At first we might be inclined to answer this question in a *polyphyletic* sense, by saying that we must assume, for each of the seven great animal tribes, at least one independent primary form completely distinct from the others. On further considering this difficult problem, we arrive in the end at the notion of a *monophyletic* origin of the animal kingdom, viz., that these seven primary forms are connected at their lowest roots, and that they are derived from a single, common primæval form. *In the animal as well as in the vegetable kingdom, when closely and accurately considered, the monophyletic hypothesis of descent is found to be more satisfactory than the polyphyletic hypothesis.*

It is *comparative ontogeny* (embryology) which first and foremost leads to the assumption of the monophyletic origin of the whole animal kingdom (the Protista excepted of course). The zoologist who has thoughtfully compared the history of the individual development of various animals, and has understood the importance of the biogenetic principle (p. 33), cannot but be convinced that a common root must be assumed for the seven different animal tribes, and that all animals, including man, are derived from a single, common primary form. The result of the consideration of the facts of embryology, or ontogeny, is the following genealogical or phylogenetic hypothesis, which I have put forward and explained in detail in my "Philosophy of Calcareous Sponges" (Monograph of the Calcareous Sponges, vol. i. pp. 464, 465, etc.,—"the Theory of the Layers of the Embryo, and the Pedigree of Animals.")

The first stage of organic life in the Animal kingdom (as in the Vegetable and Protista kingdoms) was formed by perfectly simple *Monera*, originating by spontaneous generation.