Book reviews

Quantitative Layer-By-Layer Perimetry: An Extended Analysis. By JAY M. ENOCH, C. R. FITZGERALD, E. C. CAMPOS. Pp. 232. \$29.50. Grune and Stratton: New York. 1981.

The introduction over the past 25 years of new anatomical, physiological, and biochemical techniques has added enormously to our knowledge of the complexity of the visual pathway, while the clinical localisation of pathological processes in the retina has been enhanced by fluorescein angiography and electrodiagnostic procedures. Much of the work of Professor Enoch and his group has been concerned with the development of noninvasive psychophysical tests of visual function, which not only provide information to be correlated with the more recent anatomical and physiological studies of the normal visual processes, but also have a bearing on clinical ophthalmological practice and research. This book gives an account of this work together with an assessment of its present stage of development and the advances which may be expected from its impact on future research.

The subject matter lies in an area of specialised interest shared by visual scientists and clinicians and deals mainly with 3 procedures—a test of 'sustained-like' function, a test of 'transient-like' function, and the flashing repeat static test (FRST). The first 2 functions are described with appropriate references to the previous work of Westheimer, who studied the correlation of this type of psychophysical test of vision with the underlying physiology.

The initial step in testing is the determination of the threshold of a small test target, presented as a flashing point of light. The luminance of this target is then raised by a constant factor. In order to test the sustained-like function a surrounding background field is introduced, the luminance and area of which can be varied; measurement is made of the effect of these variations on the perception of the test-target. The level of adaptation at which the test is done is set by a large illuminated field which surrounds the background field. In order to test the transient-like function the flashing test target is surrounded by a background field bearing a windmill-shaped pattern, and measurements are made with the windmill stationary and rotating. The flashing repeat static test is concerned with the alteration in retinal sensitivity over a relatively short period of time. The apparatus needed for these tests and the methodology are described. In reading the descriptions of these tests, the clinical ophthalmologist will appreciate that they are designed to assess relatively unfamiliar factors, such as integrative activity within the retina, temporal variations, and the effect of on-off signals, rather than the more familiar ones associated with the testing of acuity and visual fields during routine clinical practice.

Of particular interest to the clinical ophthalmologist are the extensive presentations of the results obtained on various groups of patients with pathological changes in different layers of the retina and with glaucoma, the clinical details often being supplemented by illustrations of fluorescein angiography and visual fields. It is clear that the work is still in its relatively early stages, but the evidence accumulated so far may be summarised as follows. Outer

retinal diseases, involving the choroid, pigment epithelium, and retinal receptors, appear not to alter the results of any of the 3 main tests. Diseases of the inner retina, that is, from the outer plexiform layer to the nerve fibre layer, cause alterations in the sustained-like or transient-like functions or in both, but the FRST is not affected. By contrast, diseases of the optic nerve beyond the nerve head, such as retrobulbar neuritis, alter the FRST but not the other functions. In open-angle glaucoma it is of interest that changes are found in the sustained-like and transient-like functions but not in the FRST.

This book is of interest mainly to 2 groups of readers, referred to, rather negatively, as the 'nonclinician' (p.19) and the 'nonpsychophysicist' (p.18). It is inevitable therefore that some material will probably appear elementary to one group and advanced to the other, but on the whole a satisfactory balance has been achieved. The general impression which the clinician may gain from the book is that, although the psychophysical tests described may be time-consuming and demand much from the patient, there is reason to suppose that their future application will be of practical clinical value in helping to demonstrate exactly where visual function is disturbed by a pathological process. Some of the basic science will be unfamiliar to the 'non-psychophysicist' but the general presentation is interesting and stimulating.

JOHN GLOSTER

Cataract Surgery and its Complications. 3rd edn. By NORMAN S. JAFFE. Pp. 611. £55.00. YB Medical Publishers: London. 1981.

This is the third edition of Dr Norman Jaffe's book, which has now become a classic. Like its predecessor it is divided into 2 main parts. The first part deals mainly with the principles of cataract surgery and the second with complications.

The first of the 10 chapters making up part 1 deals with the decision to operate. This should be read by all ophthalmologists, as it contains many useful tips on how to handle patients about to have cataract surgery and advice on post-operative management. There is also a detailed description of the evaluation of eyes with mature cataracts. The section on intraocular lenses is also outstanding, as might be expected from Dr Jaffe's great interest and experience in this field. The chapter on surgical techniques discusses in depth the older methods of extraction, such as the use of the Graefe knife and of the erisiphake, and compares the technique of sliding with tumbling. The paragraph on congenital cataract surgery is somewhat disappointing and contains vague statements such as 'the exact age at which surgery must be performed to avoid amblyopia is not known. This is probably sometime during the first year'. None of the references quoted on congenital cataracts are less than 11 years old. The chapter on the management of subluxated lenses is similarly out of date. Although it describes in detail the older methods, no mention is made of closed intraocular surgical techniques which have revolutionised the management of this very difficult problem. It is surprising that, although a whole chapter is devoted to phaco-emulsification (written by Dr Charles Kelman) there is no mention of lensectomy techniques for the management of soft and complicated cataracts. The chapter on wound

healing is detailed and excellent, as is the chapter on keratomileusis and keratophakia by Dr Jose Barraquer. The section dealing with postoperative corneal astigmatism is, however, of little interest to the general ophthalmologist, with its many complicated geometrical analyses.

The second part of the book, dealing with postoperative complications, consists of 21 chapters. All of the complications are discussed in detail, from common complications such as shallowing of the anterior chamber to rare ones such as epithelial invasion. The descriptions are uniformly excellent.

J. J. KANSKI

Illustrated Handbook of Ophthalmology. By RUDOLF SACHSENWEGER. Pp. 164. £7.50. John Wright: Bristol. 1981.

This book, which has been translated from the original German edition, is aimed at medical and ophthalmic optic undergraduates. It will have an immediate appeal for students seeking a text to supplement their clinical teaching, for it is an attractive volume, profusely illustrated by monochrome and colour photographs and excellent diagrams.

A considerable amount of information is contained within its 150 pages, but the format is somewhat old fashioned and the overall approach too systematic. A greater emphasis on presenting symptoms and differential diagnosis would have increased the book's value to the student. The text, however, is clear, and an appropriate emphasis has been placed on medical ophthalmology with only brief accounts of surgical procedures. The translation from the original is excellent, and the book has been well edited to bring it into line with United Kingdom practice.

ROGER COAKES

Ptosis: 3rd edn. By CROWELL BEARD. Pp. 276. £35.75. C. V. Mosby: London. 1981.

This book remains the classical monograph on ptosis surgery. The format has not been altered in this new edition and the basic text is the same. The main changes are in the chapter on newer operations for ptosis. It has been updated

to include many of the most recent concepts. The other chapters have also been brought up to date with the addition of several new and relevant references. The size of the book has not increased significantly, since the author has omitted some of the material that he previously published in order to make room for the new additions.

Crowell Beard has more experience in ptosis surgery than anybody else in the world and yet has the ability to present each chapter in such a clear and logical way that it is readily intelligible to anyone wishing to learn about the subject. The basic anatomy, physiology, and pathology are clearly described, and all the operations are well illustrated with excellent diagrams. There are a profusion of clinical photographs which demonstrate what may and may not be achieved with the different procedures. He has not altered his personal anecdotal style of writing, which makes the book eminently readable as a whole, while at the same time it is so well indexed that it can be used as a reference book for an opinion on any problem likely to be encountered in ptosis surgery.

This book should be read by everyone with any interest in ptosis, and those who practise ptosis surgery are strongly recommended to buy it both as a practical guide and as an up-to-date reference book.

J. R. O. COLLIN

An Atlas of Ophthalmic Surgery. 3rd edn. By J. H. KING AND J. A. C. WADSWORTH. Pp. 654. £49.00. Harper and Row: London. 1981.

The coverage of the field of ophthalmic surgery in this book (its third edition) is good but at times too limited. The monochromatic illustrations are excellent and numerous, being accompanied by brief explanatory texts covering many aspects of the surgical manoeuvres involved in these operations. These texts probably fail in that they are too brief and for the student leave some questions unanswered, while the operations covered in the book are only the ones preferred by the authors; thus alternative measures are not described. The illustrations are beautiful and demonstrate the chosen steps in the operations with a rare clarity. New sections in this edition include recent advances in eye surgery.

IAN DUGUID