mud poured into the sea on this side during the rainy season.[373] The great reef of Australia is 1250 miles long and from 10 to 90 miles broad.

Coral-rock, though formed by the continuous growth of the polyps, gradually loses any distinct organic structure, and acquires an internal crystalline character like an ancient limestone, owing to the infiltration of water through its mass, whereby calcium-carbonate is carried down and deposited in the pores and crevices, as in a growing stalactite. Great quantities of calcareous sand and mud are produced by the breakers which beat upon the outer edge of the reefs. This detritus is partly washed up upon the reefs, where, being cemented by solution and redeposit, it aids in their consolidation, sometimes acquiring an oolitic structure;[374] but much of it is swept away by the ocean currents and distributed over the sea-floor, the water becoming milky with it after a storm.[375] Around volcanic islands much lava detritus may be mixed with the coral-sand and mud. Thus at Hawaii, where great abrasion by the waves takes place on the ends of the lava-streams which have run out to sea, large quantities of olivine sand are formed, the grains of this mineral varying from the size of a bean or pea downward to the finest particles. This sand becomes mixed with the coral detritus and is also interstratified with it in layers.[376]

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[373] Bull. Mus. Comp. Zool. xxiii. 1892, p. 70.

[374] See Dana's "Corals and Coral Islands," pp. 152, 194; A. Agassiz, Mem. Amer. Acad. xi. 1882, p. 128.

[375] A. Agassiz mentions that after a storm, the sea is sometimes discolored by this silt to a distance of six to ten miles from the outer reef, and he adds that he has seen between two and three inches of fine silt deposited in the interval between two tides after a prolonged storm: Amer. Acad. xi. p. 126. The total area of sea-floor covered with coral-sand and mud is estimated by Messrs. Murray and Irvine at 3,219,800 square miles. Proc. Roy. Soc. Edin. xvii. 1889, p. 82.

[376] W. L. Green, Journ. Roy. Geol. Soc. Ireland, iv. 1887, p. 140. This author suggestively points out the resemblance of such a mingling of calcareous material and magnesian silicate to the mingled limestones, serpentines and