

in situ rising four feet above low-water mark." *Rotuma* (177° $15'$ E., and 12° $30'$ N.) is another high island, to the west of Wallis's. It has encircling reefs, but we know nothing as to its changes of level.

k. Kingsmill or Gilbert Group. (Map, p. 133.)

Tapateua or Drummond.—This is one of the southern islands of the group. The reef-rock, near the village of Utiroa, is a foot above low-tide level, and consists of large massive *Astræas* and *Mæandrinæ*. The tide in the Kingsmill seas is seven feet; and consequently this evidence of a rise might be doubted, as some corals may grow to this height where the tide is so high. But these *Astræas* and *Mæandrinæ*, as far as observed by the writer, are not among the species that may undergo exposure at low tide, except it be to the amount of three or four inches; and it is probable that an elevation of at least one foot has taken place.

Apaiang or Charlotte's Island, one of the northernmost of the group, has the *reef-rock* in some parts raised bodily to a height of six or seven feet above low-water level, evidencing this amount of elevation. This elevated reef was observed for long distances between the several wooded islets; it resembled the south reef of Nairsa in the Paumotu Archipelago in its bare, even top, and bluff, worn front. An islet of the atoll, where we landed, was twelve feet high, and the coral *reef-rock* was five or six feet above middle tide. A wall of this rock, having the same height, extends along the reef from the islet. There was no doubt that it was due to an actual uplifting of the reef to a height of full *six* feet.

Nononti, Kuria, Maiana, and Tarawa, lying between the two islands above mentioned, were seen only from the ship, and nothing decisive bearing on the subject of elevation was observed. On the north-east side of Nononti there was a hill twenty or thirty feet in height covered with trees; but we had no means of learning that it was not artificial. We were, however, informed by Kirby, a sailor taken from Kuria, that the reef of *Apamama* was elevated, precisely like that of Apaiang, to a height of *five* feet; and this was confirmed by Lieutenant