rocks from the edge of the platform, and throw them on the reef. From the observations of Mr. Stevenson, cited on a preceding page (p. 191), it appears that the force of the waves during the summer and winter months differs at Skerryvore more than 1,200 pounds to the square foot,—in the former it averaging but 636 pounds, and in the latter 2,086 pounds, while in storms it was at times equivalent to 6,083 pounds. The seasons are not as unlike in the tropical part of the Pacific. Still there must be a marked difference between the ordinary seas and those during stormy weather. We have, therefore, no difficulty in comprehending how the ordinary wave-action should build up and keep entire the shore platform, while the more agitated seas may tear up parts of the structure formed, and bear them on to the higher parts of the island. Still more violent in action are the great earthquake-waves, which move through the very depths of the ocean.

These principles offer an explanation also of the general fact that the windward reef is the highest. The ordinary seas both on the leeward and windward sides, are sufficient for producing coral débris and building up the reef, and in this work the two sides will go on together, though at different rates of progress. We may often find no very great difference in the *width* of the leeward and windward reefs, especially as the wind for some parts of the year, has a course opposite to its usual direction. But seldom, except on the side to windward, is a sufficient force brought to bear upon the edge of the platform, to detach and uplift the larger coral blocks. The distance to which the waves may roll on without becoming too much weakened for the transportation of uptorn blocks, will determine the outline of the forming land. With proper data as to the force of the waves, the tides, and the soundings around, the extent of the shore platform might be made a subject of calculation.

The effect of a windward reef in diminishing the force of the sea, is sometimes shown in the influence of one island on another. A striking instance of this is presented by the northernmost of the Gilbert Islands (see map on page 133). All the islands of this group are well wooded to windward—