

tistical incrustations of caverns, &c. may be referred to the same general head. In many instances these recent calcareous deposits include land or freshwater shells, leaves, and other substances which have become accidentally entangled in them.

But of all the changes resulting from causes in actual operation, those depending on the agency of volcanoes are the most remarkable. By this cause new mountains are still occasionally elevated, and new islands formed; thus the Monte Nuovo, elevated above 600 feet, rose in the space once occupied by the Lucrine lake in the year 1538. See Hamilton's letters on Volcanos, p. 127; and more recently (1759) in Mexico, from similar causes, a tract of ground of four square miles in extent, swelled to the height of 524 feet, and in the centre of a thousand burning cones, six large masses elevated themselves more than 1200 feet; the loftiest summit, known as the Volcano of Jorullo, rising no less than 1695 feet. What renders the case more remarkable is, that the point where this extraordinary convulsion happened, is more than 42 leagues distant from every other volcano. See Humboldt's *New Spain*, vol. 2. p. 165. The islands of the Greek Archipelago, especially those of Hiera and Santorini, have received accessions by the extension of those previously existing, and the formation of new islets in the adjoining sea by volcanic eruptions, in 726, 1427, 1573, and 1650. New islands are recorded as having been thus formed among the Azores in 1628, and very recently in 1811.

By the same cause extensive districts are covered with thick beds of volcanic ashes; those resulting from successive eruptions being regularly disposed, stratum super stratum, and overflowed by long currents of lava, or sometimes by streams of ejected mud. Mackenzie's and Henderson's travels in Iceland, Fortis, Spallanzani, Dolomieu, and Ferrara in Italy and Sicily, and Humboldt's in South America, should be referred to on these heads.

Closely connected with volcanic phenomena are those of earthquakes. These often produce subversions of the strata, which represent, though on a smaller scale, and may perhaps account for, those grand dislocations and derangements which we generally observe in the beds composing mountain chains. See particularly the description of the effects produced by the great earthquake in Calabria.

The agency of volcanic powers appears to have been much more extensive at an earlier period, even under the existing order of things, and subsequently to the last great convulsion of the Earth's surface, than they are at the present moment; for we observe craters now extinct of the most indisputable character, which have covered with showers of scoriæ many