

Komatsu concludes with a review of present linguistic views about the origins and continental affiliations of the Japanese language, which structurally and to some extent phonetically comes closest to the Korean language. The book was evidently not designed for scholars interested in checking additional sources for there is no bibliography, but the reader may be assured that the statements in the book can be backed up by an impressive scientific documentation, almost all in Japanese. The author might well have indicated at least one or two publications which would lead an interested reader to this abundant literature.

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## Human Physiology

**Physiologie.** vols. 1, 2, and 3. vol. 1, *Introduction historique; Les fonctions de nutrition* (958 pp., F. 80); vol. 2, *Système nerveux; Muscle* (1101 pp., F. 95); vol. 3, *Les grandes fonctions* (1201 pp., F. 95). Charles Keyser, Ed. Editions Médicales Flammarion, Paris, 1963. Illus.

This treatise is *formidable*, in both the English and the colloquial French senses; its three volumes total over 3200 pages, making it probably the most exhaustive, up-to-date presentation of human physiology available. In several respects, it is intermediate in scope and detail between the standard textbooks used in the United States and the as yet incomplete *Handbook of Physiology* published by the American Physiological Society.

Volume 1 provides a brief historical introduction followed by the section on the functions of nutrition which considers the kidney and body fluids and includes an extensive chapter on endocrinology as well as the discussions of bioenergetics, digestion, nutrients, and intermediary metabolism ordinarily expected in this category. Volume 2 is devoted entirely to nerve and muscle. The long and thorough chapter on the electrochemistry of the neuron (by Marx) and the separate chapters on sleep, phonation, and spoken language are especially noteworthy. Volume 3, includes consideration of respiration, circulation, reproduction, fetal and neonatal life, and growth. This volume con-

cludes with a brief chapter on immunology. Volumes 1 and 2 each have their own indexes, and volume 3 has a most useful cumulative index. The table of contents is at the back of each volume, a quite common procedure in France.

The bibliographies are extensive and international in scope. Some chapters contain references no more recent than 1957, but in general the material is up to date as of 1962, presumably the time at which the volumes went to press. An unfortunate error led to the omission of the bibliographies to the chapters on smell, taste, and vision. The anguish of editors endeavoring to collate manuscripts from collaborators is well known, but in addition to writing his own four distinguished chapters, Charles Kayser, the editor, has displayed remarkable talent for organization (and diplomacy) in assembling a work of this size in virtual synchrony.

The volume of material covered and the obviously great effort brought to bear by the contributors makes it especially difficult (and loftily presumptuous) to present an evaluation in a short review. Only impressions, supported by examples, are possible.

Certainly the best aspect of this work is the great detail with which many topics are discussed. This has resulted in a very long book, but it is clear that each of the 40 contributors must have been able to write his section with very much less than the usual pressure from editor and publisher to "keep it under 10,000 words." For example, the magnificent chapter on respiration (by Dejours) occupies 245 pages, which alone would represent 20 percent of one of our standard texts. There are also good discussions of some topics ordinarily omitted or treated in bare outline—for example, growth, senescence, and fetal and neonatal physiology.

There is no preface, unfortunately, and it is not clear whether the authors intended the volumes to be used in teaching or simply as a reference work; French medical schools have used American physiology texts extensively. One can imagine the mutinous dismay of medical students confronted with a work of this size, but its major defect for use as a textbook would arise from the rather rigid treatment of physiology, organ system by organ system. For example, the plasma buffers are discussed in a section on the physical chemistry of blood, the acidifi-

cation of the urine in a chapter on the kidney, and the role of the hydrogen ion as a stimulus to ventilation is described in the chapter on respiration. There is not, however, any integrated discussion of the acid-base regulation of the body or of the multiple adjustments in response to an acid or base load. But, on the other hand, it must be noted that the chapter on growth, for example, pulls together material ordinarily treated in only a fragmentary way.

Another impression is that, despite the valuable and detailed discussion in some areas, other parts of the book are curiously brief, rather as if they were written as introductory comments to more intensive treatments which the authors expected to be published in later sections but which, for some reason, were not actually written. For example, the formed elements of the blood, the blood groups, and blood coagulation are dealt with in a scant seven pages.

These volumes will be useful as supplementary extended reading material for students of physiology, provided some of the weaknesses referred to are taken into account. The style is simple and lucid throughout so that the French language should present no particular obstacle.

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## Modern Chinese History

**Twentieth Century China.** O. Edmund Clubb. Columbia University Press, New York, 1964. xvi + 470 pp. Illus. \$7.95.

Anyone who has taught a course on the history of modern China will have felt the need for a good general textbook. There are many excellent studies of particular topics or limited periods, but to make the best use of these a student needs some book which gives a general outline of all the main developments and which is also a reliable reference work for the more important facts and dates. The best work of this kind so far available carries the story only up to the Kuomintang victory in 1928.

*Twentieth Century China* is a disappointing book because it just misses the standards required for such a text