

The situation of Vesuvius and Etna has made their history better known than that of most volcanoes. More than eighty eruptions of the latter are on record, since the days of Thucydides; and more than forty of the former, since the first century of the Christian era. That which occurred in Vesuvius, A.D. 79, is best known, from the fact that it buried three cities, Herculaneum, Pompeii, and Stabiae, which were flourishing at its base. Not much lava appears to have been thrown out at the eruption, but other volcanic products, such as sand, ashes, cinders, and stones. Not only were the cities buried in this loose material, but the buildings, cellars, and vaults, were filled by currents of mud produced by copious showers, resulting from the condensation of aqueous vapors ejected from the volcanoes, mixed with ashes and fine sand. In Herculaneum these deposits are from 70 to 112 feet thick.

Hence it is, that when these cities were first excavated, more than a hundred years ago, every thing enveloped was in a most perfect state of preservation—the pavements of lava, with deep ruts worn by the carriage wheels; the names of their owners over the doors of the houses; the frescoed paintings as bright as though put on but yesterday; fabrics in the shops still showing their texture; vessels of fruit so well preserved as to be easily recognized; bread retaining the stamp of the baker, and medicine yet remaining on the apothecary's counter. The whole constitute perfect examples of fossil cities!

In 1759, in the elevated plain of Malpais, in Mexico, which is from 2,000 to 3,000 feet above the ocean, and at the distance of 125 miles from the sea, a volcanic eruption took place, producing six volcanic cones; now varying in height from 200 to 1,600 feet. Around these cones, and covering several square miles, are a multitude of small cones, from two to six feet high, called *hornitos*, which continually give off hot aqueous vapor and sulphuric acid.

Sometimes during a violent eruption the whole mountain, or cone, is either blown to pieces or falls into the gulf beneath, and its place is afterwards occupied as a lake.

EXAMPLES.—1. In 1772, the Papandayang, a large volcano in the island of Java, after a short and severe eruption, fell in and disappeared over an extent of fifteen miles long and six broad; burying forty villages, and 2,957 inhabitants. 2. In 1638, the Pic, a volcano in the island of Timor, so high as to be visible 300 miles, disappeared, and its place is now occupied by a