

What grand results have followed from the long-continued action of methodical and unconscious selection, regulated to a certain extent by natural selection, we see on every side of us. Compare the many animals and plants which are displayed at our exhibitions with their parent-forms when these are known, or consult old historical records with respect to their former state. Most of our domesticated animals have given rise to numerous and distinct races, but those which cannot be easily subjected to selection must be excepted—such as cats, the cochineal insect, and the hive-bee. In accordance with what we know of the process of selection, the formation of our many races has been slow and gradual. The man who first observed and preserved a pigeon with its œsophagus a little enlarged, its beak a little longer, or its tail a little more expanded than usual, never dreamed that he had made the first step in the creation of a pouter, carrier, and fantail-pigeon. Man can create not only anomalous breeds, but others having their whole structure admirably co-ordinated for certain purposes, such as the race-horse and dray-horse, or the greyhound and bulldog. It is by no means necessary that each small change of structure throughout the body, leading towards excellence, should simultaneously arise and be selected. Although man seldom attends to differences in organs which are important under a physiological point of view, yet he has so profoundly modified some breeds, that assuredly, if found wild, they would be ranked as distinct genera.

The best proof of what selection has effected is perhaps afforded by the fact that whatever part or quality in any animal, and more especially in any plant, is most valued by man, that part or quality differs most in the several races. This result is well seen by comparing the amount of difference between the fruits produced by the several varieties of fruit-trees, between the flowers of our flower-garden plants, between the seeds, roots, or leaves of our culinary and agricultural plants, in comparison with the other and not valued parts of the same varieties. Striking evidence of a different kind is afforded by the fact ascertained by Oswald Heer,^s namely, that the seeds of a large number of plants,—wheat, barley,

^s 'Die Pflanzen der Pfahlbauten,' 1865.