

ancient craters at the summit of the Peak of Ternate, and the ridges forming the old borders of these craters and the outer portions of the bottoms of the craters themselves are traversed in succession on the way to the terminal modern cone of eruption which stands in the inner of the two. The outermost and oldest of the craters is a wild-looking place, inhabited by numerous wild pigs and deer, and is covered with a growth of bushes and a small tree fern, and three other species of ferns,¹ and with these grow a Club-moss (*Lycopodium*) and a Whortleberry (*Vaccinium*). The shrubs apparently belonged to only two species, and the flora seemed a very poor one in number of species. The second ridge, marking the summit of the inner extinct crater, is about 50 feet higher than the outer one. Within this inner crater there is scarcely any vegetation, only a few scattered blades of grass. Here a large mass of lava was met with, evidently recently ejected from the active crater, and hurled to this distance. The mass had a smooth reddened surface, and was deeply split all over by cracks evidently formed by contraction on cooling. The terminal cone itself is entirely devoid of vegetation. The cavity of the inner extinct crater from which it rises is filled up, except at its margin, by the results of later eruptions, hence the base of the terminal cone lies about 60 feet above the level of the margin of this crater, and is approached by a gentle ascent. The cone itself rises steeply and suddenly, with a slope of 30°, and is about 350 feet in height. The guides had hesitated somewhat when we ascended the slope leading out of the first extinct crater, and had done their best to persuade us not to go any farther, telling us that it was dangerous to proceed. They lagged behind as we approached the terminal cone, and as soon as we began to climb it, turned round and ran back as fast as they could go. We were told afterwards that they have strong superstitious fears concerning the volcano, and believe that if any one climbs the terminal cone, a terrible eruption and earthquake are certain to ensue. It appeared as if there might be some real risk in the ascent. The cone is not composed of ashes, but of masses of basaltic lava of various sizes; all of these on the surface appeared freshly fractured and split, as if quite recently thrown out of the crater, and broken up on cooling. At the summit, a slope of 30°, exactly the same as that of the outside of the cone, the natural slope, no doubt, of the lava fragments, leads down into the crater, from a sharp ridge, along which we walked. A dense smoke rose from the interior of the crater, and hid its form and extent entirely from view. The wind was easterly (E. by N.), and drove the smoke away from the side of the crater on which we were. The smoke is excessively suffocating, and a sudden shift in the wind might be fatal to any one who was a short way down within the crater, or even at some places on its margin. It would not be easy to get down it in some places, at all events in a hurry. It was only possible to descend about 20 yards into the crater, and even then the vapours inhaled were very trying. Steam and acid vapours issued from cracks

¹ *Gleichenia dichotoma*, *Pteris incisa*, *Polypodium phlebiscopum*; J. G. Baker, F.R.S., On the Polynesian Ferns of the Challenger Expedition, *Journ. Linn. Soc. Lond. (Bot.)*, vol. xv. pp. 104-113, 1877.