

the kind, and was the result of the upheaval of the mountains of western Asia.

A deluge, quite of modern date, conveys a tolerably exact idea of this kind of phenomena. We recall the circumstances the better to comprehend the true nature of the ravages the deluge inflicted upon some Asiatic countries in the Quaternary period. At six days' journey from the city of Mexico there existed, in 1759, a fertile and well-cultivated district, where grew abundance of rice, maize, and bananas. In the month of June frightful earthquakes shook the ground, and were continued unceasingly for two whole months. On the night of the 28th September the earth was violently convulsed, and a region of many leagues in extent was slowly raised until it attained a height of about 500 feet over a surface of many square leagues. The earth undulated like the waves of the sea in a tempest; thousands of small hills alternately rose and fell, and, finally, an immense gulf opened, from which smoke, fire, red-hot stones and ashes were violently discharged, and darted to prodigious heights. Six mountains emerged from this gaping gulf; among which the volcanic mountain Jorullo rises 2,890 feet above the ancient plain, to the height of 4,265 feet above the sea.

At the moment when the earthquake commenced the two rivers *Cuitimba* and *San Pedro* flowed backwards, inundating all the plain now occupied by Jorullo; but in the regions which continually rose, a gulf opened and swallowed up the rivers. They reappeared to the west, but at a point very distant from their former beds.

This inundation reminds us on a small scale of the phenomena which attended the deluge of Noah.

Besides the deposits resulting from the partial deluges which we have described as occurring in Europe and Asia during the Quaternary epoch there were produced in the same period many new formations resulting from the deposition of *alluvia* thrown down by seas and rivers. These deposits are always few in number, and widely disseminated. Their stratification is as regular as that of any which belong to preceding periods; they are distinguished from those of the Tertiary epoch, with which they are most likely to be confounded, by their situation, which is very frequently upon the shores of the sea, and by the predominance of shells of a species identical with those now living in the adjacent seas.

A marine formation of this kind, which, after constituting the coast of Sicily, principally on the side of Girgenti, Syracuse, Catania, and Palermo, occupies the centre of the island, where it rises to the