

the southern coast of Porto Rico, St. Domingo, and the island of Cuba their uniform configuration. This supposition of an oceanic irruption has been the source of two other hypotheses on the origin of the smaller West India Islands. Some geologists admit that the uninterrupted chain of islands from Trinidad to Florida exhibits the remains of an ancient chain of mountains. They connect this chain sometimes with the granite of French Guiana, sometimes with the calcareous mountains of Pari. Others, struck with the difference of geological constitution between the primitive mountains of the Greater and the volcanic cones of the Lesser Antilles, consider the latter as having risen from the bottom of the sea.

If we recollect that volcanic upheavings, when they take place through elongated crevices, usually take a straight direction, we shall find it difficult to judge from the disposition of the craters alone, whether the volcanos have belonged to the same chain, or have always been isolated. Supposing an irruption of the ocean to take place either into the eastern part of the island of Java\* or into the Cordilleras of Guatemala and Nicaragua, where so many burning mountains form but one chain, that chain would be divided into several islands, and would perfectly resemble the Caribbean Archipelago. The union of primitive formations and volcanic rocks in the same range of mountain is not extraordinary; it is very distinctly seen in my geological sections of the Cordillera of the Andes. The trachytes and basalts of Popayan are separated from the system of the volcanos of Quito by the mica-slates of Almager; the volcanos of Quito from the trachytes of Assuay by the gneiss of Condorasta and Guasunto. There does not exist a real chain of mountains running south-east and north-west from Oyapoc to the mouths of the Orinoco, and of which the smaller West India Islands might be a northern prolongation. The granites of Guiana, as well as the hornblende-slates, which I saw near Angostura, on the banks of the Lower Orinoco, belong to the mountains of Pacaraimo and of

\* Raffles, History of Java, 1817, pp. 23—28. The principal line of the volcanos of Java, on a distance of 160 leagues, runs from west to east, through the mountains of Gagak, Gedé, Tankuban-Prahu, Ungarang, Merapi, Lawu, Wilis, Arjuna, Dasar, and Tashem.