Book reviews

FRONTIERS IN NEUROENDOCRINOLOGY Edited by Luciano Martini and William P. Ganong. (Pp. 419; illustrated; £8.75.) OUP: London. 1971.

This book is the second of a projected series of biennial volumes surveying the frontiers of the rapidly expanding science of neuroendocrinology. The editors claim that this science is concerned not only with the neural control of endocrine secretion, but also with the effects of hormones on behaviour, and with the broader pattern of the interaction between the brain and the internal environment. There are 12 chapters, and all the contributors are acknowledged experts in their fields. The book begins with an excellent detailed account of anatomical considerations relevant to the interpretation of neuroendocrine experiments. There are chapters on the neural control of prolactin secretion, the regulation of follicle stimulating and luteinizing hormones in humans, and feedback control of adrenocorticotrophic hormone secretion. Current views on the role of brain monoamines in the control of anterior pituitary function are focused on in two articles, and there is a very good account of the mechanism of action of hypothalamic-hypophyseal stimulating and inhibiting hormones. Of particular interest to the psychiatrist are the chapters concerned with the sexual differentiation of the neuroendocrine axis and the neuroendocrine factors regulating primate behaviour. This is a rewarding book that fully lives up to its title, and will be of great interest not only to neuroendocrinologists, but also to neurophysiologists, biochemists, and biologically minded psychiatrists.

A. WAKELING

RADIOLOGY OF THE SKULL AND BRAIN Volume 1 (Books 1 and 2). **THE SKULL** By T. N. Newton and D. G. Potts. (Pp. 873; illustrated; £35.) Mosby: Saint Louis. (Distributed in Great Britain by Henry Kimpton: London.) 1972.

This is the first volume of a three-volume set, and it consists of two books with chapters written by 37 eminent contributors. The first chapter is by Erik Lindgren and is on the history of neuroradiology. It is followed by sections on the technical aspects of skull radiography, skull maturation, the vault, the base, the orbit, congenital anomalies, metabolic diseases, and other diseases. The editors 'have tried to analyse each anatomic structure exhaustively in a sequence which parallels the process of analysis of

clinical neuroradiologic problems.' Thus, there are, in the section on the skull base, chapters dealing with the nasopharynx, craniovertebral junction, foramen magnum, basal foramina and canals, clivus, sella turcica, and the temporal bone. Every chapter is an authoritative monograph clearly and profusely illustrated by what must surely be the finest examples in each author's collection. In a work of such consistently high quality it is difficult to single out any individual contribution, but the sections dealing with the skull base, the congenital anomalies, and calcification, by themselves would justify the presence of this book in the library. The section on skull trauma is also very good and anticipates the next volume by including the angiographic appearances of traumatic aneurysms, meningeal arteriovenous fistulae, and meningeal artery occlusion.

The editors claim that the book is primarily a reference source and this is undoubtedly true. Lists of references, some very extensive, follow each chapter and the total for the volume is nearly 1,800. There is also a detailed index. The remaining two volumes will be devoted to angiography, pneumography, neuropathology, and isotope and other diagnostic techniques, and if the standard of the first volume is maintained the complete work will form an indispensable reference source for all interested in the radiological diagnosis of neurological problems and also for those training in the fields of neurology, neurosurgery, and neuroradiology.

J. L. STEVEN

MULTIPLE SCLEROSIS Edited by E. J. Field, T. M. Bell, and P. R. Carnegie. (Pp. 273; ca. \$14.75.) North Holland: Amsterdam. 1972.

In June 1971 a symposium on multiple sclerosis was held in Newcastle upon Tyne. The papers presented at this symposium have been reprinted in the third volume of *Clinical Studies* by the North Holland Publishing Company. Four topics of current interest were selected. The final section, entitled 'virology', was very much concerned with the role of measles infection in multiple sclerosis. The impression which I gained from reading these papers was that, although so much attention has been paid to measles, it does not seem to be causally related to multiple sclerosis, and secondly that the more often evidence of infection were sought in other chronic neurological disorders the more often would it be found.

Two sections were devoted to biochemistry and immunology; the principal subjects here were the structure and behaviour of the myelin protein and the electrophoretic analysis of the cerebrospinal fluid protein. In the section on epidemiology the contributors dealt with the incidence of multiple sclerosis among immigrants from high to low risk areas in the world.

These are subjects which are of the greatest interest to neurologists and their presentation in a form which can be digested at leisure is especially welcome.

In the style of such symposia, the discussion after each paper is reprinted. What may have been enjoyable and instructive at the time does not reproduce well in print and some of the participants appear to have been distinctly petulant. A brief summary or comment by the session chairmen might have been more effective. The editors and publishers must be congratulated on producing this account of an interesting meeting so promptly.

IVAN T. DRAPER

MUSCLES—TESTING AND FUNCTION. 2nd ed. By H. O. Kendall, P. Florence Kendall, and Gladys E. Wadsworth. (Pp. 284; illustrated; £9.00.) Churchill Livingstone: Edinburgh. 1972.

No extensive review of this type of book is required, but it is a pleasure to draw attention to an unusually good book on the testing of muscle function. Photographs of human muscles in action are excellent, well produced, and show what is intended and no more. They are accompanied by unusually lucid drawings and a very adequate though brief text, which includes useful hints on isolating the muscle under test as well as sufficient anatomical information to satisfy all clinical requirements. Many of the manoeuvres were unfamiliar to me and will be particularly valuable in the EMG laboratory. Important errors in testing some muscles are illustrated. Terminology is according to the third edition of *Nomina Anatomica*. The authors make modest claims for the book, but this is one to keep and use long after more pretentious books have been discarded.

J. A. SIMPSON

ANALYSIS OF BIOGENIC AMINES AND THEIR RELATED ENZYMES Edited by David Glick. (Pp. 350; illustrated; £8.25.) Wiley: New York. 1971.

This is a supplement in the series *Methods of Biochemical Analysis*. Since its biogenic amines include acetylcholine the title may be, if not inaccurate, at least incomplete but the likelihood of misunderstanding is small, so accustomed have we become to grouping these chemical transmitter substances as a distinct entity. The book deals with the measurement

of catecholamines, acetylcholine, serotonin, and histamine; their synthetic and degradative enzymes and their metabolites. Each chapter is written by a separate author but the imbalance inevitable with such a treatment is of little consequence since the book is not intended to be read in its entirety. This is essentially a 'Methods' book for workers wishing to measure one or other of these substances. For such, this book will be invaluable. It offers a selective, critical, and up-to-date description of the techniques available, an extended description of those used by the author with practical information on the likely sources of difficulty, and how to overcome these. A particularly welcome feature is the extensive bibliography.

In recent years interest in these transmitters has extended far beyond the limits of the neurophysiologist, neuropharmacologist, and biochemist. In medicine generally, and particularly in psychiatry, neurology, and anaesthesia, explanations of disease and of drug action are now possible in terms of these transmitters. For the new recruits this has brought to the field there could be no better introduction than the appropriate chapters of this book.

J. S. GILLESPIE

TREMORS AND TREMOROGENIC AGENTS By R. W. Brimblecombe and R. M. Pinder. (Pp. 196; illustrated; £5.) Scientifica: Bristol. 1972.

In the first third of this monograph the authors, one a neuropharmacologist, the other a medicinal chemist, review the definition, measurement and physiology of tremor. The origins of physiological tremor and tremor due to extrapyramidal and cerebellar disease are discussed, but 'although a large amount of information is now available, it is still not possible to make any categorical statements concerning the precise cause of the tremors'. Although physiological tremor is attributed to oscillation in the stretch-reflex servo-loop, no mention is made of the effects of vision or the introduction of visual delays on this phenomenon. In the remaining two-thirds of the book the authors expand at length on their own field of the pharmacology of substances that produce tremor. They attempt to classify the large number of known tremorogenic substances into those acting on cholinergic brain mechanisms (muscarinic and nicotinic agonists and anticholinesterases) and those acting by altering brain amines (neuroleptics, phenethylamines and indoles). In doing so they follow the presently fashionable concept of Parkinsonism being the result of imbalance between central cholinergic and aminergic function, and include a chapter on the biochemistry of Parkinson's disease. Although using this concept as a framework, the authors do not con-