the side fronting east. But the north and north-east sides of Tari-tari are only a bare reef, through a distance of twenty miles, although the south-east reef is a continuous line of verdure. The small island of Makin, just north of Tari-tari, is the breakwater which has protected the reef referred to from the heavier seas.

Coral island accumulations have an advantage over all other shore deposits, owing to the ready agglutination of calcareous grains, as explained on a following page. It has been stated that coral sand-rocks are forming along the beaches, while the reef-rock is consolidating in the water. A defence of rock against encroachment is thus produced, and is in continual progress. Moreover, the structure built amid the waves will necessarily have the form and condition best fitted for withstanding their action. The atoll is, therefore, more enduring than hills of harder basaltic rocks. Reefs of zoöphytic growth but "mock the leaping billows," while other lands of the same height gradually yield to the assaults of the ocean. There are cases, however, of wear from the sea, owing to some change of condition in the island, or in the currents about it, in consequence of which, parts once built up are again carried off. Moreover, those devastating earthquake-waves which overleap the whole land, may occasion unusual degradation. Yet these islands have within themselves the source of their own repair, and are secure from all serious injury.

The change of the seasons is often apparent in the distribution of the beach sands covering the prominent points of an island. At Baker's Island (near the equator, in long. 176° 23′, W.) this fact is well illustrated. J. D. Hague states (*Am. Jour. Sci.*, II., xxxiv. 237), that the shifting sands change their place twice a year. "The western shore of the island trends nearly north-east and south-west; the southern shore, east-by-north. At their junction there is a spit of sand extending out toward the south-west. During the summer, the ocean swell, like the wind, comes from the south-east, to the force of which the south side of the island is exposed, while the western side is protected. In consequence, the sands of the beach that have been accu-