

to half a mile, generally running nearly parallel with the shore, and at top were from a fourth to half an inch wide. These fissures are not essential features of the reef. They are probably a result of a subterranean movement or shaking.

The *beach* consists of coral pebbles or sand, with some worn shells, and occasionally the exuviae of crabs and bones of fishes. Owing to its whiteness, and the contrast it affords to the massy verdure above, it is a remarkable feature in the distant view of these islands, and often seemed like an artificial wall or embankment running parallel with the shores. On Clermont Tonnerre, the first of these islands visited by us, the natives seen from shipboard, standing spear in hand along the top of the beach, were believed by some to be keeping patrol on the ramparts of a kind of fortification. This deception arose from the dazzling whiteness of the coral sand, in consequence of which, the slope of the beach was not distinguished in the distant view.

The *emerged land* beyond the beach, in its earliest stage, when barely raised above the tides, appears like a vast field of ruins. Angular masses of coral rock, varying in dimensions from one to a hundred cubic feet, lie piled together in the utmost confusion; and they are so blackened by exposure, or from incrusting lichens, as to resemble the clinkers of Mauna Loa; moreover, they ring like metal under the hammer. Such regions may be traversed by leaping from block to block, with the risk of falling into the many recesses among the huge masses. On breaking an edge from the black masses, the usual white colour of coral is at once apparent. Some of the blocks, measuring five or six feet in each of their dimensions, were portions of single individual corals; while others had the usual conglomerate character of the reef-rock, or, in other words, were fragments torn by the waves from the reef-rock.

In the next stage, coral sand has found lodgment among the blocks; and although so scantily supplied as hardly to be detected without close attention, some seeds have taken root, and vines, purslane, and a few shrubs have begun to grow, relieving the scene, by their green leaves, of much of its desolate aspect.