

CHAPTER XXVII.

Volcanic eruption in Iceland in 1783—New island thrown up—Lava-currents of Skaptár Jokul, in same year—Their immense volume—Eruption of Jorullo in Mexico—Humboldt's theory of the convexity of the plain of Malpais—Eruption of Galongoon in Java—Submarine volcanos—Graham island, formed in 1831—Volcanic archipelagos—Submarine eruptions in mid-Atlantic—The Canaries—Teneriffe—Cones thrown up in Lancerote, 1730–36—Santorin and its contiguous isles—Barren island, in the Bay of Bengal—Mineral composition of volcanic products.

Volcanic eruptions in Iceland.—WITH the exception of Etna and Vesuvius, the most complete chronological records of a series of eruptions are those of Iceland, for their history reaches as far back as the ninth century of our era; and, from the beginning of the twelfth century, there is clear evidence that, during the whole period, there has never been an interval of more than forty, and very rarely one of twenty years, without either an eruption or a great earthquake. So intense is the energy of the volcanic action in this region, that some eruptions of Hecla have lasted six years without ceasing. Earthquakes have often shaken the whole island at once, causing great changes in the interior, such as the sinking down of hills, the rending of mountains, the desertion by rivers of their channels, and the appearance of new lakes.* New islands have often been thrown up near the coast, some of which still exist; while others have disappeared, either by subsidences or the action of the waves.

In the interval between eruptions, innumerable hot springs afford vent to subterranean heat, and solfataras discharge copious streams of inflammable matter. The volcanos in different parts of this island are observed, like those of the Phlegreæan Fields, to be in activity by turns, one vent often serving for a time as a safety-valve to the rest. Many cones are often thrown up in one eruption, and in this case they take a linear direction, running generally from north-east to south-west, from the north-eastern part of the island, where the volcano Krabla lies, to the promontory Reykianas.

New island thrown up in 1783.—The convulsions of the year 1783 appear to have been more tremendous than any recorded in the modern annals of Iceland; and the original Danish narrative of the catastrophe, drawn up in great detail, has since been substantiated by several English travellers, particularly in regard to the prodigious extent of country laid waste, and the volume of lava produced.† About a month previous to the eruption on the mainland, a submarine

* Von Hoff, vol. ii. p. 393.

† The first narrative of the eruption was drawn up by Stephensen, then Chief Justice in Iceland, appointed commissioner by the King of Denmark for estimating the damage done to the

country, that relief might be afforded to the sufferers. Henderson was enabled to correct some of the measurements given by Stephensen, of the depth, width, and length of the lava-currents, by reference to the MS. of Mr. Paulson, who