

The southwest side of the bowl or crater is covered nearly from top to bottom with angular blocks of the light scoria we have described (var. 7). The fragments were from twelve to twenty inches in diameter. They are the ejected masses which were thrown up during the last eruption, and fell back into the crater. Similar scoria, during the same eruption, projected farther outward by the force below, covers the outer declivities of the volcano on the same side. The occurrence of the scoria on this side may be due to the direction of the trade winds, which blow from the northeast. The southwest side of the cone, along which we made our descent, is nearly as steep as the interior of the crater, and continues at an angle of thirty-five to forty degrees for twelve hundred feet, leading down into a valley which opens upon the sea at Falelatai.

No streams of lava appear about the summit of this cone, neither are there traces of such currents on the declivities of the mountain, within nine or ten hundred feet of the top. The thin unbroken lip of the crater shows of itself that no lava has ever boiled over it. It is properly a cinder cone formed after some violent eruption, which had poured forth its lavas at a lower elevation. When the intensity of the action had somewhat abated, and the melted rock had ceased to flow out, the second stage in volcanic action commenced; the still active fires ejected showers of cinders and scoria, which fell around the opening and piled up this volcanic cone. This seems to have been the last effort of the subsiding fires in this part of Upolu.

The present cone occupies apparently but a small portion of the area covered by the original crater at this place; but we are not prepared to state its former extent. It is possible that the deep valley already alluded to, to the southward and westward of the present cone, may have been the great centre of the fires, and in this case Tafua was thrown up on one side of this crater, when the fires in other parts were extinguished. The layers of basaltic lava down this valley and on the seashore adjoining Falelatai, are not different from those on the opposite side of the ridge.

*Lanu-to'o.*—I commenced the ascent of the Sangana peak, but deceived by my native guide, failed of reaching the summit. Better success attended my efforts to reach the crater and lake back of Apia. This crater is the highest point of the ridge in the *western district*. The barometer indicated an altitude of 2576 feet. The peak, however, forms but a low rounded projection on the outline of the range