short duration, and the deposits at the distance of ten miles from land are no longer conspicuous. In the vicinity of coral reefs and islands the attrition of the waves imparts a milky complexion to the sea, especially during the prevalence of a storm, and the calcareous particles are floated sometimes a hundred miles and more. But it is apparent that, as a rule, the sea floats too little sediment to build up a formation in any other than a very gradual manner. We noticed, also, in our walk under the sea, that the bottom sediments grew thin with distance from the shore, and that those of continental origin ceased entirely at about two miles in depth. When now we remember that the stratified rocks are over a hundred thousand feet in thickness, we perceive immediately that the process of sedimentation has been an extremely long one.

We have then to consider what changes may have taken place in the conditions of the world during so long a period. Probably the nature of the sediments has been changed from time to time by these changes in the physical conditions of the planet. We do not wish to anticipate conclusions to be rested on facts which have not yet fallen under our observation; but every body has noticed that the surface of the earth is undergoing changes; and these, in thousands of years, must aggregate amounts which transform the aspects of the planet. We have lived to see lakelets filled; new channels formed for great rivers; ocean beaches consumed by the waves; hundreds of miles of continental coasts upraised or sunken—as in Chili, Scandinavia, and Greenland; new islands bursting into view; whole provinces shattered by earthquakes. Suppose our observation extended back a million years, and the tenor of events had been the same as in modern times; is it not certain that changes must have aggregated to such an extent that, waking at times to distinct consciousness of the greatly changed conditions, we should from æon to æon have felt ready to declare a new chapter of the world's history had begun? I think so—reasoning only from the physical data which, so far, have engaged our attention. But we shall hereafter make the acquaintance of many other facts which will confirm this