

a change in the leaves. Thus the struggle for life, in this instance, acts as a means of selecting and transforming. The struggle of the different individuals to obtain the necessary conditions of existence, or, taking it in its widest sense, the inter-relations of organisms to the whole of their surroundings, produce mutations of form such as are produced in the cultivated state by the action of man's selection.

This agency will perhaps appear at first sight small and insignificant, and the student will not be inclined to concede to the action of such relations the weight which it in reality possesses. I must therefore find place in a subsequent chapter to put forward further examples of the immense and far-reaching power of transformation exhibited in natural selection. For the present I will confine myself to simply once more comparing the two processes of artificial and natural selection, and clearly explaining the agreement and the differences of the two.

Both natural and artificial selection are quite simple, natural, mechanical relations of life, which depend upon the *interaction* of two physiological functions, namely, on *Adaptation* and *Inheritance*, functions which, as such, must again be traced to the physical and chemical properties of organic matter. The difference between the two forms of selection consists in this : in artificial selection the will of man makes the selection according to a *plan*, whereas in natural selection, the struggle for life (that universal inter-relation of organisms) acts *without a plan*, but otherwise produces quite the same result, namely, a selection of a particular kind of individuals for propagation. The alterations produced by artificial selection are turned to the advantage of *those who make*