

extend to the south beyond the mainland 50 miles, and north 150 miles, making in all a line of reef full 400 miles in length. Towards the north extremity, however, it is interrupted or broken into detached reefs. This surprising extent is partly explained by the fact that New Caledonia is not a land of volcanoes; but, on the contrary, consists of older metamorphic rocks. The streams of so large a land might be expected to exclude reefs from certain parts; and in accordance with this fact we find the reefs of the windward or rainy side comparatively small, and scarcely indicated on the charts; while on the dry or western side, they often extend thirty miles from the shores. The theory of subsidence accounts fully for the great prolongation of the New Caledonia reefs. The reefs indicate, moreover, the existence of a former land near three times the area of the present island.

Between New Caledonia and the New Hebrides are several high islands, one of which, Lafu, has been described (*Quart. Jour. Geol. Soc.*, 1847, p. 61) by Rev. W. B. Clarke as an elevated coral island, with fringing reefs; it appears also from the remarks of this writer, that the other islets of what is called the Loyalty Group are of the same kind. Lafu, the largest of the number, is about ninety miles in circumference.

South of New Caledonia lies Norfolk Island, in latitude  $29^{\circ}$  S., about which there is said to be some coral, which is occasionally thrown on the beach, but no reefs.

Between Australia and New Caledonia the islands are all of coral. The Australian reef extending south to the east cape, in latitude  $24^{\circ}$  S., has already been described. Such long reefs on the shores of continents are not common. In the case of Australia, the zoöphytes are not exposed to the destructive agents usual on continental shores, as the land has a dry climate, the shores are mostly rocky, and there are no streams of any extent emptying into the ocean. The east cape is the southern limit, because here the tropical current, owing to the direction of the coast above, trends off to the eastward of south, away from the land, while a polar current follows up the shores from the south as far as this