

THE HISTORY OF OUR SPECIES

that man has been evolved from lower vertebrates, and immediately from the *simiæ*, is a special inference which results with absolute necessity from the general inductive law of the theory of descent."

For the definitive proof and establishment of this fundamental pithecometra-thesis the palæontological discoveries of the last thirty years are of the greatest importance; in particular, the astonishing discoveries of a number of extinct mammals of the Tertiary period have enabled us to draw up clearly in its main outlines the evolutionary history of this most important class of animals, from the lowest oviparous monotremes up to man. The four chief groups of the placentals, the heterogeneous legions of the carnassia, the rodentia, the ungulata, and the primates, seem to be separated by profound gulfs, when we confine our attention to their representatives of to-day. But these gulfs are completely bridged, and the sharp distinctions of the four legions are entirely lost, when we compare their extinct predecessors of the Tertiary period, and when we go back into the Eocene twilight of history, in the oldest part of the Tertiary period—at least three million years ago. There we find the great subclass of the placentals, which to-day comprises more than two thousand five hundred species, represented by only a small number of little, insignificant "pro-placentals"; and in these *prochoriata* the characters of the four divergent legions are so intermingled and toned down that we cannot in reason do other than consider them as the precursors of those features. The oldest carnassia (the *ictopsales*), the oldest rodentia (the *esthonychales*), the oldest ungulata (the *condylarthrales*) and the oldest primates (the *lemuravales*), all have the same fundamental skeletal structure, and the same typ-