It is further to be noticed, that many of the craters of ancient volcanoes, are of far greater size than the present ones. Vesuvius is a comparatively small cone, raised within the crater of a larger volcano. The cone of the Peak of Teneriffe, according to the description of travellers, stands within a volcanic plain, containing twelve square leagues of surface, surrounded by perpendicular precipices and mountains, which were the border of the ancient crater. If the opinion of M. Humboldt be correct, all these craters are diminutive apertures, compared with the immense chasms through which, in remote ages, subterranean fire has forced a passage through the crust of the globe.

"The whole of the mountainous parts of Quito," he says, "may be considered as one immense volcano, occupying more than seven hundred square leagues of surface, and throwing out flames by different cones, known by the denominations of Cotopaxi, Tungurahua, and Pichincha. In like manner," he adds, "the whole group of the Canary Islands is placed as it were on one submarine volcano. The fire forces a passage sometimes through one, and sometimes through another of these islands. Teneriffe alone, contains in its centre an immense pyramid terminated by a crater, throwing out, from one century to another, lava by its flanks. In the other Canary Islands, the different eruptions take place in various parts, and we no where find *those isolated mountains, to which volcanic effects are restrained.* The basaltic crust formed by ancient volcanoes seems every where undermined; and the currents of lava seen at Lanzerote and Palma remind us," he adds, "by every geological affinity, of the eruption which took place in 1301 at the Isle of Ischia, amid the tufas of Epimeo."

In the preceding part of the present chapter, I have endeavoured to give a succinct account of the most important volcanic phenomena. The only formations of hard crystalline rocks in the present day are volcanic; and if we trace the connection that exists between modern and ancient volcanic rocks, and between the latter and the rocks of trap and porphyry, among the ancient rock-formations, we shall extend the dominion of Pluto over a large portion of the globe.

Many of the ancient volcanic rocks, have not flowed in currents from limited apertures, like modern lavas. "The volcanic porphyries on the back of the Cordilleras," says M. Humboldt, "are undoubtedly of igneous origin; but the mode of their formation is not like that of modern lavas, which have been erupted since the excavation of valleys. The action of volcanic fire by an isolated cone or crater of a modern volcano, differs necessarily from the action of this fire, through the fractured crust of the globe." It has been observed by the same geologist, that the further back we can trace volcanic eruptions, the greater is the similarity between their products, and *the rocks which are regarded as the most ancient;—hence, the* countries that have been the seats of ancient volcanoes, are particu-