

on this direction, and in this parallel the waters, of which we have followed the course from the coasts of Honduras to those of Africa, mingle with the great current of the tropics to resume their tour from east to west. Several hundred leagues westward of the Canary Islands, the motion peculiar to the equinoctial waters is felt in the temperate zone from the 28th and 29th degrees of north latitude; but on the meridian of the island of Ferro, vessels sail southward as far as the tropic of Cancer, before they find themselves, by their reckoning, eastward of their right course.\*

We have just seen that between the parallels of 11 and 43 degrees, the waters of the Atlantic are driven by the currents in a continual whirlpool. Supposing that a molecule of water returns to the same place from which it departed, we can estimate, from our present knowledge of the swiftness of currents, than this circuit of 3800 leagues is not terminated in less than two years and ten months. A boat, which may be supposed to receive no impulsion from the winds, would require thirteen months to go from the Canary Islands to the coast of Caracas, ten months to make the tour of the gulf of Mexico and reach Tortoise Shoals opposite the port of the Havannah, while forty or fifty days might be sufficient to carry it from the straits of Florida to the bank of Newfoundland. It would be difficult to fix the rapidity of the retrograde current from this bank to the shores of Africa; estimating the mean velocity of the waters at seven or eight miles in twenty-four hours, we may allow ten or eleven months for this last distance. Such are the effects of the slow but regular motion which agitates the waters of the Atlantic. Those of the river Amazon take nearly forty-five days to flow from Tomependa to Grand Para.

A short time before my arrival at Teneriffe, the sea had left in the road of Santa Cruz the trunk of a cedrela odorata covered with the bark. This American tree vegetates within the tropics, or in the neighbouring regions. It had no doubt been torn up on the coast of the continent, or of that of Honduras. The nature of the wood, and the lichens which covered its bark, bore evidence that this trunk had not belonged to these submarine forests which

\* See Humboldt's *Cosmos*, vol. i., p. 312. Bohn's edition.