

revealed by the electron microscope, anastomotic fiber patterns, and the fiber spectra of nerves and nerve roots. The author next takes up the pattern and divisions of the spinal nerves and their connections with the peripheral, sympathetic, and central nervous systems. This is followed by detailed descriptions of the spinal nerves considered individually, their plexuses, and their sensory or motor destinations. This section includes useful summaries for quick reference, as well as tables of motor functions. In the succeeding chapter, the cranial nerves are considered in comparable detail, and information is given about their central origin and their peripheral interconnections and functions. Another chapter deals with the autonomic nervous system as a whole, in particular with the sympathetic innervation of the viscera, and reviews the autonomic contribution to the somatic nerves and the parasympathetic innervation of the head. There follows a brief chapter on the central pathways involved in perception and in reflex and voluntary movement. This is strictly traditional in viewpoint, naturally oversimplifying somewhat, and serves as an introduction to the book's final section, which relates neurological symptoms—paralytic, irritative, and release phenomena—to their anatomical substrate and describes the clinical picture of lesions of the spinal and cranial nerves.

The book is illustrated with clinical photographs as well as with a series of line drawings which are models of clarity and good draftsmanship. One might have wished for some consideration of peripheral sensory receptors, and for more attention to the alpha and gamma spinal efferent systems in view of their increasing physiological importance. Likewise, the absence of a bibliography will handicap the research worker. Nonetheless, this is an excellent and authoritative text for the medical student, practitioner, or specialist, although it is only fair to point out that much of this material is included in general textbooks of anatomy.

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New Books

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Principles of Ophthalmoscopy. John K. Erbaugh. Thomas, Springfield, Ill., 1958. 79 pp. \$5.50.

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Treatise on Marine Ecology and Paleocology. vol. 1. *Ecology.* Geological Society of America Memoir 67. Joel W. Hedgpeth, Ed. Geological Society of America, New York, 1957. 1304 pp. \$12.50.

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Review of Sociology. Analysis of a decade. Joseph B. Gittler, Ed. Wiley, New York; Chapman & Hall, London, 1957. 597 pp. \$10.50.

Science in Your Own Back Yard. Elizabeth K. Cooper. Harcourt, Brace, New York, 1958. 192 pp. \$3.

Excavations in the McNary Reservoir Basin near Umatilla, Oregon, by Douglas Osborne. River Basin Survey Papers, Bureau of American Ethnology Bull. 166. Marshall T. Newman, Arthur Woodward, W. J. Kroll, B. H. McLeod. Smithsonian Institution, Washington, 1957 (order from Supt. of Documents, GPO, Washington 25). 259 pp. \$1.75.

The Preparation of Programs for an Electronic Digital Computer. Maurice V. Wilkes, David J. Wheeler, Stanley Gill. Addison-Wesley, Reading, Mass., ed. 2, 1957. 252 pp. \$7.50.

An Introduction to Chemical Thermodynamics. E. F. Caldin. Clarendon Press, Oxford, 1958 (order from Oxford University Press, New York). 439 pp. \$8.

An Introduction to the Foundations and Fundamental Concepts of Mathematics. Howard Eves and Carroll V. Newsom. Rinehart, New York, 1958. 378 pp. \$6.75.

Basic Animal Husbandry. John M. Kays. Prentice-Hall, Englewood Cliffs, N.J., 1958. 443 pp. \$7.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

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