body of it would pass across the bank, instead of being deflected westward, so as to flow round the Cape of Good Hope. From this cape it flows northward, as before stated, along the western coast of Africa, taking the name of the South Atlantic current. It then enters the Bight, or Bay of Benin, and is turned westward, partly by the form of the coast there, and partly, perhaps, by the Guinea current, which runs from the north into the same great bay. From the centre of this bay proceeds the equatorial current already mentioned, holding a westerly direction across the Atlantic, which it traverses, from the coast of Guinea to that of Brazil, flowing afterwards by the shores of Guiana to the West Indies. The breadth of this current varies from 160 to 450 geographical miles, and its velocity is from twenty-five to seventy-nine miles per day, the mean rate being about thirty miles. The length of its whole course is about 4000 miles. As it skirts the coast of Guiana, it is increased by the influx of the waters of the Amazon and Orinoco, and by their junction acquires accelerated velocity. After passing the island of Trinidad, it expands, and is almost lost in the Caribbean Sea; but there appears to be a general movement of that sea towards the Mexican Gulf, which discharges the most powerful of all currents through the Straits of Florida, where the waters run in the northern part with a velocity of four or five miles an hour, having a breadth of from thirty-five to fifty miles.*

The temperature of the Gulf of Mexico is 86° F, in summer, or 6° higher than that of the ocean, in the same parallel (25° N. lat.), and a large proportion of this warmth is retained, even where the stream reaches the 43° N. lat. After issuing from the Straits of Florida, the current runs in a northerly direction to Cape Hatteras, in North Carolina, about 35° N. lat., where it is more than seventy miles broad, and still moves at the rate of seventy-five miles per day. In about the 40° N. lat., it is turned more towards the Atlantic by the extensive banks of Nantucket, and St. George, which are from 200 to 300 feet beneath the surface of the sea; a clear proof that the current exceeds that depth. On arriving near the Azores, the stream widens, and overflows, as it were, forming a large expanse of warm water in the centre of the North Atlantic, over a space of 200 or 300 miles from north to south, and having a temperature of from 8° to 10° Fahr. above the surrounding ocean. The whole area, covered by the Gulf water, is estimated by Rennell at 2000 miles in length, and, at a mean, 350 miles in breadth; an area more extensive than that of the Mediterranean. The warm water has been sometimes known to reach the Bay of Biscay, still retaining five degrees of temperature above that of the adjoining ocean; and a branch of the Gulf current occasionally drifts fruits, plants, and wood, the produce of America, and the West Indies, to the shores of Ireland, and the Hebrides.

From the above statements we may understand why Rennell has

* Consult the map of Currents by Captain F. Beechy, R. N., Admiralty Manual, 1849. London.