"Regions situated similarly to enclosed and shallow seas and the borders of the present continents appear to have been, throughout all geological ages, the theatre of the greatest and most remarkable changes; in short, all, or nearly all, the sedimentary rocks of the continents would seem to have been built up in areas like those now occupied by the terrigenous deposits. During each era of the earth's history, the borders of some lands have sunk beneath the sea and been covered by marine sediments; while in other parts the terrigenous deposits have been elevated into dry land, and have carried with them a record of the organisms which flourished in the sea of the time. In this transitional or critical area there has been throughout a continuity of geological and biological phenomena.

"The small extent occupied by littoral formations, especially those of an arenaceous nature, shown by deep-sea investigations, is important. In the present state of things there does not appear to be anything to account for the enormous thickness of the clastic sediments making up certain geological formations, unless the exceptional cases of erosion which are brought into play when a coast is undergoing constant elevation or subsidence are taken into consideration. Great movements of the land are doubtless necessary for the formation of thick beds of transported matter like sandstones and conlomerates.

"The débris carried away from the land accumulates at the bottom of the sea before reaching the abysmal regions of the ocean. It is only in exceptional cases that the finest terrigenous materials are transported several hundred miles from the shores. In place of layers formed of pebbles and clastic elements with grains of considerable dimensions, which play so large a part in the composition of emerged lands, the great areas of the ocean basins are covered by the microscopic remains of pelagic organisms, or by the deposits resulting from the alteration of volcanic products. The distinctive elements that appear in the river and coast sediments are, properly speaking, wanting in the great depths far distant from the coasts. To such a degree is this the case that in a great number of soundings, from the centre of the Pacific for example, mineral particles on which the mechanical action of water has left its imprint cannot be distinguished, and quartz is so rare that it may be said to be absent. It is sufficient to indicate these facts in order to make apparent the profound differences which separate the deposits of the abysmal areas of the ocean basins from the series of rocks in the geological formations.

"The continental geological formations, when compared with marine deposits of modern seas and oceans, appear to present no analogues to the red clays, Radiolarian, Globigerina, Pteropod, and Diatom oozes. If it do not follow from this that deep and extended oceans like those of the present day cannot formerly have occupied the areas of the present continents, and as a corollary that the great lines of the ocean basins and continents must have been marked out from the earliest geological ages, it is, never-