

ordinary in a country not volcanic, is pretty frequent in the Alpine calcareous mountains near Cumanacoa, in the valley of Bordones, in the island of Margareta, and amidst the Llanos or savannahs of New Andalusia. In these savannahs, flakes of fire rising to a considerable height, are seen for hours together in the driest places; and it is asserted, that, on examining the ground no crevice is perceptible. This fire, which resembles the springs of hydrogen, or Salse, of Modena, or what is called the will-o'-the-wisp of our marshes, does not burn the grass; because, no doubt, the column of gas, which develops itself, is mixed with azote and carbonic acid, and does not burn at its basis. The people, although less superstitious here than in Spain, call these reddish flames by the singular name of 'the soul of the tyrant Aguirre;' imagining that the spectre of Lopez Aguirre, harassed by remorse, wanders over these countries sullied by his crimes.*

The great earthquake of 1797 produced some changes in the configuration of the shoal of Morro Roxo, towards the mouth of the Rio Bordones. Similar swellings were observed at the time of the total destruction of Cumana, in 1766. At that period, the Punta Delgado, on the southern coast of the gulf of Cariaco, became perceptibly enlarged; and in the Rio Guarapiche, near the village of Maturin, a shoal was formed, no doubt by the action of the elastic fluids, which displaced and raised up the bed of the river.

In order to follow a plan conformable to the end we proposed in this work, we shall endeavour to generalize our ideas, and to comprehend in one point of view everything that relates to these phenomena, so terrific, and so difficult to explain. If it be the duty of the men of science who visit the Alps of Switzerland, or the coasts of Lapland, to extend our knowledge respecting the glaciers and the aurora borealis, it may be expected that a traveller who

* When at Cumana, or in the island of Margareta, the people pronounce the words *el tirano* (the tyrant), it is always to denote the hated Lopez d'Aguirre, who, after having taken part, in 1560, in the revolt of Fernando de Guzman against Pedro de Ursua, governor of the Omeguas and Dorado, voluntarily took the title of *traidor*, or traitor. He descended the river Amazon with his band, and reached by a communication of the rivers of Guyana the island of Margareta. The port of Paraguache still bears, in this island, the name of the Tyrant's Port.