BOOK REVIEWS


In the 5 years that have elapsed between the publication of the twelfth and this, the thirteenth edition of this book, two events have occurred. One is an occasion for sorrow, the death of the author of its being, Sir John Parsons, to whom fitting tribute is paid by its current author, Sir Stewart Duke-Elder, in his preface; the other for rejoicing, the golden jubilee of its first publication in 1907. That it has passed through thirteen editions in 52 years is indeed a compliment to the genius of its creator, a guarantee that it has kept abreast of the times and a more than sufficient advertisement of its continuing popularity and usefulness.

Little more need be said. It is unnecessary to mention that this edition, which, avoiding flights of fancy and nebulous theory, incorporates all the consolidated advances of the past 5 years, lives up to the high standard of its predecessors. Although Parsons's guiding spirit is no longer there his philosophy and meticulously high standards of accuracy still illuminate its pages and many will echo the wish that they may long continue so to do.

One point deserves special mention. The publishers are to be warmly congratulated not only on the high standard of production—which we have come to expect of them—but even more on keeping the price of the book down to a figure which compares more than favourably with similar works of the same genre. At its cost and for its content it is a real bargain for those for whom it is intended, the senior student, the general practitioner, and the junior ophthalmic surgeon.


Occasionally, but only rarely, does a really great book appear in scientific literature; into this small and select company comes Stephen Polyak's "The Vertebrate Visual System", a book which represents 30 years of unremitting labour by one whose life was dedicated to his work. The last decade of that life was clouded by ill health, overhung with the certainty of two alternatives—gradual blindness or sudden death. It may have been well that death came first, but it was indeed fortunate that its visit was delayed until the manuscript had been completed and the preface written. The entire scientific world—for the book is much more than sectional in its interest—is indebted to Heinrich Klüver, Polyak's colleague and close friend, for the 2 years he has devoted to seeing this immense achievement of 1,390 pages through the press; and excellently he has done it.

The full title of the book gives some indication of its breadth and depth—"The Vertebrate Visual System, its Origin, Structure and Function, and its Manifestations in Disease, with an Analysis of its Rôle in the Life of Animals and in the Origin of Man, preceded by a Historical Review of Investigations of the Eye and of the Visual Pathways and Centres of the Brain". The theme of the book is the structural basis of vision, its organization from the retina to the cerebral cortex, its evolution throughout the animal kingdom, and the influence which the development of the visual pathways has had on the evolution of man.

Vision, what it is and how it happens, has constituted a mystery that has acted as a challenge to man from the beginning of documented civilization. The writings of the Greeks, the Romans, the Arabs, and the scholars of the Middle Ages dealt liberally with
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this subject, mostly, it is true, in a speculative manner. These and the cumulative and laborious researches of the masters of the last 150 years are summarized in the first part of the book. Nowhere is an assessment of this mass of literature to be found so complete and at the same time so interestingly written; and it is of immense value, not only because of the vast amount of historical material thus gathered or the interest of the multitude of annotated portraits of those who contributed to this subject, but because the student can only reach a proper perspective of the immensity of the subject through an understanding of the struggles of the past. This story of the development of physiological optics and neuro-anatomy makes fascinating reading, and none was more competent to present it than Poljak with his wide knowledge of classical and Arabic literature and his capacity of critical assessment.

The second part of the volume deals with the anatomy of the human retina and the visual pathways and centres. It thus forms a second edition to Poljak's previous books on The Retina (1941) and The Main Afferent Fibre Systems of the Cerebral Cortex in Primates (1932), and adds to these a study of the neuro-anatomy of the cortical visual centres and their neuronal associations, and a discussion of their probable functions as well as a description of the blood supply of the visual system and its physiological and pathological implications.

No assessment of the topography of the anatomical organization of the visual system could be complete without taking into account the pathological effect of localized lesions, for therefrom much of the functional anatomy of this complex system has been learned, and it is only fitting that the third part of this book is concerned with a detailed study of the clinical evidences, particularly as they affect the visual fields, of the many pathological conditions that may determine disturbances of vision.

The final and fourth part is occupied by the ontogenetic and phylogenetic development of the vertebrate eye and terminates with a philosophical discussion of the role of vision in the origin of man.

Such is the scope of the book, completed by a bibliography of the entire subject, which in itself represents a labour of years, occupying 300 pages and containing approximately 10,000 references—a unique and extraordinarily useful compilation of the literature on the structure and function of the visual pathways embracing all the ages and all nations. There is no attempt to pass on ignorance of past work for originality.

It seems to the reviewer that this book of Poljak will probably serve as a historical landmark. It takes within its compass the speculations of the ancient world, the gross anatomy of the mediaeval world, and the histology of the modern world, culminating in the beautiful and laborious researches which constituted the author's life work. Here the epoch ends. The successor to Poljak will describe neuro-anatomy in terms of the new world being brought into our ken by the electron-microscope. This has already started, and some months ago the population of nerve fibres in the optic nerve of the frog has been multiplied by a factor of 30; a whole multitude of fibres hitherto invisible, vastly exceeding the number detectable by the ordinary microscope, must necessitate a complete reassessment of our ideas. At the same time from the functional point of view physiologists are now busying themselves with the direct exploration of the visual stations and pathways by direct electrical methods. It is good that we have this classical compendium of the knowledge of the past and present to form a sturdy springboard before we take an immense leap into the unknown which will precipitate us we know not whither.


This book, which forms the sixth volume of a series published on the antibiotics and chemotherapeutic drugs, contains a long chapter by Jules François and M. T. van Leuven on the experimental and clinical work which has been carried out with these therapeutic
agents in their application to diseases of the eye. A detailed account is given of the methods of administration (systemic and topical), the mode of action, the dosage, and the use in clinical practice in infective diseases of the ocular adnexa and of the outer and inner eye. Their use in general diseases such as tuberculosis and syphilis with ocular manifestations is also considered as also their applications in ophthalmic surgery. The subject is discussed in great detail and the bibliography is extensive.


Work done to a British Standard implies a quality, whether of materials, workmanship, or both, with which the discerning user can be sure of satisfaction.

B.S.2738 “Spectacle Lenses” (Brit. J. Ophthal., 40, 611) defined the finished lens or lenses, in the frame and on the wearer’s face. The new publication, B.S.3062 “Spectacle Lens Materials”, defines certain physical characters of acceptable glasses and plastic materials for ophthalmic lenses. Limits are set for refractive index (after specified annealing or conditioning), for constringence (where appropriate), for colour of white and tinted materials, and for freedom from defects.

The implications of this new British Standard are primarily of interest to manufacturers, but it must also in the long run benefit the user of lenses, and it is welcome as another instalment of the projected standard covering all aspects of spectacles.


The third edition of this Hungarian text-book on ophthalmic surgery, which was first written in 1938 by Blaskovicz, has now appeared under the authorship of Kettesy of Debrecen. The book conforms to the usual pattern of short manuals on this subject. After a general section dealing with the peculiarities of eye surgery and the instruments generally employed, the subsequent chapters deal with the surgery of the lids, the lacrimal apparatus, the conjunctiva, and the various structures of the inner eye, the ocular muscles, and the orbit, and finally of injuries.

**NOTES**

**INSTITUTE OF OPHTHALMOLOGICAL DOCUMENTATION**

This Institute, organized by the French Society of Ophthalmology and the Faculty of Medicine of Paris, was opened in March, 1959, in the premises of the former Faculty of Medicine, 12 Rue de l’École de Médecine (Staircase “A”, 1st floor).

The Institute is open to physicians and medical students interested in ophthalmology, and the visiting hours are from 9.30 a.m. to 12 noon and 2 to 6 p.m. from Monday to Friday, and 9.30 a.m. to 12 noon on Saturday.

Among the various works are collections of French and foreign periodicals and ophthalmological books, many of which are very old or not to be found elsewhere. Those not living in Paris may obtain microfilms from the Faculty.