

mountains. The harbour of Pango-pango, in which our ships lay at anchor, is a large bay several miles deep, on the south side of the island. It curves to the westward, and is confined by mountain ridges from eight to thirteen hundred feet in height, which form a high and steep but verdant wall around it. For a few hundred feet, about two-thirds of the way up the face of the ridge, a bare surface of dark semi-columnar rock is exposed to view. Above this, the front of the ridge again slopes a little, like the part below, and the rocks are soon buried in forest vegetation, which continues with few exceptions to the summit.

Along the shores where the valleys come out upon the sea, there is usually a level plain, sometimes extending back for two miles. These plains are mostly occupied by groves of cocoanut and bread fruit, and the villages of the natives.

The soil of this island is extremely fertile, the whole surface well wooded, and the lands abundantly watered with mountain streams.

*Rocks.*—The basalt of the island about Pango-pango and on the ridges to the north, is remarkable for the very sparing dissemination of crystals of chrysolite and augite. In many varieties there is a total absence of either, and a strikingly uniform texture throughout. The rock is usually somewhat vesicular, but in some places it is without a cellule. A variety from Cockscomb Hill, a high crest of rock on the north side of the island, resembles in its appearance a very compact, grayish-brown quartz rock, though not silicious; it has no traces of crystallization, is exceedingly tough, and has a glistening lustre. Without a knowledge of its gradations into the other rocks of the island, a hand specimen would not at first be recognised as of igneous origin. Its colour is dirty bluish-brown.

Small feldspathic crystals and minute grains of magnetic iron are occasionally found in the rock. I have collected, from large boulders around Pango-pango, fine specimens of porphyritic basalt, in which large compound tables of feldspar were thickly disseminated through a compact basaltic base. Some of the tables were a fourth of an inch thick, and an inch and a half broad.

The prevailing colour of the basalt is grayish-blue, of different shades, passing into greenish-black and reddish-brown.

I was informed by Mr. W. C. Cunningham, then English Vice-Consul at these islands, that a large current of lava occurs on the southwest portion of Tutuila. I have not seen any specimens of the