

caybo. It throws up asphaltum, and is said to emit gaseous emanations, which ignite spontaneously, and are seen at a great distance.

These are the springs of petroleum and of thermal waters, the igneous meteors, and the ejections of muddy substances attended with explosions, of which I acquired a knowledge in the vast provinces of Venezuela, whilst travelling over a space of two hundred leagues from east to west. These various phenomena have occasioned great excitement among the inhabitants since the catastrophes of 1797 and 1812: yet they present nothing which constitutes a volcano, in the sense hitherto attributed to that word. If the apertures, which throw up vapours and water with violent noise, be sometimes called *volcancitos*, it is only by such of the inhabitants as persuade themselves that volcanos must necessarily exist in countries so frequently exposed to earthquakes. Advancing from the burning crater of St. Vincent in the directions of south, west and south-west, first by the chain of the Caribbee Islands, then by the littoral chain of Cumana and Venezuela, and finally by the Cordilleras of New Grenada, along a distance of three hundred and eighty leagues, we find no active volcano before we arrive at Purace, near Popayan. The total absence of apertures, through which melted substances can issue, in that part of the continent, which stretches eastward of the Cordillera of the Andes, and eastward of the Rocky Mountains, is a most remarkable geological fact.

In this chapter we have examined the great commotions which from time to time convulse the stony crust of the globe, and scatter desolation in regions favoured by the most precious gifts of nature. An uninterrupted calm prevails in the upper atmosphere; but, to use an expression of Franklin, more ingenious than accurate, thunder often rolls in the *subterranean atmosphere*, amidst that mixture of elastic fluids, the impetuous movements of which are frequently felt at the surface of the earth. The destruction of so many populous cities presents a picture of the greatest calamities which afflict mankind. A people struggling for independence are suddenly exposed to the want of subsistence, and of all the necessaries of life. Famished and without shelter, the inhabitants are dispersed through the