

## CHAPTER VI.

PROGRESS OF THE GEOLOGICAL DYNAMICS OF ORGANIZED  
BEINGS.

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*Sect. 1.—Objects of this Science.*

PERHAPS in extending the term *Geological Dynamics* to the causes of changes in organized beings, I shall be thought to be employing a forced and inconvenient phrasology. But it will be found that, in order to treat geology in a truly scientific manner, we must bring together all the classes of speculations concerning known causes of change; and the Organic Dynamics of Geology, or of Geography, if the reader prefers the word, appears not an inappropriate phrase for one part of this body of researches.

As has already been said, the species of plants and animals which are found embedded in the strata of the earth, are not only different from those which now live in the same regions, but, for the most part, different from any now existing on the face of the earth. The remains which we discover imply a past state of things different from that which now prevails; they imply also that the whole organic creation has been renewed, and that this renewal has taken place several times. Such extraordinary general facts have naturally put in activity very bold speculations.

But it has already been said, we cannot speculate upon such facts in the past history of the globe, without taking a large survey of its present condition. Does the present animal and vegetable population differ from the past, in the same way in which the products of one region of the existing earth differ from those of another? Can the creation and diffusion of the fossil species be explained in the same manner as the creation and diffusion of the creatures among which we live? And these questions lead us onwards another step, to ask,—What *are* the laws by which the plants and animals of different parts of the earth differ? What was the manner in which they were originally diffused?—Thus we have to include, as portions of our subject,