

Biophysics of the Striated Muscle

By Prof. E. Ernst. Pp. 398. (Budapest: Publishing House of the Hungarian Academy of Sciences, 1963. Second edition.) 9.00 dollars.

THIS volume is a new English edition of the author's *Die Muskeltätigkeit* published in 1958 and reviewed in *Nature* (183, 1008; 1959) by Dr. D. R. Wilkie. Prof. Ernst has taken the opportunity to add new material to each chapter, and specialists in the field should welcome the work, particularly for its comprehensive survey of the literature, some of which is not very well known to English-speaking physiologists. There are sections on muscle structure, contraction, volume changes, electrical excitability, metabolism and theories of muscle contraction.

The fullest treatment is given to work which has been done in the author's own laboratory, but he is aware of this bias and, in this connexion, he quotes Empedocles: "Each of us believes only what he has encountered during his random wanderings and nevertheless prides himself on having found the whole". Professor Ernst's wanderings have led him to an outlook which differs considerably from that current in English physiology and one valuable consequence of this is that it has led him to experiments (for example, those on volume changes) which may not otherwise have been performed.

The author is very critical of some present-day theories of excitation and contraction but, although some of the criticisms deserve careful attention, others are based on misunderstandings of the theories. Thus, in discussing excitation (p. 212), he argues that "contrary to expectation impedance drops after the onset of the action current". In fact, the delay in onset of the impedance drop is perfectly well explained, indeed required, by the Hodgkin-Huxley theory. The explanations of the action potential overshoot (p. 210) and the effects of temperature on conduction velocity and spike duration (p. 222) are also misunderstood or ignored and it is not therefore surprising that Prof. Ernst comes to the conclusion that "the excitation of muscle (and nerve) can hardly be explained on the basis of current ion and membrane theory" (p. 223). Although this book will be of value to research workers in muscle biophysics, it cannot be recommended as a general introduction to the subject.

D. NOBLE

A Textbook of Gynaecology and Obstetrics

By Douglas G. Wilson Clyne. Pp. xxiii+1019+83 plates. (London: Longmans, Green and Co. Ltd., 1963.) 90s.

THE preparation of a single volume covering the whole field of obstetrics and gynaecology is an unenviable task, particularly if the author directs his book to teachers. Inevitably some subjects are compressed into small space and there are omissions. For example, in the section on the new-born, important causes of jaundice, such as glucose-6-phosphate dehydrogenase deficiency and galactose intolerance, are not described. Much is also said about vitamin K, but there is no reference to vitamin K₁.

In the chapter comparing hospital and domiciliary confinement the author echoes the Ministry of Health with the statement that almost three-quarters of deliveries take place in "an institution". It is a pity that it is not made clear that at present only just more than half the British mothers can have full hospital facilities as shown by the recent *Perinatal Mortality Survey*, and that many deliveries occur in small units which have the disadvantages of both hospital and domiciliary confinement.

For the most part the material is well chosen and the arrangement of text and references to published work is good. This is a book full of facts and figures which should prove valuable to students.

JOHN MURRAY

Three Hundred Years of Psychiatry, 1525-1860

A History Presented in Selected English Texts. By Richard Hunter and Ida Macalpine. Pp. xxvi+1107. (London: Oxford University Press, 1963.) 84s. net.

THE authors in their preface adopt a refreshingly sceptical attitude towards psychiatry as a science. Psychiatry, they say, "does not possess a body of exact and established knowledge on which all can agree comparable with medicine. Rather it consists of attitudes, concepts, theories and therapies from which each doctor selects what accords best with his predilections, so that one is tempted to say that there is not one body of psychiatry but many psychiatrists". Furthermore, "aetiology remains speculative, pathogenesis largely obscure, classification predominantly symptomatic and hence arbitrary and possibly ephemeral; physical treatments are empirical and subject to fashion, and psychotherapies still only in their infancy and doctrinaire". To escape from present empiricism they turn to history, believing that "the history of a science is the science itself". Their book is built up on extracts from original sources arranged chronologically, and since psychiatry extends well beyond the field of medicine as a physical science they have included "the writings of divines, philosophers, philanthropists, lawyers, men of letters, even self-accounts of patients, as well as Parliamentary Acts and reports documenting society's interests in and care for the insane". The result is a fascinating compendium, richly illustrated by the reproduction of title-pages. It can be recommended as a mine of information to all who are interested in the human mind or in society's reactions to its aberrations.

BRAIN

Marsilae: Botanical Monograph No. 2

By Prof. K. M. Gupta. Pp. iii+113+40 figures. (New Delhi: Council of Scientific and Industrial Research, 1962.) Rs. 16.00, 33s., 5.00 dollars.

THIS work is primarily though not exclusively concerned with formal and experimental taxonomic studies on the Indian species of *Marsilea*, and in particular with those four of the nine Indian species recognized by the author which have been available to him as live plants. The bulk of the original material included consists of the results of biometric studies on these four species grown under uniform conditions of cultivation. The main appeal of this volume will therefore be to workers concerned with the taxonomy and biosystematics of this genus. An artificial key to the Indian species of *Marsilea* is provided, and one new species, *M. rajasthanensis*, is described.

The quality of this publication is, to say the least of it, uneven. The photographs of leaflets, pedicel-petiole attachments, and sporocarps, reproduced as Figs. 14, 20 and 21 are poor by any standard, and fail to display adequately the contrasting characters concerned. Diagrams, not photographs, without indication of magnification are selected for the illustrations of chromosomes on Fig. 37. The drawings included on Figs. 29, 30 and 31 do little justice to the figures of Sharp and Delmas-Feller on which they are acknowledgedly based, and the legends provided in the original publications are excluded in their entirety, an omission which is the more deplorable since Fig. 29, purporting to show microsporogenesis in *Marsilea quadrifolia*, does in fact illustrate stages in spermatogenesis, and the illustrations on Fig. 30, described as megasporogenesis in *M. diffusa*, do in fact depict the development of the female gametophyte. Furthermore, certain of the drawings included on Fig. 31, labelled as embryogenesis in *M. diffusa*, only become explicable on reference to the original legends of Delmas-Feller, when it is discovered that half the illustrations refer not to stages in embryogenesis, but to abnormalities in the development of the female gametophyte!

J. D. LOVIS