

opacities visible only by the corneal microscope, and causing no interference with vision; (2) The cataracts were found in a patient of 31 years of age, and were typical of cataracts due to endocrine disturbance. In addition to the well recognized features of precocity, bilaterality and superficiality of the cataracts, it was observed that there was a notable lack of demarcation between the several layers of the lens. This feature is present, therefore, in all types of endocrine cataract, diabetic, tetanic and myotonic. It is suggested that this sign may possibly be found before the development of opacities in the lens. (3) The antero-posterior diameter of the lenses was less than normal. This is a further sign present in the three groups of endocrine disturbance.

HUMPHREY NEAME.

- (6) **Scotti, P. (Savona).—Changes in the lens caused by ultra-violet rays.** (*Alterazioni del Cristallino da Raggi Ultra-Violetti*). *Ann. di Ottal.*, December and January, 1931.

(6) Scotti has made a number of experiments in which the lens was exposed to ultra-violet rays; in some, enucleated eyes were used; in some, the lens extracted from the eye, and in others the living animal. The changes noted differed in the various classes of experiment; the enucleated eyes showed opacity of the nuclear zone of the lens. The living animals showed changes in the ciliary and capsular epithelium, and opacities in the lens chiefly close under the capsule.

That the opacity found in enucleated eyes is really due to the ultra-violet rays is shown by the fact that the interposition of a sheet of glass to stop these rays, prevented the formation of any opacity.

HAROLD GRIMSDALE.

BOOK NOTICES

Kurzes Handbuch der Ophthalmologie. Edited by F. SCHIECK and A. BRUCKNER. Band IV, pp. 874; 463 Figs. Berlin: Julius Springer. 1931. Price, R.M. 165.

The fourth volume of this large and extensive treatise on ophthalmology has now appeared, and follows the general lines adopted in its predecessors. The first part dealing with diseases of the conjunctiva, cornea, and sclera, has been contributed by Professor Schieck, of Würzburg. After dealing with the various types of infective conjunctivitis, in which are included concise and informative accounts of the bacteriology peculiar to each condition, the author adopts the somewhat novel and very useful arrangement

of grouping together a number of conditions which affect the conjunctiva and the corneal epithelium: inflammatory conditions, such as phlyctenular disease, acne rosacea, and so on; pigmentary changes; degenerations, in which are included pinguecula, keratosis, xerosis, and other conditions; and tumours. This is followed by a section dealing with pathological conditions peculiar to the cornea (developmental, inflammatory, degenerative) and a similar section on the sclera. The second part of the volume, written by Dr. Cramer, of Cottbus, is devoted to the effects of injuries to the eye; and this is followed by a section on sympathetic ophthalmitis, by Professor Reis, of Bonn. Here, as elsewhere in the book, the author contents himself with an encyclopaedic summary of different theories and views, and makes little attempt at a critical analysis which might lead to a reasoned course of treatment. The last section of the book—and the best—deals with the physiological and pathological variations of the intra-ocular pressure and the clinical aspects of glaucoma and buphthalmos. It is written by Professor Thiel, of Berlin, a recognized authority in this field, who bases his argument on the newer views that the aqueous humour is a dialysate. Our knowledge of the pathology of the various types of glaucoma is adequately summarized as well as the clinical symptoms of the disease, and the indications for medical and surgical treatment. Also the relative merits of the numerous surgical methods which have been advocated, are fairly reviewed.

Like its predecessors in this series the present volume is a valuable one, cumbersome perhaps in certain places, but on the whole well balanced. The illustrations are excellent and extremely informative, and like most German works of this type, the artistry of the production is beyond question. No effort is made to include an exhaustive literature, but that which is supplied is representative and useful.

An Index of Treatment. Edited by ROBERT HUTCHISON. 10th Edition, pp. 18 + 1027. Bristol: John Wright and Sons, Limited. London: Simpkin, Marshall, Limited. 1931. Price, 42s.

The ninth edition of this popular index was noticed in our columns in 1925 (Vol. IX, p. 543). It was edited by Hutchison and Sherren, and it was so quickly sold out that a reprint was brought out in December, 1926.

The present edition has been thoroughly revised; some of the articles have been rewritten and some new subjects are included, *inter alia*, Anaesthesia in Children, Diabetes in Childhood, Serum Sickness and Protein-shock Treatment.

The ophthalmic articles are again in the hands of Sir William Lister, a sufficient guarantee of their being accurate and up to date.

Recent Advances in Microscopy. By A. PINEY, BASIL GRAVES, E. W. MACBRIDE, H. R. HEWER, and E. C. BARTON-WRIGHT. London: A. Piney. 83 illustrations, pp. 254, 1931. Price, 12/6.

Microscopy is a wide subject and it would have been impossible for one man to write comprehensively on the advances which it has recently made. The volume under review is therefore the work of five authors, each of whom has taken a special aspect of his subject. The medical aspect is described by Piney, who is careful at the outset to emphasize the limitations of microscopy, *i.e.*, that histological methods can never do more than give us a picture equivalent to some living structures, and not a picture of these structures actually at work. Supra-vital staining suffers from the handicap that the structures made visible by this method are few in number, and that even those which are made visible are not shown in great detail. Piney's section opens with an interesting description of mitochondria, and then goes on to deal with the skin, blood, muscle and various glands. An interesting example of the complexity of modern histology is afforded by a paragraph on the subject of "that special form of histiocyte, the Kupffer cell, in the liver." It appears that there are at least three types of cells in the hepatic capillaries—the endothelial cells proper, branched pericytes between the endothelium and the liver cells and lastly, endocytes lying on the inner surface of the endothelium or even in the lumina of the capillaries. These last are presumably the true Kupffer cells.

The next section, on the microscopy of the living eye, directly concerns ophthalmologists and has been written by Basil Graves. He is to be congratulated on having given a remarkably clear and succinct account of the technique of this branch of ophthalmology within the compass of 57 pages.

The article contains 51 illustrations, which add greatly to the clarity of the descriptions in the text. Graves concerns himself mainly with technique, because the methods evolved for the examination of the human eye "are quite probably applicable in other useful fields, *e.g.*, zoological work; and also because in the space available a comprehensive account of common normal and pathological clinical features could not well be given." The various methods of examination—direct, proximal and retro-illumination, scleral scatter, etc., are described in considerable detail and a particularly good explanation is given of specular reflection.

The zoological aspect of modern microscopy is dealt with by MacBride and Hewer, who devote a large part of their space to a discussion and description of the Golgi apparatus. Work in this direction has been much facilitated lately by the perfection of an instrument for micro-dissection and by the discovery of tissue cultivation *in vitro*. The book concludes with a chapter on recent

advances in botanical microscopy by Barton Wright. Here again, the Golgi apparatus is to the fore, and there is an interesting account of the structure and behaviour of chromosomes. Microdissection also comes in for consideration, and it is interesting to read how the nucleus can be pushed by a delicate glass needle from end to end of a cell and then be watched, recoiling to its original position when released.

Although such a book as this is outside the confines of our speciality, it provides good reading and not the least of its uses, at any rate to ophthalmologists, is that it serves to remind them of the great progress which is being made in science as a whole as well as in that portion of it which concerns the structures within the walls of the orbit.

Augenärztliche Eingriffe. Ein Kurzes Handbuch für angehende Augenärzte. By PROFESSOR DR. J. MELLER, Director of No. 1 Eye Clinic, Vienna. 3rd Edition. Vienna: Julius Springer. 1931. Price, 28 R.M., with duty and postage, 29.80.

The third edition of this book contains sixteen chapters, 352 pages including the index, and 199 illustrations, drawings and diagrams, demonstrating anatomical features, stages, and technical points in the surgery of the eye and its appendages. It has been revised and brought up to date and represents the technique employed in No. 1 Eye Clinic in Vienna, of which the author is professor and director.

Indications for operation, pre-operative preparation, surgical technique, post-operative treatment and complications are fully described. Difficulties encountered during operation are discussed and attention is paid to the faults that a beginner is likely to make and how such may be avoided. The stance of the operator, position of the assistant, and other technicalities are of the Viennese and continental schools and differ from those practised by the majority of English and American ophthalmic surgeons. These are clearly illustrated in the drawings (taken from photographs) and diagrams of operations. Methods of local anaesthesia, including retro-ocular injections and blocking of branches of the facial nerve are described. A chapter is devoted to reconstructive plastic surgery of the conjunctiva and lids, but this is brief and limited in the range of alternative operations for defects in these structures. Little is written about "whole skin" grafts and Thiersch grafts, or the methods of reconstructing the conjunctival fornix and contracted sockets.

The treatment of retinal detachment by ignipuncture has been added. The methods of localisation of the retinal tear are those practised in No. 1 Eye Clinic, Vienna. They are interesting and

elaborate, necessitating the use of a special type of perimeter and movable ophthalmoscope. When the meridian of the site of retinal hole is found further mathematical calculations as to its distance from the limbus are made by referring to the curves of a graph plotted for myopic, emmetropic, and hypermetropic eyes of various degrees. As a preliminary to the operation a small metal frame, which exactly encircles the limbus is made, and attached to this is a flat narrow strip of metal curved to the contour of the sclera. Two holes are bored in this ring at 3 and 9 o'clock respectively so as to lie in the transverse axis of the globe. The metal strip is set in the meridian of the retinal hole and is cut at such a length as to correspond to the distance it is believed to be from the limbus. Sutures are passed through the holes at 3 and 9 o'clock and these are used to secure the metal framework to the limbus. Caustery puncture is made at the point indicated.

This book is of considerable practical value to the ophthalmic practitioner. It is well written by a surgeon of great experience and the illustrations are clear and helpful,

A Pocket Atlas and Text-book of the Fundus Oculi. By G. LINDSAY JOHNSON, M.A., B.C., M.D.(Camb.), F.R.C.S.Eng. Second edition revised and enlarged. London: Adlard and Son, Limited. 1931. Price, 12/6.

This book has been carefully revised and brought up to date. Two chapters have been added, one on the various forms of cataract and another on the vitreous. There are numerous illustrations in the text, and fifty-four coloured drawings, selected from the author's cases and painted by Arthur W. Head, F.Z.S. Chapters are devoted to the ophthalmoscope, its history, varieties, and methods of use; to retinoscopy and refractive errors; and to the anatomy of the eye. Diseases that can be viewed by the ophthalmoscope are described.

There are 208 pages of text, and the coloured plates at the end of the book are accompanied by a description of the clinical aspects of the disease shown. These plates are valuable to the student for reference and to the teacher for demonstration purposes.
