

was a portion of the forest of Aripao which subsided, and the trees remained green for several months under water.*

Sicily, 1790.—On the 18th of March in the same year, at S. Maria di Niscemi, some miles from Terranuova, near the south coast of Sicily, the ground gradually sunk down for a circumference of three Italian miles, during seven shocks; and, in one place, to the depth of thirty feet. It continued to subside to the end of the month. Several fissures sent forth sulphur, petroleum, steam, and hot water, and a stream of mud, which flowed for two hours, and covered a space sixty feet long, and thirty broad. This happened far from both the ancient and modern volcanic district, in a group of strata consisting chiefly of blue clay.†

Java, 1786.—About the year 1786, an earthquake was felt at intervals, for the period of four months, in the neighbourhood of Batur, in Java, and an eruption followed. Various rents were formed, which emitted a sulphureous vapour; separate tracts sunk away, and were swallowed by the earth. Into one of these the rivulet Dotog entered, and afterwards continued to follow a subterraneous course. The village of Jampang was buried in the ground, with thirty-eight of its inhabitants, who had not time to escape. We are indebted to Dr. Horsfield for having verified the above-mentioned facts.‡

CHAPTER XXIX.

EARTHQUAKE IN CALABRIA, 1783.

Earthquake in Calabria, February 5. 1783 — Shocks continued to the end of the year 1786 — Authorities — Area convulsed — Geological structure of the district — Difficulty of ascertaining changes of level — Subsidence of the quay at Messina — Movement in the stones of two obelisks — Shift or fault in the Round Tower of Terranuova — Opening and closing of fissures — Large edifices engulfed — Dimensions of new caverns and fissures — Gradual closing in of rents — Bounding of detached masses into the air — Landslips — Buildings transported entire to great distances — New lakes — Funnel-shaped hollows in alluvial plains — Currents of mud — Fall of cliffs, and shore near Scilla inundated — State of Stromboli and Etna during the shocks — How earthquakes contribute to the formation of valleys — Concluding remarks.

Calabria, 1783. — OF the numerous earthquakes which have occurred in different parts of the globe, during the last hundred years, that of Calabria, in 1783, is almost the only one of which the geologist can be said to have such a circumstantial account as to enable him fully to appreciate the changes which this cause is capable of producing in the lapse of ages. The shocks began in February,

* Humboldt's Voy., Relat. Hist., part ii. p. 632.

† Ferrara, Camp. fl., p. 51.

‡ Batav. Trans. vol. viii. p. 141.