

mountains of Capadare, Porto Cabello, and the Villa de Cura. It may be said to form the eastern wall of that vast circular depression of which the lake of Maracaybo is the centre and which is bounded on the south and west by the mountains of Merida, Ocaña, Perija, and Santa Marta.

The littoral chain of Venezuela presents towards the centre, and the east, the same phenomena of structure as those observed in the Andes of Peru and New Grenada; namely, the division into several parallel ranges, and the frequency of longitudinal basins or vallies. But the irruptions of the Caribbean Sea having apparently overwhelmed, at a very remote period, a part of the mountains of the shore, the ranges or partial chains are interrupted, and some basins have become oceanic gulfs. To comprehend the Cordillera of Venezuela in mass, we must carefully study the direction and windings of the coast from Punta Tucacas (west of Porto Cabello), as far as Punta de la Galera of the island of Trinidad. That island, those of Los Testigos, Marguerita, and Tortuga, constitute, with the mica-slates of the peninsula of Araya, one and the same system of mountains. The granitic rocks which appear between Buria, Duaca, and Aroa, cross the valley of the Rio Yaracui, and draw near the shore, whence they extend, like a continuous wall, from Porto Cabello to Cape Codera. This prolongation forms the northern chain of the Cordillera of Venezuela, and is traversed in going from south to north, either from Valencia and the vallies of Aragua, to Burburata and Turiamo, or from Caracas to La Guayra. Hot springs*

* The other hot springs of the Cordillera of the shore, are those of S. Juan, Provisor, Brigantin, the gulf of Cariaco, Cumucatar, and Irapa. MM. Rivero and Boussingault, who visited the thermal waters of Mariara in February, 1823, during their journey from Caracas to Santa Fe de Bogota, found their maximum to be 64° cent. I found it at the same season, only 59·2°. Has the great earthquake of the 26th March, 1812, had an influence on the temperature of these springs? The able chemists above mentioned were, like myself, struck with the extreme purity of the hot waters that issue from the primitive rocks of the basin of Aragua. Those of Onoto, which flow at the height of 360 toises above the level of the sea, have no smell of sulphuretted hydrogen; they are without taste, and cannot be precipitated, either by nitrate of silver or any other re-agent. When evaporated, they have an inappreciable residue, which consists of a little silica and a trace of alkali; their temperature is