BOOK REVIEWS


Most review articles and monographs, however comprehensive, are almost unreadable because they are only compilations of the literature with no form or thesis to carry the reader along. In addition, one often finds entirely incompatible theories or results presented in adjacent paragraphs (or even sentences) with no indication whether one is more acceptable to the experts than the other.

"La vision nocturne et ses troubles," which was originally prepared as a report for discussion by the Société Française d'Ophtalmologie, does not suffer from these faults in spite of its immense scope (it is hardly possible to think of a book or paper concerned, even indirectly, with normal or abnormal dark-adaptation and night vision which has not been included). This is certainly no mere collection of the relevant literature. Where results or theories are in conflict, the authors usually make a satisfactory attempt to guide the reader in choosing between them, and there is an excellent critical discussion of current theories about the mechanism of dark-adaptation.

It is almost impossible to overpraise this excellent book. Not only is it of first-rate quality but it is entirely up to date, several papers published as late as 1950 being included. The necessary background of the structure, function, and central connections of the retina is well covered before dark-adaptation and night vision, with the factors affecting them, are discussed.

One of the most valuable sections of the book comprises Chapters VII and VIII. The former gives an almost comprehensive list of the numerous types of adaptometer, both in use and described in the literature. In addition, there is a full description of how each works, what it actually measures (absolute threshold, difference threshold, resolving power, etc.), and what information it can be expected to give. Chapter VIII deals with the different techniques of investigation and methods of presenting results. To anyone trying to find his way through the jungle of dark-adaptation literature, or to compare the results of different workers, this chapter will be invaluable.

However, it is not only those concerned with dark-adaptation and its disorders who are deeply indebted to the authors of this splendid volume. Those interested in retinal physiology as a whole will also find much that is valuable and important.


Those who were acquainted with Adler's "Clinical Physiology of the Eye" which appeared twenty years ago will be glad to welcome its successor. It is a tribute to the virility of ocular physiology that the author has found that an entirely new book rather than a second edition of the old is required, for not only has much in basic physiology changed, but many of the applications of these problems to the eye have taken on new aspects—the dynamics of the intra-ocular fluids, the photo-chemistry of vision, and the electro-physiology of the visual impulse, to mention three examples.
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The eyelids, lacrimal apparatus, cornea, aqueous humour, intra-ocular pressure, the iris, accommodation, the ocular circulation, and the lens and vitreous each occupy a chapter. In the discussion of the metabolism of the cornea and the interpretation of the hydro-dynamics of the intra-ocular fluid, the researches of E. V. Kinsey form the basis of the argument. The mobility of the eyes is discussed in a chapter of 142 pages. The remainder of the book deals with the physiology of vision, starting from the nature of light, tracing the photo-chemical and electrical events in the retina, describing the visual pathways, and discussing the physiological and psychological aspects. The clinical applications of physiology are stressed throughout to ensure that the clinician is able to base a rational treatment of disease upon an adequate understanding of normal metabolic function. Our knowledge of ocular physiology is still so incomplete as to render this an impossible ideal, but the present volume, comprehensive in scope and pleasantly written, will do much to elucidate the practical problems of ophthalmic medicine.


Ogle's work at Dartmouth in association with Ames on aniseikonia is well known, and he is generally regarded as the critical scientist who elaborated the original ideas of his brilliant colleague and subjected them to mathematical analysis. That the study of aniseikonia should have stimulated our ideas on binocular vision is readily understandable, but much of the work which emerged from the Institute at Dartmouth has been published in different and unrelated journals. The present volume assembles this valuable material, and to those already available in the literature the author has added much unpublished data, and has reached conclusions some of which are original. The first part of the book deals with the sensorial organization of the retina and the physiological co-ordination of the two retinas. The theory of corresponding retinal points is discussed and a full and interesting study made of the empirical longitudinal horopter and monocular asymmetries. The second part is largely occupied by the perceptual processes involved in fusion, both in reference to central and peripheral vision; cyclofusional movements are discussed in detail, and much original work on fixation disparity is described. The remainder is largely occupied in the problems presented by the author's work on aniseikonia. The results of altering the relative magnification of the images of the two eyes are fully described with much experimental detail, its effect on the interpretation of spatial judgements is discussed as well as the influence of the anomalous condition of aniseikonia. The book is an excellent presentation of a difficult subject, and to do justice to the argument the reader must not be afraid of mathematical formulation.


This text-book is intended by the authors for students and the newly-qualified who desire to gain the first ideas about ophthalmology; it can only be said that they have treated their intended public liberally. They plead that, although thirty years ago a volume of 300 pages would have sufficed, scientific progress has been such as to demand a treatise four times that size.

The manual gives the impression of careful and studied preparation, such as one would expect. There are four main divisions: Generalities, Affections of the Globe and Adnexa, Surgical Technique, and Refraction. An appendix deals briefly with