

there at that time. It is much to be regretted that the foreign missionary establishments should not be furnished with a few instruments to aid them in making observations upon the climate. I have found some of them without even a thermometer.

The tides throughout the group appear to be very irregular, until they are closely studied. The flood sets in opposite directions on the eastern and western sides of the group. Thus, on the south side of Vanua-levu, it flows from the east as far as Buia Point, where it is met by the flood coming from the west. It is high water at Ovolau at 6<sup>h</sup> 10<sup>m</sup>, on the full and change of the moon. At Muthuata 5<sup>h</sup> 30<sup>m</sup>. The manner in which the tide flows will be better understood by reference to the map of the group, on which it is exhibited.

From the observations of the Porpoise, and information obtained from the natives, there appears to be a continual current setting to the eastward, at the rate of about half a mile an hour. This current we observed to exist both on the north and south sides of the island; and I am disposed to think it would be found to prevail for the most of the year.

The greatest rise and fall of the tide is six feet. The currents set strongly in and out of the passages, until the water rises above the level of the reefs, when it flows over in all directions, and its force is much decreased.

Earthquakes are not unfrequent: according to the white residents, they generally occur in the month of February. Several shocks are often felt in a single night. The only place where there are any visible signs of volcanic heat, is Savu-savu; but several islands in the group exhibit signs of craters. One of these is at the west end of Kantavu. There are others at Nairai, Goro, and in the Ringgold Isles. The peaks, however, are usually basaltic cones or needles, some of which rise to the height of several thousand feet, and no running stream of lava has been seen occurring on any of these islands. It may consequently be inferred, that the date of the formation of these islands is more remote than that of the other groups of Polynesia. Volcanic conglomerate, tufa, and compact and scoriaceous basalts are found, of every texture and colour, and in all states of decomposition. When decomposed, they afford a rich soil, which, clothed with a luxuriant foliage, covers the islands to their very tops, clinging to every point where it is possible for a plant to take root. This rich vegetation gives a degree of beauty to the aspect of the whole group, that is scarcely surpassed in any part of the world.

In relation to the population of these islands, it was found difficult to obtain information that could be implicitly relied upon, and we had reason to suspect that the white residents rather overrated the number