

as in most cases, preferred the monophyletic, or one-rooted, to the polyphyletic, or many-rooted, hypothesis of descent. I assumed that all Placental animals were derived from a single form of Marsupial animal, which, for the first time, began to form a placenta. In this case the Villiplacentals, Zonoplacentals, and Discoplacentals would perhaps have to be considered as three diverging branches of the common primary form of Placentals, or it might also be conceived that the two latter, the Deciduata, had developed only at a later period out of the Indeciduata, which on their part had arisen directly out of the Marsupials. However, there are also important reasons for the alternative; namely, that several groups of Placentals, differing from the beginning, arose out of several distinct groups of Marsupials, so that the placenta itself was formed several times independently. This opinion is maintained by Huxley, the most eminent English zoologist, and by many others. In this case the Indeciduata and the Deciduata would perhaps have to be considered as two completely distinct groups; then the order of Hoofed animals, as the primary group of the Indeciduata, might be supposed to have originated out of the Marsupial hoofed animals (Barypoda). Among the Deciduata, on the other hand, the order of Semi-apes, as the common primary form of the other orders, might possibly have arisen out of Handed Marsupials (Pedinana). But it is also conceivable that the Deciduata themselves have arisen out of several different orders of Marsupials, Animals of Prey out of Rapacious Marsupials, Gnawing animals out of Gnawing Marsupials, Semi-apes out of Handed Marsupials, etc. As we do not at present possess sufficient empiric material to solve this most difficult question, we must leave it and