

departure of the Vincennes, and were subsequently completed by the officers of the Peacock.*

I was desirous, in addition, of ascertaining with precision the least depth of water on the Dolphin Shoal, and had employed boats in making accurate soundings. The results, however, were so unsatisfactory, on account of the ever-varying level of the tide, that I could not hope that they would serve for a reference by which to ascertain the future increase of this bank, by the growth of the coral. I therefore planted a large stone, with a horizontal surface, and having found the shoalest place on the bank, carefully measured the difference in the height of the surface of the stone and the rock of the bank, by an excellent spirit-level. I then caused a mark to be traced upon the surface of the stone pointing towards the place on the bank where the levelling-staff had been placed. The difference of level was twenty-five feet seven inches. Old Taua, the chief of the district, promised me that he would taboo the stone, and that it should not be touched or disturbed on any account; and, to preserve it from any accidental disturbance, it was set four feet into the ground.

The Vincennes moved to the harbour of Papieti on the 22d September. At the same time, orders were given to the Peacock and Flying-Fish to take on board their articles from Point Venus, and to follow as soon as they had done so. The tender required some repairs, which could be done with more safety at Papieti. Both vessels joined us in that harbour on the 24th.

In proceeding to Papieti, we left Matavai Bay in the morning, and within a few hours had anchored in the harbour of the former place. No soundings are to be had beyond the line of reefs, and consequently there is no anchorage; the outer wall of the reef surrounding the island is in fact perpendicular, with the exception of some projecting patches in Matavai Bay, and to the eastward of Point Venus. On the latter the French frigate *Artemise* struck, in 1836.

At the season of the year when we made this short passage, there is some danger to be apprehended in entering the harbour of Papieti, and much caution is therefore necessary. The trades at this season are irregular, and the winds which prevail are light; they also are most apt to fail at the critical moment when the vessel is at the entrance of the narrow passage through the reefs, in which case the current, which rushes strongly out and sometimes across the passage, may cause a vessel to drift upon the western reef. The proper mode of guarding against this, is to keep the vessel as close as possible to the eastern reef.

* The chart of these harbours will be found in the *Hydrographical Atlas*.