

these differences and divergences from an original type correspond in a general way with the length of time during which the divergence has been going on, together with the environment and other empirical conditions.

Perhaps the strongest and most startling evidence is found in the following chapter, "The Newest of the Sciences, the Science of Embryology." The foetal stages and transformations are so numerous and so similar, even in the most widely divergent species, that it is thought no explanation of this can be given except on the supposition that all are to be viewed as related to a common parent stem.

In the two remaining chapters on Palæontology and Geographical Distribution, we have an accumulation of evidence bearing on the forms, the order, and the distribution of ancient and modern life. It is endeavored to show that gaps now evidently existing can be accounted for; gradual divergences may be traced in the one direction and assimilations in the other; the whole furnishing a mass of evidence that practically closes the argument against the rival theory of the formation of species by special creation. The "time" distribution in geology and the "space" distribution in geography show—on the one hand, the remarkable similarities between animal and plant life during the same periods; and on the other, the corresponding resemblances over the same areas.

The argument so far presented is fuller and more satisfactory than in Spencer's "Principles of Biology." Spencer concludes his examination in rebuttal of the special creation hypothesis in the following words: "Thus, however regarded, the hypothesis of special creations turns out to be worthless—worthless by its derivation, worthless in its intrinsic incoherence, worthless as absolutely without evidence, worthless as not supplying an intellectual need, worthless as not satisfying a moral want." As the evolution hypothesis is open to none of these objections, it is accordingly accepted.

The second part of the volume consists of four chapters devoted to "The Theory of Natural Selection." Part First treated of "the main evidences of organic evolution considered as a fact." In Part Second, "we enter a new field, namely, the evidences which thus far have been brought to light, touching the causes of organic evolution considered as a process." It explains and defends the theory in the operation and process of realization.

What is the outcome, in the opinion of the author, in relation to the personality and spirituality of man and the existence of God? "Design," "adaptation," "contrivance," "beneficence," these are the terms in which the Divine nature and activity were wont to be set forth in the not distant past. Darwinism has changed all this. Whatever may be left of the substance, the reading of the record and the method of presenting the subject have undergone complete transformation. The direction is one of *tendency* rather than dogmatic utterance. We must bear in mind that science can only speak oracularly of what it knows. This statement is necessary to guard the reader from pronouncing too severely upon the following quotations. Detached from the context, they are more than likely to be unduly misleading:

"Innumerable adaptations of structures to functions appeared to yield convincing evidence in favor of design; the beauty so profusely shed by living forms appeared to yield evidence, no less convincing, of that design as beneficent. But both these sources of evidence have now, as it were, been tapped at their fountain head; the adaptation and the beauty are alike receiving their explanation at the hands of a purely mechanical philosophy. Nay, even the personality of man himself is assailed, and this not only in the features which he shares with the lower animals, but also in his god-like attributes of reason, thought and conscience."