

CHAPTER XIX.

SUMMARY OF THE FOUR LAST CHAPTERS, WITH REMARKS ON HYBRIDISM.

ON THE EFFECTS OF CROSSING—THE INFLUENCE OF DOMESTICATION ON FERTILITY—CLOSE INTERBREEDING—GOOD AND EVIL RESULTS FROM CHANGED CONDITIONS OF LIFE—VARIETIES WHEN CROSSED NOT INVARIABLY FERTILE—ON THE DIFFERENCE IN FERTILITY BETWEEN CROSSED SPECIES AND VARIETIES—CONCLUSIONS WITH RESPECT TO HYBRIDISM—LIGHT THROWN ON HYBRIDISM BY THE ILLEGITIMATE PROGENY OF HETEROSTYLED PLANTS—STERILITY OF CROSSED SPECIES DUE TO DIFFERENCES CONFINED TO THE REPRODUCTIVE SYSTEM—NOT ACCUMULATED THROUGH NATURAL SELECTION—REASONS WHY DOMESTIC VARIETIES ARE NOT MUTUALLY STERILE—TOO MUCH STRESS HAS BEEN LAID ON THE DIFFERENCE IN FERTILITY BETWEEN CROSSED SPECIES AND CROSSED VARIETIES—CONCLUSION.

It was shown in the fifteenth chapter that when individuals of the same variety, or even of a distinct variety, are allowed freely to intercross, uniformity of character is ultimately acquired. Some few characters, however, are incapable of fusion, but these are unimportant, as they are often of a semi-monstrous nature, and have suddenly appeared. Hence, to preserve our domesticated breeds true, or to improve them by methodical selection, it is obviously necessary that they should be kept separate. Nevertheless, a whole body of individuals may be slowly modified, through unconscious selection, as we shall see in a future chapter, without separating them into distinct lots. Domestic races have often been intentionally modified by one or two crosses, made with some allied race, and occasionally even by repeated crosses with very distinct races; but in almost all such cases, long-continued and careful selection has been absolutely necessary, owing to the excessive variability of the crossed offspring, due to the principle of reversion. In a few instances, however, mongrels have retained a uniform character from their first production.

When two varieties are allowed to cross freely, and one is