

matter—it is better, and the best soil of all is probably that which consists of red earth, humus, and coral-sand.

The origin of this red earth is a matter of great interest, as it seems to afford a singular illustration and confirmation of our view as to the organic origin of the red clay of the Atlantic sea-bed. There is ample evidence all over the islands that there has been an enormous amount of denudation—that while, in some places, coral-sand has been encroaching and new rocks have been thus formed, in other places masses of rock of great thickness have been removed by the disintegrating effect of rain-water.

During the disintegration of the stone, the softer parts are first removed, leaving a kind of skeleton, consisting of the harder parts, and as rough as a mass of scoriæ. The ridge between Harrington Sound and Castle Harbor, which rises to the height of about 150 feet, is, as we have already said, entirely composed of limestone in that condition; passing, where it is not eroded, into a very compact hard stone, worked in a large quarry at Painter's Vale for building purposes. The height of these ridges and crests, taken in connection with their structure and distribution, gives a very good idea of the amount of denudation which has taken place—at all events, during this last episode in the geological history of the islands.

I am indebted to his Excellency General Lefroy for the report on the analyses of soils from Bermudas given in Appendix A to this chapter, and I believe it holds the clue to the mode of formation of the red earth. The coral-sand, like the mass of skeletons of surface animals accumulated at the bottom of the ocean, does not consist of carbonate of lime alone. It contains about one per cent. of other inorganic substances, chiefly peroxide of iron and alumina, silica, and some earthy phosphates. Now, these substances are to a very small degree soluble in water charged with carbonic acid; consequently, after the gradual removal of the lime, a certain sediment, a certain