

to go on : a part will be swept by the waves, across the patch of reef, into the lagoon or channel beyond, while other portions will fill up the spaces among the corals along its margin, or be thrown beyond the margin and lodge on its surface. The layer of dead coral rock which makes the body of the reef, has its border of growing corals, and is thus undergoing extension at its margin, both through the increase in the corals, and the débris dropped among them.

But besides the small fragments, larger masses will be thrown on the reefs by the more violent waves, and commence to raise them above the sea. The *clinker fields* of coral by this means produced, constitute the first step in the formation of dry land. Afterward, by further contributions of the coarse and fine coral material, the islets are completed, and raised as far out of the water as the waves can reach—that is, about ten feet, with a tide of three feet ; and sixteen to eighteen feet with a tide of six or seven.

The Ocean is thus the architect, while the coral polyps afford the material for the structure ; and, when all is ready, it sows the land with seed brought from distant shores, covering it with verdure and flowers.

The growth of the reefs and islands around high lands is the same as here described for the atoll. The reef-rock is mainly a result of accumulations of coral and shell débris. There are reefs where the corals retain the position of growth, as has been described on a former page. But with these the débris comes in to fill up the intervening spaces or cavities, and make a compact bed for consolidation. There are other parts, especially portions of the outer reef along the line of breakers, which are formed by the gradual growth of layer upon layer of incrusting Nullipores ; but such formations are of small extent, and only add to the results from other sources.

II. ORIGIN OF THE SHORE PLATFORM.

Among the peculiarities of coral islands, the *shore platform* appears to be one of the most singular, and its origin has not