Book reviews

CURRENT TOPICS IN MICROBIOLOGY AND IMMUNOLOGY Vol. 40. Chronic Infectious Neuropathic Agents (CHINA) and other Slow Virus Infections. Edited by J. A. Brody, W. Henle, and H. Koprowski. (Pp. viii + 74; 22 figures. DM 32.00; U.S.\$8.00). Springer-Verlag: Berlin/Heidelberg/New York. 1967.

Baffling diseases such as disseminated sclerosis and 'degenerative' diseases of the nervous system are fertile fields for propagation of fashionable theories. Lack of substantial evidence for an autoimmune mechanism and increasing recognition of epidemiological features compatible with infection have led to renewed search for infective agents. In the past this has not been a rewarding search, because the natural history and pathology of these diseases were so unlike recognized infections. Now the position is quite different. Two degenerative diseases of the CNS of sheep, visna and scrapie, have been shown to be transmissible. This was missed before because of the remarkably long latent period and the species or strain specificity of the host animal (again resembling disseminated sclerosis). Surprising findings in both of these diseases are that the brain or cord may show no evidence of inflammation and that antibody formation cannot be detected by present methods.

In the human, kuru shows striking resemblances to scrapie. It has been transmitted by serial passage in the chimpanzee by intracerebral inoculation of brain suspension from affected human subjects. Limitation to one tribe may be due to genetic pleomorphism (low ATP-ase) or to hyper-infection by cannibalism at a particular age. Although kuru has not yet been passaged by cell-free filtrates, there is no evidence that the disease is transmitted by an immunological mechanism. Autoimmune phenomena do occur in the related Aleutian disease of mink and may be a factor in the others. Nevertheless, in all of these diseases the evidence for an infective agent is strong. It must have very unusual properties of slow but continuing damage to invaded cells. This has given rise to the name 'slow virus'.

Recognition of these agents opens a wide field for renewed research in 'degenerative diseases'. It is particularly interesting that they tend to be neuropathic, but there is still no evidence that they are related to any human disease other than kuru. Those interested in a brief introduction to this field are recommended to read this short book which contains eight papers presented at a symposium in Los Angeles in 1966. Further advances are sure to follow and many will feel that the cost is excessive for a survey of this nature, though all the papers are well presented.

J. A. SIMPSON

THE MANAGEMENT OF CEREBROVASCULAR DISEASE. 2nd Edition. By John Marshall. (Pp. vii + 215; illustrated. 48s.) J. & A. Churchill: London. 1968. Great advances in understanding of the various factors

involved in cerebrovascular disease have emerged from the development particularly of intracranial angiography, but unfortunately these advances in knowledge have led to relatively little practical improvement in the methods of treatment, and the new tests that are available all carry risks to the patient which are difficult to assess. These cerebral catastrophes are however very common, and this volume gives a clear and practical account of existing knowledge, and describes a sensible approach to therapeutic possibilities.

Dr. Marshall's presentation is particularly helpful in relation to his classification of firstly the various types of 'completed' stroke, and then the stroke-in-evolution, the transient ischaemic attacks, and the part played by carotid artery stenosis.

THE ELECTRICAL ACTIVITY OF THE NERVOUS SYSTEM 3rd Ed. By Mary A. B. Brazier. (Pp. xiv + 317; 151 figures, 1 table, 6 plates. 45s.). Pitman: London. 1968. It is eight years since the previous edition and, at the expense of some forty additional pages, Dr. Brazier has revised this work to cover the considerable knowledge that has accumulated. The value of the book is well described by its sub-title 'A textbook for students'. The text is clear with good illustrations. Each section may be read independently and is provided with a bibliography. For the student entering upon the subject of neurophysiology and for those seeking to revise their knowledge this book is excellent.

A. F. LEWIS

BRAIN, BEHAVIOR AND EVOLUTION Vol. 1, No. 1. (Pp. 90; illustrated. S. Fr. 78.00; \$18.60—for six numbers). Karger: Basel and New York. 1968.

'Brain, Behavior and Evolution' meets the widespread need for an outlet which allows realistic interdisciplinary interaction between those interested in the organization of the nervous system and those interested in the organization of behavior'. So says the introduction to the first volume of this new journal. But if people with these interests wish to interact, they can already do so by reading each other's journals; and it is generally easier to maintain high average quality in a journal that is centred on one established discipline than in one that covers two weakly linked disciplines. An interdisciplinary journal might be useful if its editors made great efforts to attract those rare papers that really unite two subjects; though there is no lack of existing outlets for these exceptional and distinguished writings, for they are already welcomed by all editors. In default of such jewels, my ideal interdisciplinary journal would accept only papers in each discipline with more than average relevance to the other.

The first number of *Brain, Behavior and Evolution* does not, by this standard, do very well. It contains no interdisciplinary paper. Of the four papers in it, one is on behaviour, and is indeed of more interest to the neuro-

physiologist or neuroanatomist than are most papers published in journals of behaviour; it proves that intact goldfish have, in small degree, the independence of the two halves of the brain in visual learning that is more strikingly shown by mammals with the corpus callosum cut through. The other three papers are neuroanatomical. Two of them, on the spinal cord and cerebellum, are as remote from behaviour as any neuroanatomy could be. The influence of the third, on the visual pathways of *Chelydra serpentina*, is unlikely to extend far beyond those who study binocular vision in turtles.

G. S. BRINDLEY

SYMPOSIUM ON NEUROGLIA (*Acta Neuropathologica* Supplement IV). Edited by F. Erbslöh, A. Oksche, and F. Seitelberger. (Pp. iv + 166; illustrated. DM 65.00; \$16.25). Springer-Verlag: Berlin, Heidelberg, and New York. 1968.

This symposium was held at a meeting of the Association of German Neuropathologists and Neuroanatomists in October 1966. Many aspects of the subject are covered. There is some enzyme histochemistry of normal and abnormal glia, a little autoradiography (glial reactions to neuronal injury and near brain wounds), and much electron microscopy. There are papers on pre- and post-natal development of glia, on the lipidoses, on spongy degeneration of the white matter, and the section on oedema includes a paper on weighing swollen astrocytes by interference microscopy. Neoplasms are not dealt with. As usual with symposia there is not a great deal of brand-new information, but it is useful to have all this material and a relatively up-to-date bibliography in one volume. All the papers are in German. Summaries are provided in English which is sometimes good and sometimes virtually incomprehensible, which is a pity.

SABINA J. STRICH

SYMPOSIUM ON FACTORS RELATED TO THE DEVELOPMENT OF SAFER AND MORE EFFECTIVE DRUGS Edited by Samuel W. Goldstein. (Pp. x + 186; illustrated). American Pharmaceutical Association Academy of Pharmaceutical Sciences: Washington, D.C. 1968.

In this series of 15 papers presented at the Third National Meeting of the APhA Academy of Pharmaceutical Sciences, the contributors have clearly set out the diverse problems with which the initiators of new drugs are faced. Both the sponsors and contributors are to be congratulated on their orderly approach to this vast and extremely complex subject and on their insistence upon the more effective recording and use of toxicological information in the design of drugs and drug formulations and in the clinical use of drugs. The American Pharmaceutical Association has been in the forefront in the development and enforcement of high standards for drugs and this symposium of the Academy of Pharmaceutical Sciences maintains the standards set by its parent body.

THE BIOCHEMISTRY OF MEMORY By Samuel Bogoch (Pp. xi + 254; 39 figures, 21 tables. 64s.). Oxford University Press: Oxford. 1968.

This book by a biochemist reviews existing knowledge and adds an account of his own work on brain mucoids.

However, the weakness of the biochemical approaches to the problems of brain mechanisms is that they tend to ignore the need to fit in the various hypotheses with existing knowledge of brain physiology.

PROGRESS IN BRAIN RESEARCH Vol. 29. Brain Barrier Systems. Edited by A. Lajtha and D. H. Ford. (Pp. xv + 552; illustrated. 230s.) Elsevier: Amsterdam, London, New York. 1968.

This volume presents the proceedings of an important conference held in the Netherlands on the current problems and researches concerning the blood-brain barrier and allied topics.

W. RITCHIE RUSSELL

THE HUMAN BRAIN AND SPINAL CORD. A Historical Study Illustrated by Writings from Antiquity to the Twentieth Century. By Edwin Clarke and C. D. O'Malley. (Pp. xiii + 926; illustrated. £11 17s. 6d., \$25.00). University of California Press: Berkeley and Los Angeles. (London Agents: Cambridge University Press). 1968.

This *magnum opus* is compiled from a vast programme of historical research by the authors. The presentation is most attractive and helpful to the reader, while all the quotations are accompanied by a brief biographical account of the contributor. Dr. Clarke's experience of both medical and surgical neurology has enabled him to select those writings from both the remote and more recent past which fire the interest of today's students of the nervous system. Many of the quotations reported were very difficult to find and were for the first time translated into English. All will enjoy referring to these fascinating pages.

BEDINGUNGSKONSTELLATIONEN PARANOIDHALLUZINATORISCHER SYNDROME (Monographien aus dem Gesamtgebiete der Neurologie und Psychiatrie—Heft 122). By H. Helmchen. (Pp. vi + 104; 17 figures, 39 tables. DM 42.00; \$10.50). Springer: Berlin, Heidelberg, and New York. 1968.

A hundred women who were considered to have a hallucinatory paranoid syndrome were investigated, with particular regard to psychological abnormalities and the electroencephalogram. They were all treated for at least six weeks of the inquiry with phenothiazine derivative (Perazine). The findings, analysed with standard statistical methods, revealed nothing new, precise, or applicable to paranoid hallucinatory states in general. As the author frankly acknowledges the 100 patients he studied were not a representative sample. In spite of this, there are interesting and suggestive observations—including correlations between EEG anomalies and clinical state—and a discussion of the bearing of the data on the nature and form of schizophrenic disability.

THE ADDICTIVE STATES Edited by A. Wikler. (Pp. xii + 520; 84 figures, 58 tables. £11 2s. 6d.) Williams & Wilkins: Baltimore. (Edinburgh agents: Livingstone). 1968.

There were 50 contributors to the Proceedings of the 1966 meeting of the Association for Research in Nervous