

2050 fathoms was obtained on the passage, in lat. $20^{\circ} 18' N.$, long. $157^{\circ} 14' W.$ (see Sheet 37), and at night the light from the volcano of Mauna Loa was seen quite distinctly. During the passage from Honolulu to Hilo a Petrel, possibly *Procellaria rostrata* which occurs at Tahiti, and a Stormy Petrel (*Oceanites*), were seen about the ship. These birds do not seem to be included in lists of the avi-fauna of the group. The ship anchored in Hilo Bay on the 14th in 6 fathoms, with Green Hill in line with Hilo Church S. $40^{\circ} W.$, Red Cliffs N. $16^{\circ} W.$, and the left extremity of the rocks off Cocoa Nut Island N. $84^{\circ} E.$

The Americans possess a much better plan of Hilo Bay than is given on the Admiralty Charts, for Captain Wilkes made an elaborate survey of the anchorage when there with the United States Exploring Expedition.

The lighthouse at Hilo is a wooden building 14 feet high on the cliffs. It exhibits a light of very low power, which cannot always be depended on, as the illuminating apparatus consists merely of an ordinary paraffin lamp with a metal reflector.

Whilst at the Sandwich Islands the following information was procured from Captain Chaves, of the brigantine "W. H. Allen," relative to the small islands between the Sandwich and Society groups. At Howland and Baker Islands a severe S.W. gale was experienced in December 1870, which lasted three days, during which the ship "Liebig" of Hamburg was wrecked on Baker Island and another ship was driven to sea from Howland Island. This gale is said to be the only bad weather experienced in the vicinity of these islands for ten years. Howland, Baker, Malden, Flint, and Caroline Islands are frequented by ships wishing to obtain cargoes of guano. At Malden Island there is no anchorage, but moorings are laid down for ships whilst embarking guano, one of the mooring anchors being buried in the reef and the other laid down in a depth of 70 or 80 fathoms off the reef. At Caroline and Flint Islands, moorings are also laid down for the convenience of guano ships. In these two islands the guano is worked by an English company, whose agents, Brauder & Co., reside at Tahiti. At Penrhyn Island there is said to be good anchorage, but none has hitherto been found at either Reirson or Humphreys Islands. At Suwarrow Island Captain Chaves resided two years, having been cast on shore there in a whale boat with one native belonging to the Society Islands. They lived on coconuts and clams the whole period, and were finally taken off by a passing vessel. Captain Chaves reports that at this island there exists an excellent harbour inside the lagoon of the reef, to which there is a deep channel through the reef.

The appearance of the great volcano of Mauna Loa on Hawaii Island is most remarkable. The slope of the mountain, as seen from the sea, is so gradual that it is difficult to believe that it rises to a height of nearly 14,000 feet above the sea level. The cause of the peculiar form is the extreme fluidity of the lava, of successive flows of which the mountain is composed. The other large mountain of the island, Mauna Kea, has a similar form, as will be seen from the accompanying sketch by Dr. Wild (see fig. 267).

During the stay at Hilo several parties visited the well-known Kilauea, which is a secondary crater on the side of the Mauna Loa, at a height of about 4000 feet. The island of Hawaii is much more fully clothed with verdure than Oahu, and has none of