

## CHAPTER XX.

## SELECTION BY MAN.

SELECTION A DIFFICULT ART—METHODICAL, UNCONSCIOUS, AND NATURAL SELECTION—RESULTS OF METHODICAL SELECTION—CARE TAKEN IN SELECTION—SELECTION WITH PLANTS—SELECTION CARRIED ON BY THE ANCIENTS AND BY SEMI-CIVILISED PEOPLE—UNIMPORTANT CHARACTERS OFTEN ATTENDED TO—UNCONSCIOUS SELECTION—AS CIRCUMSTANCES SLOWLY CHANGE, SO HAVE OUR DOMESTICATED ANIMALS CHANGED THROUGH THE ACTION OF UNCONSCIOUS SELECTION—INFLUENCE OF DIFFERENT BREEDERS ON THE SAME SUB-VARIETY—PLANTS AS AFFECTED BY UNCONSCIOUS SELECTION—EFFECTS OF SELECTION AS SHOWN BY THE GREAT AMOUNT OF DIFFERENCE IN THE PARTS MOST VALUED BY MAN.

THE power of Selection, whether exercised by man, or brought into play under nature through the struggle for existence and the consequent survival of the fittest, absolutely depends on the variability of organic beings. Without variability nothing can be effected; slight individual differences, however, suffice for the work, and are probably the chief or sole means in the production of new species. Hence our discussion on the causes and laws of variability ought in strict order to have preceded the present subject, as well as inheritance, crossing, &c.; but practically the present arrangement has been found the most convenient. Man does not attempt to cause variability; though he unintentionally effects this by exposing organisms to new conditions of life, and by crossing breeds already formed. But variability being granted, he works wonders. Unless some degree of selection be exercised, the free commingling of the individuals of the same variety soon obliterates, as we have previously seen, the slight differences which arise, and gives uniformity of character to the whole body of individuals. In separated districts, long-continued exposure to different conditions of life may produce new races without the aid of selection; but to this subject of the direct action of the conditions of life I shall recur in a future chapter.