REVIEWS

HEREDITY. An Introduction to Genetics. By A. M. Winchester. Harrap, London. 1964. Pp. 269. 18s.

There is a need for an inexpensive textbook on genetics as more universities teach basic biology to first-year students. This book covers the topics that are commonly taught in elementary courses with chapters on the physical basis of heredity, mono- and di-hybrid inheritance, multiple alleles and genes, linkage, gene structure, action and mutation and a chapter on heredity and environment. There are also chapters on sex-determination and sex-linkage, blood groups, chromosome aberrations and radiation hazards in an atomic age.

Unfortunately, the treatment of these topics conveys the impression that genetics is a descriptive science alone. There is little attempt, for example, to relate the segregation of genes in mono- and di-hybrid crosses with that of the chromosomes at meiosis. The cytological photographs are poor and some of the terminology is archaic such as the use of the terms dyad and tetrad for bivalent and the products of first meiotic anaphase respectively. The chapter on statistical methods treats the analysis of experimental data recipé fashion without any appeal to the common sense of what is being attempted. The figure appearing on page 106 is not that illustrating the inheritance of barred features in Plymouth Rock chickens. In short, though this book is right in size, coverage and price for use in basic biology courses, and by laymen, its content is not. Finally, for connoisseurs of prudery there is a collectors item on page 177 where an illustration of Klinefelter's Syndrome is shown with masked genitalia.

M. J. LAWRENCE.

DIAGNOSIS AND GENETICS OF DEFECTIVE COLOUR VISION. H. Kalmus. Pergamon Press, London. 1965. Pp. x+114. Price 50s.

Dr Kalmus has written an interesting book on the detection, classification and inheritance of colour vision defects. In the opening chapter he mentions the history of the discovery of colour-blindness in its various forms. He proceeds in the next chapter to an account of the trichromatic theory, not mentioning the four-colour theory in any way except in so far as it may apply to certain aspects of colour vision and colour-blindness which are due to factors not at the receptor level.

In the chapter dealing with types of defect Dr Kalmus appears to accept three degrees of protan defect, namely protanopia, extreme protanomaly and protanomaly, and three of deutan defect, namely deuteranopia, extreme deuteranomaly and deuteranomaly. He considers, however, that more than three abnormal alleles exist in each case, which result in a larger number of different defects. This is a little vague, and could have been made more precise by reference to actual data. For instance, it is true that there are various degrees of protanomaly and deuteranomaly in terms of deviation in the Rayleigh equation, as well as in magnitude of matching range, and