

identical, or nearly identical, in the animal and vegetable kingdoms.

*Secondly*, the sterility of distinct species when first united, and that of their hybrid offspring, graduate, by an almost infinite number of steps, from zero, when the ovule is never impregnated and a seed-capsule is never formed, up to complete fertility. We can only escape the conclusion that some species are fully fertile when crossed, by determining to designate as varieties all the forms which are quite fertile. This high degree of fertility is, however, rare. Nevertheless, plants, which have been exposed to unnatural conditions, sometimes become modified in so peculiar a manner, that they are much more fertile when crossed with a distinct species than when fertilised by their own pollen. Success in effecting a first union between two species, and the fertility of their hybrids, depend in an eminent degree on the conditions of life being favourable. The innate sterility of hybrids of the same parentage and raised from the same seed-capsule often differs much in degree.

*Thirdly*, the degree of sterility of a first cross between two species does not always run strictly parallel with that of their hybrid offspring. Many cases are known of species which can be crossed with ease, but yield hybrids excessively sterile; and conversely some which can be crossed with great difficulty, but produce fairly fertile hybrids. This is an inexplicable fact, on the view that species have been specially endowed with mutual sterility in order to keep them distinct.

*Fourthly*, the degree of sterility often differs greatly in two species when reciprocally crossed; for the first will readily fertilise the second; but the latter is incapable, after hundreds of trials, of fertilising the former. Hybrids produced from reciprocal crosses between the same two species likewise sometimes differ in their degree of sterility. These cases also are utterly inexplicable on the view of sterility being a special endowment.

*Fifthly*, the degree of sterility of first crosses and of hybrids runs, to a certain extent, parallel with the general or systematic affinity of the forms which are united. For species be-