

westward towards Alvarez and Matanzas, they stretch in the direction of the northern coast. Proceeding from the mouth of the Rio Guaurabo to the Villa de la Trinidad, I saw on the north-west, the Lomas de San Juan, which form needles or horns more than 300 toises high, with their declivities sloping regularly to the south. This calcareous group presents a majestic aspect, as seen from the anchorage near the Cayo de Piedras. Xagua and Batabano are low coasts; and I believe that, in general, west of the meridian of Matanzas, there is no hill more than 200 toises high, with the exception of the Pan de Guaixabon. The land in the interior of the island is gently undulated, as in England; and it rises only from 45 to 50 toises above the level of the sea. The objects most visible at a distance, and most celebrated by navigators, are the Pan de Matanzas, a truncated cone which has the form of a small monument; the Arcos de Canasi, which appear between Puerto Escondido and Jaruco, like small segments of a circle; the Mesa de Mariel, the Tetas de Managua, and the Pan de Guaixabon. This gradual slope of the limestone formations of the island of Cuba towards the north and west indicates the submarine connection of those rocks with the equally low lands of the Bahama Islands, Florida, and Yucatan.

Intellectual cultivation and improvement were so long restricted to the Havannah and the neighbouring districts, that we cannot be surprised at the ignorance prevailing among the inhabitants respecting the geologic formation of the Copper Mountains. Don Francisco Ramirez, a traveller versed in chemical and mineralogical science, informed me that the western part of the island is granitic, and that he there observed gneiss and primitive slate. Probably the alluvial deposits of auriferous sand which were explored with so much ardour* at the beginning of the conquest, to the

* At Cubanacan, that is, in the interior of the island, near Jagua and Trinidad, where the auriferous sands have been washed by the waters as far as the limestone soil. Martyr d'Anghiera, the most intelligent writer on the Conquest, says: "Cuba is richer in gold than Hispaniola (San Domingo); and at the moment I am writing, 180,000 castillanos of ore have been collected at Cuba." Herrera estimates the tax called King's-fifth (quinto del Rey), in the island of Cuba, at 6000 pesos, which indicates an annual product of 2000 marks of gold, at 22 carats; and conse-