

Book reviews

Handbook of Sensory Physiology. Vol. 9. Development of Sensory Systems. Ed. Marcus Jacobson. Pp. 469. DM230. Springer-Verlag: Berlin. 1978.

Marcus Jacobson asserts in his preface to this volume that 'we have a plethora of facts but a dearth of hypotheses' about the development of sensory systems. This is surely true for neurobiology and biology in general. For the ophthalmologist 2 chapters in this handbook are of direct interest: 'Visual behaviour development in non-mammalian vertebrates' by D. Ingle, and 'Functional modification of the developing visual system' by H. V. B. Hirsch and A. G. Leventhal. The latter chapter is a well-written summary by 2 workers in this exponentially growing field. It covers the organisation of the W, X, and Y systems, and concludes that the W and X systems are invariant, while the Y cell projections are modifiable by the environment. Even if this viewpoint is shown to be oversimplified (and recent work has shown that X-cell properties can be modified by experimental amblyopia), it is pleasing to see the W, X, Y categorisation used to interpret this complex and controversial research area.

A. L. HOLDEN

Modern Problems in Ophthalmology. Vol 19. Colour Vision Deficiencies IV. Ed. E. B. STREIFF. Pp. 348. DM198. Karger: Basel. 1978.

Dr G. Verriest, the enthusiastic and indefatigable convener of meetings and editor of symposia, has done it again. The proceedings of Parma '77 of the International Group on Colour Vision Deficiencies have appeared with commendable speed, beautifully produced. The topics covered include neurophysiological aspects, colour vision under reduced illumination, practical (that is, economic and professional) aspects of colour deficiencies, methods of examination, etc. The contributions vary in quality, and the high price (£50) will limit its market.

ROBERT WEALE

External Ocular Tumors. By KNUD BECH and OVE ASKEL JENSEN. Pp. 64. £14.00. Holt-Saunders: Eastbourne. 1978.

This is an attractively produced short textbook and atlas recording the clinical, surgical, and radiotherapeutic experience at the Rigshospital and at the Eye Pathology Institute, Copenhagen, which has long had a special interest in the pathology and treatment of ocular tumours. It is based on follow-up of 300 consecutive cases of benign and malignant tumours and of simulating lesions of the external eye as found by inspection of the conjunctiva and eyelids (anterior segment intraocular tumours are by definition excluded).

The various diseases are carefully defined as to their clinical and histological features, which are well shown by juxtaposition of clinical photographs and the corresponding microscopical appearance. The text includes analysis of the history and clinical features and a com-

parison between the initial clinical diagnosis and the histological diagnosis, pointing out a high error rate in regard to lid papilloma, too often thought to be simple but frequently harbouring a carcinoma, as is often the case with the atypical chalazion. The authors advocate total excision of lesions appearing benign clinically, but for all others where malignancy is suspected a generous biopsy including the margin of the lesion and adjacent skin is done, followed by irradiation. With pigmented lesions of the lids total excision is attempted, followed by major plastic surgery if malignant melanoma is found.

This study emphasises the important principle of careful follow-up of patients with malignant disease, which has been long established in other branches of medicine but is equally important in ophthalmology and clearly justifies the emergence of multidisciplinary ocular oncology clinics. The quality of the black-and-white clinical photographs and microscopical illustrations is excellent and together with the helpful glossary of clinical and histological terms should make this book useful to postgraduate students as well as to those particularly interested in this field.

P. A. MACFAUL

Physiology of the Eye. An Introduction to the Vegetative Functions. By IRVING FATT. Pp. 232. £11.10. Butterworths: London. 1978.

This book is apparently designed for optometry students and is intended as an introduction to the purely vegetative physiology of the eye. This restriction being granted, the book is of curiously uneven quality in its approach to the subject, and, while it reflects the author's personal (and extremely valuable) contribution to biophysical problems encountered in the eye, it should not be regarded as an adequate introductory text. The unevenness is nowhere better displayed than in comparing chapters 5 and 6 on lens and cornea; the lens occupies a mere 8 pages as compared with 96 on the cornea. It is difficult to imagine a student who is capable of following the account of corneal oxygen supply under contact lenses (pp. 134-160) and at the same time needs to be informed that 'opacity of the lens, called a *cataract*, is one of the leading causes of loss of vision in the aged' (p. 90). A similar criticism could be made of chapter 8, which devotes the whole of 10 pages to the retina, and even if the author is deliberately refraining from discussing the purely visual functions of that tissue the reader will wish to know something of its vascular supply.

However, let us make the most of what is presented. Chapters 1 and 2 are not inadequate, but chapter 3 seems to give undue prominence to tonographic methods, especially since the reader is told (p. 67) that the 'optometrist never does tonography and the ophthalmologist rarely makes the measurement'. The chapter on cornea (chapter 6) is too detailed for the average student, and after being promised (p. 12) that 'the innervation of the cornea and sclera will be treated in detail in chapters 6 and 7' it is disappointing to find no discussion, either here or in chapter 9 (Tears and Lids), of the nerve pathways involved in the blink and lacrimation reflexes. The present reviewer would also have included the pupillary and accommodation reflexes in the ambit of