its velocity was 20 miles per hour, the force registered being 3 to 5. On the 6th September, at Station 117, its velocity was 24 miles per hour, and the force registered 4 to 5. On the 11th September, at Stations 123 and 124, its velocity was 9 miles per hour, and the force registered 2.

On the 14th September, at 6 A.M., the land about Bahia was sighted, and after obtaining a sounding the ship was steered in for the harbour. At noon the south end of the San Antonio Bank was rounded, and the coals having come to an end, the sea breeze had to be waited for to carry the vessel into port. Whilst waiting for the wind the ship was surrounded by myriads of butterflies, principally *Heliconius narceus*, but after the sea breeze set in, at 1 P.M., they nearly all disappeared. At 4.30 P.M. the ship anchored in the harbour.

Between Fernando Noronha and the American coast there is a deep depression, in which a depth of 2275 fathoms was obtained; and comparatively deep water extends to within 30 miles of the American shore.

The deposits along the coasts of Brazil differed in colour from those which the Challenger