

many deep-sea forms. A very large fragment of a huge new Hexactinellid Sponge was brought up from 630 fathoms. This will be described by Professor Schulze under the name of *Poliopogon gigas*; it measured about 2 feet by 3 feet 6 inches. Many of the deep-sea forms obtained here were identical with those found in the Atlantic. The deposit at 2900 fathoms was a red clay, which showed only a very slight trace of effervescence with weak acid, and did not contain more than one per cent. of carbonate of lime. The mineral particles were very small, the bulk of them being less than 0.05 mm. in diameter, and consisted of felspar, magnetite, and hornblende; there were, however, some large fragments of pumice, while the great bulk of the deposit was composed of very minute fragments of pumice.

TONGATABU.

Euaigee Island is higher than the other islets, and can be seen farther than Tongatabu itself. A narrow coral reef fringes its shore, and off its southeast end is a small detached reef, about half a mile from the island. From the east point of Tongatabu along the coast to the southward, the fringing coral reef does not extend above a few yards from the shore; but from the east point to the westward it gradually extends until it reaches a distance of about a quarter of a mile from the land. From the point opposite Onevah Islet to Makkaha Island, the coral patches on the south side of the channel into Tongatabu anchorage are much broken up and ill-defined, whilst the reef on the north side of the channel has a sharp edge with no outlying knobs. It is therefore preferable to sail near to this side. The quarter fathom rock in the channel between Makkaha and Monuafai Islands is not exactly in the centre of the channel, the passage on its western side being wider than that on the eastern. On a dull day this rock cannot be readily distinguished; but the edge of the reef extending from Makkaha Island is well-defined, and by keeping close towards it, the rock will be avoided. The church on the hill at Nukalofa is a most conspicuous object. At noon the ship anchored off it, with Faffao Island N. 31° E., the right extremity of Pangimodu, in line with the left extremity of Onevah N. 81° E., King's House S. 16° W., in 13 fathoms.

Three whaling vessels were at Tongatabu when the ship arrived, and from them it was ascertained that Raoul or Sunday Island of the Kermadec group, had been abandoned, in consequence of a sudden eruption of the volcano, by an American family who had settled there. The island was certainly quite quiet when the Challenger passed, not the slightest sign of smoke issuing from any part, but the whalers said that this state of things was exceptional, and they reported also that a rock or shoal rose, and again sunk, in its west bay.

The whaling season at the Friendly Islands commences in the middle of June, and continues to the end of October; during this time the Humpbacked Whale (*Megaptera lalandi*) frequents the neighbourhood of these islands for breeding purposes, and is then easily captured. Several whales were passed just outside the reefs. A small