the waters, and with which alone, as terrestrial beings, we are familiar. Here the direct power of animals and plants to cause any important variation is, of necessity, very limited, except in checking the progress of that decay of which the land is the chief theatre. But if we extend our views, and, instead of contemplating the dry land, consider that larger portion which is assigned to the aquatic tribes, we discover the great influence of the living creation, in imparting varieties of conformation to the solid exterior which the agency of inanimate causes alone could not produce.

Thus, when timber is floated into the sea, it is often drifted to vast distances, and subsides in spots where there might have been no deposit, at that time and place, if the earth had not been tenanted by living beings. If, therefore, in the course of ages, a hill of wood, or lignite, be thus formed in the subaqueous regions, a change in the submarine geography may be said to have resulted from the action of organic powers. So in regard to the growth of coral reefs; it is probable that a large portion of the matter of which they are composed is supplied by mineral springs, which often rise up at the bottom of the sea, and which, on land, abound throughout volcanic regions hundreds of leagues in extent. The matter thus constantly given out could not go on accumulating for ever in the waters, but would be precipitated in the abysses of the sea, even if there were no polyps and testacea; but these animals arrest and secrete the carbonate of lime on the summits of submarine mountains, and form reefs many hundred feet in thickness, and hundreds of miles in length, where, but for them, none might ever have existed.

Why the vegetable soil does not augment in thickness.—If no such voluminous masses are formed on the land, it is not from the want of solid matter in the structure of terrestrial animals and plants; but merely because, as I have so often stated, the continents are those parts of the globe where accessions of matter can scarcely ever take place—where, on the contrary, the most solid parts already formed are, each in their turn, exposed to gradual degradation. The quantity of timber and vegetable matter which grows in a tropical forest in the course of a century is enormous, and multitudes of animal skeletons are scattered there during the same period, besides innumerable land shells and other organic substances. The aggregate of these materials, therefore, might constitute a mass greater in volume than that which is produced in any coral-reef during the same lapse of years; but, although this process should continue on the land for ever, no mountains of wood or bone would be seen stretching far and wide over the country, or pushing out bold promontories into the sea. The whole solid mass is either devoured by animals, or decomposes, as does a portion of the rock and soil on which the animals and plants are supported.

The waste of the strata themselves, accompanied by the decomposition of their organic remains, and the setting free of their alkaline ingredients, is one source from whence running water and the atmosphere may derive the materials which are absorbed by the roots