

and quite different forms. In this respect we may truly say that in the domain of Zoology and Botany Darwin made the same progress as Lyell, his great countryman, made in the domain of Geology. Both proved the *uninterrupted connection of the historical development*, and demonstrated a gradual transmutation of the different conditions succeeding one another.

The special merit of Darwin, as I have already remarked in a preceding chapter, is twofold. In the first place, he has treated the Theory of Descent, put forth by Lamarck and Goethe, in a much more comprehensive manner, as a whole, and carried it out in a much more connected manner, than had been done by any one of his predecessors. Secondly, he has established the causal foundation of this Theory of Descent by the Theory of Selection, which is peculiarly his own; that is, he has demonstrated the acting *causes of the changes* which the Theory of Descent simply stated, as *facts*. The Theory of Descent, introduced into Biology in 1809, by Lamarck, asserts that all the different species of animals and plants are descended from a single or some few most simple prototypes, produced by spontaneous generation. The Theory of Selection, established in 1859, by Darwin, shows us *why* this must be so; it points out the acting causes in a manner with which Kant would have been delighted, and indeed, in the domain of organic nature, Darwin has become the Newton whose advent Kant thought himself entitled prophetically to deny.

Now, before we approach Darwin's theory, it will perhaps be of interest to notice a few details as to the personal character of this great naturalist, as to his life, and the way in which he was led to form his doctrine. Charles