

view accords well with Maupertuis's philosophical axiom of "least action."

In considering how far the theory of natural selection may be extended,—that is, in determining from how many progenitors the inhabitants of the world have descended,—we may conclude that at least all the members of the same class have descended from a single ancestor. A number of organic beings are included in the same class, because they present, independently of their habits of life, the same fundamental type of structure, and because they graduate into each other. Moreover, members of the same class can in most cases be shown to be closely alike at an early embryonic age. These facts can be explained on the belief of their descent from a common form; therefore it may be safely admitted that all the members of the same class are descended from one progenitor. But as the members of quite distinct classes have something in common in structure and much in common in constitution, analogy would lead us one step further, and to infer as probable that all living creatures are descended from a single prototype.

I hope that the reader will pause before coming to any final and hostile conclusion on the theory of natural selection. The reader may consult my 'Origin of Species' for a general sketch of the whole subject; but in that work he has to take many statements on trust. In considering the theory of natural selection, he will assuredly meet with weighty difficulties, but these difficulties relate chiefly to subjects—such as the degree of perfection of the geological record, the means of distribution, the possibility of transitions in organs, &c.—on which we are confessedly ignorant; nor do we know how ignorant we are. If we are much more ignorant than is generally supposed, most of these difficulties wholly disappear. Let the reader reflect on the difficulty of looking at whole classes of facts from a new point of view. Let him observe how slowly, but surely, the noble views of Lyell on the gradual changes now in progress on the earth's surface have been accepted as sufficient to account for all that we see in its past history. The present action of natural selection may seem more or less probable; but I believe in the truth of