

the breakers, which were produced by the billows breaking furiously on a narrow strand, terminated abruptly by a rapid incline. The water was of an acid taste, and a yellowish-green colour. Soundings taken not far from the shore discovered bottom at from forty to fifty fathoms.

On the same day, one of the brig's officers, accompanied by two sailors, succeeded in swimming ashore. He made his way to the crater, and brought back some specimens of the scoriæ, among which M. Prévost discovered a fragment of chalk.

The next day, the 29th, a boat, furnished with all the necessary instruments of observation, landed on the island, and M. Joinville made a drawing of the crater, which at the time was full of fresh water. It proved to be about 200 feet deep, and the water, of a reddish colour, showed a temperature of from 203° to 208° F. Through the quantity of bubbles it disengaged, it seemed to be boiling; but the same escape of bubbles was visible at every chink in the soil.

The sand, washed by the sea, was literally burning to the pedestrian's feet; the thermometer, when placed upon it, rose to 198° and 203° F. The water in its hollows seethed and hissed, though not quite at boiling point. M. Prévost, having thrust his hand into the sand, found it quite cool at a few inches in depth; but his finger coming in contact with a bubble of gas as it rose through the soil, was immediately burned. Each of these gas-bubbles, coming up from a great depth, projected, with a feeble report, a small puff of cinders and sand, representing thus a miniature vent of eruption.

Among these thousands of miniature volcanoes, M. Prévost noticed one which served to give his companions an idea of the formation of the island. It was about one foot in diameter, and five to six inches in height. This kind of molehill was formed by the sand and scoriæ which, incessantly launched to an elevation of two feet, fell back around the small centre of eruption. By crumbling away the sides of the cone, and imitating thus the action of the "sad sea-waves" on the new islet, M. Prévost made a crater in every respect analogous to that of Ferdinanda.

The gases escaping through the crevices of the soil were without odour and unflammable; but, at a few paces from the crater, you might see volumes of sulphurous vapour evolving and depositing salt and sulphur. The shifting scoriæ and pulverulent materials which composed the soil were absolutely burning, and impeded movement. M. Prévost met with a few blocks which, in the middle, had all the appearance of lava. In a word, the French geologist arrived at this conclusion: that Ferdinanda was itself the mouth of a volcano, a *crater of eruption*—that is, an agglomeration, in the shape of a cone, of substances piled around a volcanic duct.

The sides of the islet inclined towards the interior had a slope of 45° towards the crater. Alternate and superimposed strata were discernible in their section; on the outward declivities, the stratification had taken place in an opposite direction. The precipitous formation of the cliffs seemed to be an effect of the action of the waves.

After a careful examination of these peculiarities, M. Prévost predicted that the clash and collision of the foaming waters would gradually lower the mass of scoriæ