REVIEWS

THE WILD SPECIES OF *GOSSYPIUM* AND THEIR EVOLUTIONARY HISTORY. By J. H. Saunders. Oxford University Press. 1961. 15s.

This small book gives an excellent summary of the advances in our knowledge of cotton taxonomy and relationships since 1947, the year of publication of Hutchinson, Silow and Stephens' classic monograph on cotton evolution. Although it is written largely in note form it is extremely readable. The beautiful and accurate line drawings of the wild species leave nothing to be desired. One wishes, however, that for the sake of completeness the author had included drawings of the cultivated species also. Since Hutchinson, Silow and Stephens' work is now out of print, and their drawings in any case do not reach Saunders' standard, this omission is doubly unfortunate. Indeed, a much more comprehensive presentation, possibly in collaboration with the authors of the earlier book, would have been of far more value.

Nevertheless, the author of this new book is to be congratulated on his presentation of the latest data bearing on *Gossypium* evolution. No further information is given on the possible method by which the Old World cultivated cottons arrived in the New World, and Hutchinson's hypothesis of trans-Pacific migrations is accepted. The author puts forward an alternative suggestion, involving a natural westward migration of the A genome from Africa before the separation of the Southern continents, but rightly considers this as a remote possibility.

The work is an excellent example of the synthetic method in plant taxonomy, where information from the spheres of phytogeography, plant ecology, genetics, cytology and phytopathology is brought to bear on problems of species divergence. Above all, it shows the valuable contribution that cyto-genetics can make to taxonomy as well as the value of modern taxonomic studies to geneticists and plant breeders. J. G. HAWKES.

AN INTRODUCTION TO QUANTITATIVE GENETICS. By D. S. Falconer. Oliver and Boyd. 1960. 35s.

A text book specifically designed to introduce the student to the concepts and theories of quantitative genetics has been needed for some time. Dr Falconer has had the courage and industry to meet the need. That courage was required is undoubted, for the need was for a book that squarely faced the fact that this is a subject making mathematical demands, but yet set the standard of mathematical treatment at a level with which the biological student can cope.

Starting with simpler questions of gene frequencies at a single locus the author takes his readers through the usual necessary steps to an understanding of the causes of change in gene frequency and the significance of population size and inbreeding. He then proceeds to discuss continuous variation, where the reader is expected to have some understanding of statistics, but is assisted with examples throughout. This leads to the theory and results of artificial selection, inbreeding and cross-breeding and the author ends with a discussion of metric characters under natural selection.