

and the current, renders the sea rough and agitated. In calm weather, the vessels going from Carthagena to Rio Sinu, at the mouth of the Atrato and at Portobello, are impeded in their course by the currents of the coast. The heavy or *brizote* winds, on the contrary, govern the movement of the waters, which they impel in an opposite direction, towards W.S.W. It is the latter movement which Major Rennell, in his great hydrographic work, calls drift; and he distinguishes it from real currents, which are not owing to the local action of the wind, but to differences of level in the surface of the ocean; to the rising and accumulation of waters in very distant latitudes. The observations which I have collected on the force and direction of the winds, on the temperature and rapidity of the currents, on the influence of the seasons, or the variable declination of the sun, have thrown some light on the complicated system of those pelagic floods that furrow the surface of the ocean: but it is less easy to conceive the causes of the change in the movement of the waters at the same season and with the same wind. Why is the Gulf-stream sometimes borne on the coast of Florida, sometimes on the border of the shoal of Bahama? Why do the waters flow, for the space of whole weeks, from the Havannah to Matanzas, and (to cite an example of the *corriente por arriba*, which is sometimes observed in the most eastern part of the main land during the prevalence of gentle winds) from La Guayra to Cape Codera and Cumana?

As we advanced, on the 25th of March, towards the coast of Darien, the north-east wind increased with violence. We might have imagined ourselves transported to another climate. The sea became very rough during the night, yet the temperature of the water kept up (from lat.  $10^{\circ} 30'$ , to  $9^{\circ} 47'$ ) at  $25.8^{\circ}$ . We perceived, at sunrise, a part of the archipelago\* of Saint Bernard, which closes the gulf of Morrosquillo on the north. A clear spot between the clouds

\* It is composed of the islands Mucara, Ceycen, Maravilla, Tintipan, Panda, Palma, Mangles, and Salamanquilla, which rise little above the sea. Several of them have the form of a bastion. There are two passages in the middle of this archipelago, from seventeen to twenty fathoms. Large vessels can pass between the Isla Panda and Tintipan, and between the Isla de Mangles and Palma.