

sometimes ground on this bank; but always without danger, because the sea is never rough or heavy. We crossed that part of the gulf where hot springs gush from the bottom of the sea. It was flood-tide, so that the change of temperature was not very perceptible: besides, our canoe drove too much towards the southern shore. It may be supposed that strata of water must be found of different temperatures, according to the greater or less depth, and according as the mingling of the hot waters with those of the gulf is accelerated by the winds and currents. The existence of these hot springs, which we were assured raise the temperature of the sea through an extent of ten or twelve thousand square toises, is a very remarkable phenomenon.* Proceeding from the promontory of Paria westward, by Irapa, Aguas Calientes, the gulf of Cariaco, the Brigantine, and the valley of Aragua, as far as the snowy mountains of Merida, a continued band of thermal waters is found in an extent of 150 leagues.

Adverse winds and rainy weather forced us to go on shore at Pericantral, a small farm on the south side of the gulf. The whole of this coast, though covered with beautiful vegetation, is almost wholly uncultivated. There are scarcely seven hundred inhabitants: and, excepting in the village of Mariguitar, we saw only plantations of cocoa-trees, which are the olives of the country. This palm occupies on both continents a zone, of which the mean temperature of the year is not below 20°.† It is, like the chamærops of the basin of the Mediterranean, a true palm-tree of the coast. It prefers salt to fresh water; and flourishes less inland, where the air is not loaded with saline particles, than on the shore. When cocoa-trees are planted in Terra-Firma, or in the Missions of the Orinoco, at a distance from the sea, a considerable quantity of salt, sometimes as much as half a bushel, is thrown into the hole which receives the nut. Among the plants cultivated by man, the sugar-cane, the plantain, the mamee-apple, and alligator-pear (*Laurus per-*

* In the island of Guadaloupe, there is a fountain of boiling water, which rushes out on the beach. Hot-water springs rise from the bottom of the sea in the gulf of Naples, and near the island of Palma, in the archipelago of the Canary Islands.

† The cocoa-tree grows in the northern hemisphere from the equator to latitude 28°. Near the equator we find it from the plains to the height of 700 toises above the level of the sea.