

them. If, for example, insects living on islands fly about much, it may easily happen that when flying they are blown into the sea by the wind, and if (as is always the case) the power of flying is differently developed in different individuals, then those which fly badly have an advantage over those which fly well; they are less easily blown into the sea, and remain longer in life than the individuals of the same species which fly well. In the course of many generations, by the action of natural selection, this circumstance must necessarily lead to a complete suppression of the wings. This conclusion might have been arrived at on purely theoretical grounds, but here we find its truth established by facts. For upon isolated islands the proportion of wingless insects to those possessing wings is surprisingly large, much larger than among the insects inhabiting continents. Thus, for example, according to Wollaston, of the 550 species of beetles which inhabit the island of Madeira, 220 are wingless, or possess such imperfect wings that they can no longer fly; and of the 29 genera which belong to that island exclusively, no less than 23 contain such species only. It is evident that this remarkable circumstance does not need to be explained by the special wisdom of the Creator, but is sufficiently accounted for by natural selection, because in this case the hereditary disuse of the wings, the discontinuance of flying in the presence of dangerous winds, has been very advantageous in the struggle for life. In other wingless insects the want of wings has been advantageous for other reasons. Viewed by itself, the loss of wings is a degeneration, but in these special conditions of life it is advantageous to the organism in the struggle for life.