

and frequent on those vast savannahs or prairies,\* which are scarcely eight or ten toises above the level of the ocean?

The earthquakes of Cumana are connected with those of the West India Islands; and it has even been suspected that they have some connection with the volcanic phenomena of the Cordilleras of the Andes. On the 4th of February, 1797, the soil of the province of Quito suffered such a destructive commotion, that near 40,000 natives perished. At the same period the inhabitants of the eastern Antilles were alarmed by shocks, which continued during eight months, when the volcano of Guadaloupe threw out pumice-stones, ashes, and gusts of sulphureous vapours. The eruption of the 27th of September, during which very long-continued subterranean noises were heard, was followed on the 14th of December by the great earthquake of Cumana. Another volcano of the West India Islands, that of St. Vincent, affords an example of these extraordinary connections. This volcano had not emitted flames since 1718, when they burst forth anew in 1812. The total ruin of the city of Caracas preceded this explosion thirty-five days, and violent oscillations of the ground were felt both in the islands and on the coasts of Terra Firma.

It has long been remarked that the effects of great earthquakes extend much farther than the phenomena arising from burning volcanoes. In studying the physical revolutions of Italy, in carefully examining the series of the eruptions of Vesuvius and Etna, we can scarcely recognise, notwithstanding the proximity of these mountains, any traces of a simultaneous action. It is on the contrary beyond a doubt, that at the period of the last and preceding destruction of Lisbon,† the sea was violently agitated even as far as the

\* The Llanos of Cumana, of New Barcelona, of Calabozo, of Apure, and of Meta.

† The 1st of November, 1755, and 31st of March, 1761. During the first of these earthquakes, the sea inundated, in Europe, the coasts of Sweden, England, and Spain; in America, the islands of Antigua, Barbadoes, and Martinique. At Barbadoes, where the ordinary tides rise only from twenty-four to twenty-eight inches, the water rose twenty feet in Carlisle Bay. It became at the same time as black as ink; being, without doubt, mixed with the petroleum, or asphaltum, which abounds at the bottom of the sea, as well on the coasts of the gulf of Cariaco, as