

and the remainder white ; the decomposition not having reached as yet through the whole.

Jets of hot steam issued in many places from fissures. Around the mouths of these were growing gelatinous masses formed by lowly organised algæ closely similar in appearance to those found growing around the mouths of hot springs in the Azores.* Here, however, there was no water issuing, the only moisture being supplied by the condensation of the steam. There was no accumulation of water, but drops of moisture hung on the sides of the fissures.

In some places the gelatinous algæ, and a white mineral incrustation, formed alternate layers coating the mouths of the fissures. The steam on issuing within the fissure had a temperature of 250° F. ; and where the crust of algæ was flourishing the thermometer showed 140° F. The steam had a strongly acid and sulphurous smell.

On the summit of the mountain, where the ground is cool, Fern, a Sedge, and a Melastomaceous Plant grow. Besides these, I found another flowering plant, growing in a crack in the midst of a strongly sulphureous smoke which issued constantly from it. The thermometer when laid on the surface of the ground where this plant was growing showed a temperature of 100° F. ; and at a depth of one and a half feet below it the soil about the fissure had a temperature of 220° F.

At the summit of the mountain were numerous flying insects of various kinds, although there was nothing for them to feed upon, and large numbers of them lay dead in the cracks, killed by the poisonous volcanic vapours. So numerous were they that the Swallows had come up to the top of the mountain to feed on them.

I noticed similarly large numbers of insects at the summit of the volcano of Ternate, at an altitude of more than 5,000 feet. Insects are commonly to be seen being carried along before the wind in successive efforts of flight. No doubt they are blown up to the tops of these mountains, having towards the summits no vegetation to hold on to. The winds pressing against the mountains form currents up their slopes ; and in the case of volcanoes, which are heated at the summits, no doubt there is a constant upward draught towards their tops, caused by the ascending column of hot air.

I dwell on the accumulation of insects at the tops of these mountains, because when blown off into the free air from these great elevations by heavy winds, as no doubt they often are, the insects are likely to fly and drift before the wind to very long distances, and thus be aided in colonizing far-off islands.

* See page 32.