Book reviews


Just as in the case with entropy the size of a textbook is always increasing, and in view of the advances in this subject during the past decade one must congratulate the author on having been able to compress so much into a modest increase of 150 pages (as compared with the 2nd edition which appeared in 1963). This ability to give an overall conspectus of many different aspects of physiology is one for which Dr. Davson is well known and one which is particularly important in the present instance. The physiology of the eye involves amongst other things excursions into electro- and neurophysiology (Sections II and IV), optics (Section V), and the physiology of muscles (Section III), and must range from structural anatomy to questions of perception and experimental psychology. The author covers this wide variety of subjects admirably.

The first two sections ("Vegetative Physiology and Biochemistry of the Eye" and "The Mechanisms of Vision") have undergone the greatest expansion compared with previous editions, and it is good to see a discussion of much recent work (as for instance that of Blakemore and of Hubel and Wiesel) on the neurophysiology of perception and binocular vision in Section IV. The section on visual pigments could have been more detailed and more might have been included on the role of the retinal pigment epithelium in the metabolism of material from rod outer-segments. Another point of criticism concerns some of the figures; some of the half-tone reproductions are below standard, particularly Figs 13, 41, 313, and 314, where the contrast and detail leave much to be desired.

Each chapter is followed by a very full list of references, making it possible to find the authority for any point cited in the preceding text, and while this has undoubtedly added to the bulk of the volume it makes it invaluable for reference. This indeed renders the work rather more than a student's textbook and it is, in the opinion of the present reviewer, a necessity for any institution or any investigator seriously concerned with research on the eye. It obviously contains more information than is likely to be required by students reading for professional qualifications in ophthalmology, but this should not deter them from obtaining the book which for years to come should provide them with much valuable information on the scientific background of their specialty.


The authors are to be congratulated on producing a worthy successor to the first two editions. The present volume is some 50 pages longer than the second edition of which it is a thorough revision. New material is presented in the fields of fluorescence fundus photography, steroid glaucoma, static perimetry, and microsurgery.

An interesting innovation is the introduction of a few paragraphs on "problems for consideration" at the end of most of the main sections, i.e., gonioscopy, tonometry and tonography, ophthalmoscopy and perimetry, and diagnosis and therapy. These paragraphs contain abundant food for thought for glaucoma researchers, and indicate the possibility of numerous valuable projects which could be undertaken.

The book is beautifully produced and illustrated and clearly and lucidly written. It should be required reading for all ophthalmologists, especially those in training.

It is traditional for a reviewer to try to find a fault or two, but that is difficult to achieve in this work. If one could with great diffidence make one small point it is that chapter 30, in which a series of illustrative tonograms is discussed, could probably have been omitted without detracting from the whole work.