

(Smith and Townsend) Dowson is proposed. New British diseases dealt with include silvering of red beet (*Corynebacterium betae* Keyworth, Howell and Dowson) and slow wilt of carnation caused by a bacterium related to, if not identical with, *Pectobacterium carotovorum* f. sp. *chrysanthemi* Dowson.

W. C. MOORE

NEUROPHYSIOLOGY

Fundamentals of Clinical Neurophysiology

By Paul O. Chatfield. Pp. xiv+392. (Springfield, Ill.: Charles C. Thomas; Oxford: Blackwell Scientific Publications, 1957.) 63s.

Physiology of the Nervous System

By E. Geoffrey Walsh. With chapters on Somatic Sensibility and the Applied Physiology of Pain by John Marshall. Pp. xvi+563+6 plates. (London and New York: Longmans, Green and Co., Ltd., 1957.) 50s.

DR. CHATFIELD'S book is an account of the physiology of the nervous system based on his first-year lectures given at Harvard. It is well balanced and admirably produced. He has something to say on all topics from peripheral nerve to the frontal cortex. Unfortunately, what he has to say is often a little perfunctory. He neither takes sides nor clearly expounds the opposing views in current controversies. He mentions the "local responses of Rushton (1937)" apparently with approval, but reproduces a curious family of hypothetical curves of the excitability changes in nerve during the passage of a constant current which were shown to be erroneous by Rushton in 1932. He mentions Lorente de N6's views on the components of the resting potential of nerve but ignores all the work on the nerve sheath and its polarization. He also includes a good deal of old work which is not of much importance to anyone and certainly not to the elementary student. He industriously rakes the dead ashes of controversies over inhibition, and describes at length the potentials conducted electronically along the axons into the ventral roots, although their value has diminished now that we have access to the source of these potentials in the motoneurons themselves.

Any student in Britain who has the time to read a book of this length on the central nervous system will need one which is more critical, more coherent and more up to date.

Dr. Walsh's book should be called an introduction to clinical neurophysiology. He seems to be assuming that readers will already be familiar with the treatment of the central nervous system to be found in general text-books of physiology. He spends very little time on the nerve impulse, dismisses synaptology in a few pages and gets on with the mechanisms which underlie experimental psychology and clinical neurology. On the topics with which he does deal, the balance of his treatment is sometimes surprising. In the section on spinal shock in man he scarcely mentions the rate of recovery of spinal muscular and cardiovascular mechanisms, but describes inversion of the radial reflex at some length.

Nevertheless, in subjects which he treats at length, the book is very good indeed. His account of posture, the vestibular apparatus and cerebellum is certainly the best in English since Creed's edition of Camis. He gets away from the slightly garbled accounts of Magnus's work which are usually reproduced in

physiological text-books by drawing on Rademaker, André-Thomas, Zador and the experimental psychologists. His illustrations from Gesell of the development of standing in children emphasize that in man posture is determined very largely by cortical activity. He dismisses Larsell's use of the classification of the cerebellum into neo-cerebellar and palaeo-cerebellar divisions, and reinterprets a wide range of clinical and experimental observations in terms of the newer knowledge of the control by the cerebellum of the sensitivity of the muscle spindle. On voluntary movement he brings together the ideas from experimental psychology which have been discussed since 1939 and gives a coherent account of them in a physiological framework. The account of the organs of special sense and their central connexions is also good, extensive and enlivened by the application to classical problems of modern views on the signalling of information. He makes a number of general points on the investigation of the central nervous system which should be marked and digested by many workers. The implications for experimental analysis of Lorente de N6's principle of parallel pathways are set out here very clearly.

The references are extensive, well chosen, full of unfamiliar and useful guides to further reading.

All neurologists, all experimental psychologists and those neurophysiologists whose interests are not limited to the spinal cord should undoubtedly read this book.

D. WHITTERIDGE

PREHISTORIC AFRICA

The Prehistory of Africa

By Prof. H. Alimen. Translated by Alan Houghton Brodrick. Pp. xviii+438+25 plates. (London: Hutchinson and Co. (Publishers), Ltd., 1957.) 63s. net.

THIS is a most useful work, none the less so for the fact that one can be fairly certain that no future serious writer on prehistory will ever dare to use such a title. The area of Africa is so vast, and so much has become known of early times in the continent during the past two or three decades, that no one can hope to give the complete story or even a balanced picture of the whole. Prof. H. Alimen has done well and her book will be welcomed by students, but even while she was writing it new and important information was being unearthed.

For example, quite a lot of work has been done in West Africa between the Sahara and the Gulf of Guinea since Chapter 7 was compiled; and no account is given of the great site near the Kalambo Falls in Northern Rhodesia, where the use of wood for tool-making by Early Palaeolithic man and in First Intermediate Times has been demonstrated. Father Anciaux de Faveaux, too, has brought forward a very interesting series of stone industries from the Kansenia district of the Katanga Province, Congo. They form a definite group even if their age is as yet uncertain. No mention of these finds appears. Naturally, one could cite numerous other cases where no account is given, either because there was no room or because the descriptions, usually published in local journals, have not been available to the author. However, this merely means that the specialist prehistorian in any one area must not expect that he will be given the latest information on his district; the author has obviously another end in view and that is to give, so far as it is still