

and a Polyp builds its coral out of it, and each family, each genus, each species a different one, and different ones for all successive geological epochs. Phosphate of lime in palæozoic rocks is the same phosphate, as when prepared artificially by Man; but a Fish makes its spines out of it, and every Fish in its own way, a Turtle its shield, a Bird its wings, a Quadruped its legs, and Man, like all other Vertebrates, its whole skeleton, and during each successive period in the history of our globe, these structures are different for different species. What similarity is there between these facts! Do they not plainly indicate the working of different agencies excluding one another? Truly the noble frame of Man does not owe its origin to the same forces which combine to give a definite shape to the crystal. And what is true of the carbonate of lime, is equally true of all inorganic substances; they present the same characters in all ages past, as those they exhibit now.

Let us look upon the subject in still another light, and we shall see that the same is also true of the influence of all physical causes. Among these agents, the most powerful is certainly electricity; the only one to which, though erroneously, the formation of animals has ever been directly ascribed. The effects it may now produce, it has always produced, and produced them in the same manner. It has reduced metallic ores and various earthy minerals and deposited them in crystalline form, in veins, during all geological ages; it has transported these and other substances from one point to another, in times past, as we may do now in our laboratories, under its influence. Evaporation upon the surface of the earth has always produced clouds in the atmosphere, which after accumulating have been condensed in rain showers in past ages as now. Rain drop marks in the carboniferous and triassic rocks have brought to us this testimony of the identity of the operation of physical agents in past ages, to remind us that what these agents may do now, they already did in the same way, in the oldest geological times, and have done at all times. Who could, in presence of such facts, assume any causal connection between two series of phenomena, the one of which is ever obeying the same laws, while the other presents at every successive period new relations, an ever changing gradation of new combinations, leading to a final climax with the appearance of Man? Who does not see, on the contrary, that this identity of the products of physical agents in all ages, totally disproves any influence on their part in the production of these ever changing beings, which constitute the organic world, and which exhibit, as a whole, such striking evidence of connected thoughts!