Such eruptions would account for the minute and well-defined stratification of the tufa, and not less satisfactorily for the perfect preservation of the coral limestone. The close resemblance to the tufa craters of Oahu, and the "sand-hills" of Nanawale, Hawaii, will be seen by comparing the descriptions.

Although these are not lava cones, there is still evidence that lava rose in one of the craters during its formation. On the east side of Nuutele, for a few yards above the sea, there are two narrow dikes of black lava. The tufa near the dike is burnt to an ochre-yellow colour, and immediately adjoining it, to a light brick-red. Near the dikes there is also a fissure which extends to the summit, where a small notch marks its termination.

Tapanga Point, on the neighbouring shores of Upolu, consists of layers of tufa stratified like the islands just described.

The dip and the mineral character of the tufa are the same. The low ridge which forms the point is about fifty feet high. The layers of the tufa at the extremity incline thirty degrees to the northeast, while a short distance back on the north side they incline to the north and northwest; and on the low shores at the southern foot of the ridge, from which there has evidently been an extensive degradation and removal of the layers, the dip is towards the south and southwest. These varying inclinations might be explained on the hypothesis of a tufa cone, now to a great extent washed away. Moreover, we detect a farther resemblance to the islands in the imbedded fragments of coral limestone. These fragments are, however, much more abundant, and among them we find portions of shells and some large masses of coral, occasionally three or four inches thick; and with these, the solid basalt also occurs in boulders one to two feet in diameter.

As we go south on the coast, the coral rock becomes more and more largely disseminated through the tufa; and fifty yards distant half the rock consists of coral sand, with fragments of coral and shells, among which I collected some of the common Astræas of the coast, and pieces of the large Tridacna. Farther from the point, the layers gradually pass into a true coral limestone only a little discoloured with volcanic materials, which resembles the shore-layers of coral limestone found on many other parts of the island,—a formation still in progress at the same level, and with the same dip and other characters; and along the same coast, this rock passes into a coarse boulder conglomerate, consisting of the loose basaltic pebbles and