

been increased in intensity, and a passage been opened near the summit, through which streams of lava and showers of scoriæ had been projected, we should have had a crater of elevation, though its structure and mode of formation might have been concealed by volcanic substances covering the original rock. Von Buch and Humboldt have been challenged to discover a single volcanic cone composed exclusively of marine or of freshwater strata; but surely this is overlooking the conditions under which such a cone must be formed: the eruptions from the crater, when once open, would cover a great part of the external cone with lava and volcanic matter. The above eminent geologists might show Crich Cliff and Wren's Nest Hill, as presenting a triumphant confirmation of the theory of elevation; a confirmation not the less satisfactory, because the volcanic action had been arrested precisely at the point, where the truth of the theory was rendered most apparent.

The island called the New Kamenoi, raised near St. Erini during a submarine eruption in the year 1707, was composed partly of limestone, and covered with living shells, which prove that the rock was upraised in a solid mass. Volcanic islands, of great elevation, have been raised, in the present century, in the group called Aleutian Islands; and as they remain permanent, with little diminution of height, it is supposed by Von Buch that they consist of solid rock.

The marine limestone on the sides of *Ætna*, offers confirmatory evidence of the truth of the theory of elevation, though the strata may have been subsequently disturbed, and dip in different directions. I have in my possession an enormous marine shell, or gigantic cerithium. According to the notice written upon it by the late Faujas St. Fond, it was obtained from the Peak of Teneriffe, which indicates that this vast volcanic mountain, was originally a crater of elevation raised from the sea.

Some volcanoes in Europe, and many in the Andes, throw out aqueous torrents, intermixed with mud and stones; indeed, the American volcanoes more frequently eject mud than lava. Eruptions of water from *Ætna* and *Vesuvius* are rare, and some which have been described as flowing from the crater of the former, have been merely the torrents of melted water from snow on its summit. The volcano of *Macaluba*, in Sicily, presents the phenomena of mud, water, and stones thrown out of the crater. Ferrara describes an alarming eruption which took place on the 29th of September, 1777:—"Dreadful noises were heard all round; and from the midst of the plain, in which was formed a vast gulf, an immense column of mud arose to the height of about one hundred feet, which, abandoned by the impulsive force, assumed the appearance of a large tree at the top. In the middle, stones of all kinds and sizes were darted violently and vertically, within the body of the column. This terrible explosion lasted half an hour, when it became quiet; but after a few minutes resumed its course, and with these intermissions continued