

the table-land; the granular texture of their limestone, surrounded by trap rocks, are objects worthy the attention of the geologist who has studied in the southern Tyrol, the effects produced by the contact of poroxenic porphyries.*

The calcareous soil of the littoral Cordillera prevails most on the east of Cape Unare, in the southern chain; it extends to the gulf of Paria, opposite the island of Trinidad, where we find gypsum of Guire, containing sulphur. I have been informed that in the northern chain also, in the Montaña de Paria, and near Carupana, secondary calcareous formations are found, and that they only begin to shew themselves on the east of the ridge of rock called the Cerro de Meapire, which joins the calcareous group of Guacharo to the mica-slate group of the peninsula of Araya; but I have not had an opportunity of ascertaining the accuracy of this information. The calcareous stratum of the southern chain is composed of two formations, which appear to be very distinct the one from the other: viz. limestone of Cumanacoa and that of Caripe. When I was on the spot, the former appeared to me to have some analogy with zechstein, or Alpine limestone; the latter with Jura limestone; I even thought that the granular gypsum of Guire might be that which belongs in Europe to zechstein, or is placed between zechstein and variegated sandstone. Strata of quartzose sandstone, alternating with slaty clay, cover the limestone of Cumanacoa, Cerro del Impossible, Turimiquiri, Guarda de San Agustin, and the Jura limestone in the province of Barcelona (Aguas Calientes). According to their position, these sandstones may be considered as belonging to the formation of green sandstone, or sandstone with lignites below chalk. But if, as I thought I observed at Cocollar, sandstone form strata in the Alpine limestone before it is superposed, it appears doubtful whether the sandstone of the Impossible, and of Aguas Calientes, constitute one series. Muriatiferous clay (with petroleum and lamellar gypsum) covers the western part of the peninsula of Araya, opposite to the town of Cumana, and in the

* Leopold von Buch. Tableau géologique du Tyrol, p. 17. M. Bous-singault states that these singular Morros de San Juan, which furnish a limestone with crystalline grains, and thermal springs, are hollow, and contain immense grottos filled with stalactites, which appear to have been anciently inhabited by the natives.