

## THE RIDDLE OF THE UNIVERSE

transformation of countless organic forms, must have taken many millions of years—considerably over a hundred.\* (8) Among the different kinds of animals which arose in the later stages of the biogenetic process on earth the vertebrates have far outstripped all other competitors in the evolutionary race. (9) The most important branch of the vertebrates, the mammals, were developed later (during the triassic period) from the lower amphibia and the reptilia. (10) The most perfect and most highly developed branch of the class mammalia is the order of primates, which first put in an appearance, by development from the lowest prochoriata, at the beginning of the Tertiary period—at least three million years ago. (11) The youngest and most perfect twig of the branch primates is man, who sprang from a series of manlike apes towards the end of the Tertiary period. (12) Consequently, the so-called history of the world—that is, the brief period of a few thousand years which measures the duration of civilization—is an evanescently short episode in the long course of organic evolution, just as this, in turn, is merely a small portion of the history of our planetary system; and as our mother-earth is a mere speck in the sunbeam in the illimitable universe, so man himself is but a tiny grain of protoplasm in the perishable framework of organic nature.

Nothing seems to me better adapted than this magnificent cosmological perspective to give us the proper standard and the broad outlook which we need in the solution of the vast enigmas that surround us. It not only clearly indicates the true place of man in nature, but it dissipates the prevalent illusion of man's supreme

\* Cf. my Cambridge lecture, *The Last Link*, "Geological Time and Evolution."