

brain. The way in which this computer may work is illustrated largely by reference to the author's outstanding work upon the octopus. To this is added accounts of the structural characteristics of the human brain, though here the gaps in our knowledge are more apparent than the certainties we have.

It is a fascinating book, the reaction to which will be largely determined by temperament. Readers will either be inspired by the vision that we may soon understand the nature of man or depressed by the seemingly infinite gap between hypothesis and fact in our approach to this understanding.

ATLAS OF NEUROPATHOLOGY By W. Blackwood, T. C. Dodds, and J. C. Sommerville. (Pp. xii + 234; 311 figures. 60s.) Edinburgh and London: E. & S. Livingstone Ltd. 1964.

This second edition contains new information about the development of myelin, vascular diseases, encephalitis, demyelinating diseases, paralysis agitans, diseases of muscle, and cerebral tumours. The book's 311 photographs and diagrams are very well selected and excellently reproduced. There is no doubt that this atlas will be very helpful to people beginning the study of neuropathology and have no access to a comprehensive collection of slides or specimens.

Professor Blackwood has resisted the temptation to make too detailed a comment on the various diseases illustrated, and sometimes he may have gone too far in simplifying matters for his readers. No harm would be done to the next edition if some of the blank spaces on these printed pages were to be at least partially filled by a little more description of the essential features of the conditions mentioned, and certainly the student would be better orientated in his later reading.

R. M. NORMAN

MECHANISMS OF NEURAL REGENERATION. *Progress in Brain Research* Vol. 13. Edited by M. Singer and J. P. Schädé. (Pp. 241; 16 figures; 11 tables. 80s.) Amsterdam: Elsevier. 1964.

This book derives from eight lectures given to the first International Summer School of Brain Research at the Royal Academy of Science, Amsterdam, in July 1963. Each lecture is an authoritative review and personal account of recent experimental work by renowned experts in their own field. The trophic properties of the neurone are dealt with by M. Singer, and the importance of neurotrophic processes in regeneration by E. Gutmann and H. A. L. Trampusch. Experiments with a factor promoting regeneration of spinal neurones are described by D. Scott and C. N. Liu. Axoplasmic streaming is discussed by L. Lubińska and the proximodistal movement of phospholipids by N. Miani.

Some ultramicroscopical findings in experimental segmental demyelination and in myelin regeneration in peripheral nerve are very beautifully described and illustrated by H. de F. Webster. The development, degeneration, and regeneration of receptor organs are described by J. Zeliña. There is a verbatim report of the discussion that took place at the end of each paper, which is relatively short and to the point.

8

In common with the other volumes of 'Progress in Brain Research', this volume is beautifully produced, and the illustrations, many photomicrographs and ultraphotomicrographs are superbly reproduced.

This is a very important book, of great interest to the neurologist and physiologist, dealing mainly with the anatomy and physiology of neuronal regeneration: a basis for the recovery of function following disease of the nervous system.

GEOFFREY RUSHWORTH

SCINTILLATION SCANNING IN CLINICAL MEDICINE Edited by James L. Quinn. (Pp. 278; illustrated. 80s. 6d.) Philadelphia: W. B. Saunders and Co. 1964.

This book is based on a symposium held in 1964 in North Carolina. It deals with scintillation counting in clinical medicine as a whole, and there are sections devoted to the basic principles of scanning and to the methods and usefulness of scanning particular organs. The section devoted to neurology consists of two chapters. One reviews experience at the Johns Hopkins Hospital of 1,000 consecutive patients examined to demonstrate or exclude the presence of an intracranial tumour, and the other reports a panel discussion by doctors from five centres. The style is clear and there are many excellent reproductions of scans and radiographs. The rival merits of  $^{131}\text{I}$  albumin and of  $^{203}\text{Hg}$  chlormerodrin are discussed, and it is argued that future improvements will come with the use of radioactive material with a lower physical or biological half-life so that larger doses may be given. Scanning detects over 70% of tumours, and very rarely indicates an abnormality where none is present. It is said to be particularly reliable in detecting meningioma and fast growing glioma and is regarded as a valuable screening procedure for subjects whose clinical states do not warrant angiography or air-encephalography. Where scanning and angiography are both performed the accuracy of diagnosis is greater than with either alone. It is also reported that non-tumorous lesions, such as subdural haematoma, cerebral contusion and, for one to two days, the effect of cerebral angiography, are detectable. Though this book is not primarily neurological, neurologists interested in the clinical value of scanning will read it with profit.

AGAR GEL ELECTROPHORESIS IN NEUROLOGY By A. Lowenthal. (Pp. x + 204; 69 figures. 60s.) Amsterdam, London, New York: Elsevier Publishing Co. Ltd. 1964.

In this book the author discusses modern methods for the examination of cerebrospinal fluid proteins. An evaluation is made of the techniques of paper electrophoresis, agar gel electrophoresis, and immunoelectrophoresis; the limitations and advantages of each of these for the study of cerebrospinal fluid is carefully considered. The results of examinations of fluids from a large series of human pathological conditions by these methods are presented and discussed, with references to other data in the literature. A chapter on the examination of cerebrospinal fluid from animals with neurological diseases (rida, visna, and swayback in sheep), and one dealing with agar gel electrophoresis of soluble proteins from human cerebral tissue are also included.