

The new book by Mr. Charles Darwin ("Cross- and Self-Fertilization of Plants." London: John Murray) will be hailed with welcome by all true naturalists, whether they assent to his developmental views or not. The relationships between the colour, shapes, and perfumes of flowers, and the visits of insects, have delighted modern botanists with the clear light they have thrown on structures that before were regarded as more or less arbitrary. Sir John Lubbock's little book has put all amateur botanists in possession of the outlines of the facts, and now Mr. Darwin's new book stamps the theory with all the emphasis of varied proof. The present work has a value not even second to that encyclopædia of Darwinism, "The Variation of Animals and Plants under Domestication." It literally bristles with personal experiments, and the reader finds himself arriving at certain inevitable conclusions long before the author himself draws them. Moreover, the conclusions have a practical bearing, alike to the horticulturist and the breeder of stock, which such individuals would do well to accept. We have regarded the brilliant speculations as to the direct connection between colour, perfume, and often *shape* in flowers, and the cross-fertilization induced by insect visitations, as one of the most notable scientific promulgations of the last five or six years. But here we find that Mr. Darwin has been quietly experimenting upon the theory for *eleven years*, with a view to proving it! And the present book gives a detailed account of every experiment, both in self- and cross-fertilization of well-known British and exotic plants. We hardly know which most to wonder at—the patient and never-tiring industry, the minute accuracy and conscientious truthfulness of the experiments, or the important and brilliant conclusions which are to be drawn from them! No fewer than 1,101 crossed plants and 1,076 self-fertilized plants have been experimented upon by Mr. Darwin. These belong to fifty-seven species, selected from fifty-two genera and thirty great natural families. The conclusion drawn is that an extraordinary advantage in height, weight, and fertility is derived by plants from crossing, and that in every instance this gives them an advantage over self-fertilized flowers. It is very certain that these experiments have considerably enlarged our certain knowledge of the *raison d'être* of the chief attractions of flowers; and at the same time, by showing how almost every winged insect is actively engaged in the all-important work of floral crossing, we are led to see more clearly than ever the intimate union between, and the absolute necessity for the existence of, widely-separated groups of organic objects.