

scribed in the sequel. If the line which connects these five vents be prolonged in a westerly direction, it cuts the volcanic group of islands called the Isles of Revillagigedo.

To the north of Mexico there are said to be three, or according to some, five volcanos in the peninsula of California; and a volcano is reported to have been in eruption on the N. W. coast of America, near the Colombia river, lat.  $45^{\circ} 37' N$ .

*West Indies.*—To return to the Andes of Quito: Von Buch inclines to the belief, that if we were better acquainted with the region to the east of the Madalena, and with New Granada and the Caraccas, we might find the volcanic chain of the Andes to be connected with that of the West Indian, or Caribbee Islands. The truth of this conjecture has almost been set at rest by the eruption, in 1848, of the volcano of Zamba in New Granada, at the mouth of the river Madalena.\*

Of the West Indian islands there are two parallel series, the one to the west, which are all volcanic, and which rise to the height of several thousand feet; the others to the east, for the most part composed of calcareous rocks, and very low. In the former, or volcanic series, are Granada, St. Vincent, St. Lucia, Martinique, Dominica, Guadeloupe, Montserrat, Nevis, and St. Eustace. In the calcareous chain are Tobago, Barbadoes, Mariegallante, Grandeterre, Desirade, Antigua, Barbuda, St. Bartholomew, and St. Martin. The most considerable eruptions in modern times have been those of St. Vincent. Great earthquakes have agitated St. Domingo, as will be seen in the thirtieth chapter.

I have before mentioned (p. 216.) the violent earthquakes which in 1812 convulsed the valley of the Mississippi at New Madrid, for the space of 300 miles in length, of which more will be said in the twenty-eighth chapter. This happened exactly at the same time as the great earthquake of Caraccas, so that it is possible that these two points are parts of one subterranean volcanic region. The island of Jamaica, with a tract of the contiguous sea, has often experienced tremendous shocks; and these are frequent along a line extending from Jamaica to St. Domingo and Porto Rico.

Thus it will be seen that, without taking account of the West Indian and Mexican branches, a linear train of volcanos and tracts shaken by earthquakes may be traced from the island of Chiloe and opposite coast to Mexico, or even perhaps to the mouth of the Colombia river—a distance upon the whole as great as from the pole to the equator. In regard to the western limits of the region, they lie deep beneath the waves of the Pacific, and must continue unknown to us. On the east they are not prolonged, except where they include the West Indian Islands, to a great distance; for there seem to be no indications of volcanic disturbances in Buenos Ayres, Brazil, and the United States of North America.

*Volcanic region from the Aleutian Isles to the Moluccas and Isles of Sunda.*—On a scale, which equals, or surpasses, that of the

\* Comptes Rendus, 1849, vol. xxix. p. 531.