

CHAPTER XVIII.

ON THE ADVANTAGES AND DISADVANTAGES OF CHANGED
CONDITIONS OF LIFE: STERILITY FROM VARIOUS CAUSES.

ON THE GOOD DERIVED FROM SLIGHT CHANGES IN THE CONDITIONS OF LIFE—STERILITY FROM CHANGED CONDITIONS, IN ANIMALS, IN THEIR NATIVE COUNTRY AND IN MENAGERIES—MAMMALS, BIRDS, AND INSECTS—LOSS OF SECONDARY SEXUAL CHARACTERS AND OF INSTINCTS—CAUSES OF STERILITY—STERILITY OF DOMESTICATED ANIMALS FROM CHANGED CONDITIONS—SEXUAL INCOMPATIBILITY OF INDIVIDUAL ANIMALS—STERILITY OF PLANTS FROM CHANGED CONDITIONS OF LIFE—CONTABESCENCE OF THE ANTERS—MONSTROSITIES AS A CAUSE OF STERILITY—DOUBLE FLOWERS—SEEDLESS FRUIT—STERILITY FROM THE EXCESSIVE DEVELOPMENT OF THE ORGANS OF VEGETATION—FROM LONG-CONTINUED PROPAGATION BY BUDS—INCIPIENT STERILITY THE PRIMARY CAUSE OF DOUBLE FLOWERS AND SEEDLESS FRUIT.

On the Good derived from slight Changes in the Conditions of Life.—IN considering whether any facts were known which might throw light on the conclusion arrived at in the last chapter, namely, that benefits ensue from crossing, and that it is a law of nature that all organic beings should occasionally cross, it appeared to me probable that the good derived from slight changes in the conditions of life, from being an analogous phenomenon, might serve this purpose. No two individuals, and still less no two varieties, are absolutely alike in constitution and structure; and when the germ of one is fertilised by the male element of another, we may believe that it is acted on in a somewhat similar manner as an individual when exposed to slightly changed conditions. Now, every one must have observed the remarkable influence on convalescents of a change of residence, and no medical man doubts the truth of this fact. Small farmers who hold but little land are convinced that their cattle derive great benefit from a change of pasture. In the case of plants, the evidence is strong that a great advantage is derived from exchanging seeds, tubers, bulbs, and cuttings from one soil or place to another as different as possible.