

active ; in most cases their action is paroxysmal, and is succeeded by longer or shorter intervals of repose. This interval varies from a few months to seventeen centuries. In the island of Ischia the latter period has been known to intervene between two eruptions.

Hence some of the volcanoes of America, generally regarded as extinct, (as Chimborazo, and Carguairazo in Quito, Tacoza, in Peru, and Nevado de Toluca, in Mexico), may yet break forth and show themselves to belong to the class of active volcanoes.

PHENOMENA OF AN ERUPTION.

A volcanic eruption is commonly preceeded by rumbling sounds in the earth, or earthquakes, in the vicinity ; stillness of the air, with a sense of oppression ; noises in the mountain ; and the drying up of fountains. The eruption commences with a sudden explosion, followed by vast clouds of smoke and vapor, with flashes of lightning, jets of acids and mud, and showers of stones ; and at length by streams of red hot lava, which break out in irregular intermitting springs of molten earthy matter, and spread over the surrounding country. The eruption is terminated by showers of ashes.

Volcanoes whose summits are far above the snow line, present many peculiar appearances ; a sudden melting of the snow indicates the approach of an eruption, even before smoke appears ; and this rapid thawing of the accumulated snows occasions destructive floods and violent torrents, in which heaps of smoking ashes are floated away on thick blocks of ice.

Probably the most remarkable eruption of modern times took place in 1815, in the island of Sumbawa, one of the Molucca group. It commenced on the 5th of April, and did not entirely cease till July. The explosions were heard in Sumatra, 970 geographical miles distant, in one direction, and at Ternate in the opposite direction, 720 miles distant. So heavy was the fall of ashes at the distance of forty miles, that houses were crushed and destroyed beneath them. Toward Celebes, they were carried to the distance of 217 miles ; and toward Java, 300 miles, so as to occasion a darkness greater than that of the darkest night. On the 12th of April, the floating cinders to the westward of Sumatra were two feet thick ; and ships were forced through them with difficulty. Large tracts of country were covered by the lava ; and out of 12,000 inhabitants on the island only twenty-six survived.

During the great eruption of the volcano of Cosiguina, in Guatemala, on the shores of the Pacific, in 1835, ashes fell upon the island of Jamaica, 800 miles eastward ; and upon the deck of a vessel 1,200 miles westward.