

students for whom it is intended; it may be recommended to all those who do not wish to read one of the larger works.

The other volume gives a fairly detailed account of experimental class physiology, including also a short section on chemical physiology. The experiments, however, are often unsuitable for a practical course in Great Britain, since they require the use of anæsthetised animals as subjects; some, doubtless, with suitable modifications could be carried out on the surviving carcass. Apart from this objection, the experiments described appear to cover the ground fairly completely and are probably more detailed than required by the average medical student. A number of the illustrations are taken from Jackson's "Experimental Pharmacology."

*The A B C of Vitamins.* By John Pryde. (The Vanguard Series.) Pp. 128. (London: John Hamilton, Ltd., 1928.) 2s. 6d. net.

THE aim of this short readable volume is to give the non-scientific reader a simple account of our present knowledge of the vitamins in non-technical language. The author appears to have succeeded very well in conveying the essentials of a complex subject to its pages, and the book should enable the numerous people who take an interest in their diet to choose appropriate foodstuffs or to exercise discrimination in their selection of a proprietary 'vitamin food.' We note that the author refers to vitamin B<sub>2</sub> as the growth-promoting fraction of vitamin B; as a matter of fact, animals, young rats for example, will fail to grow unless vitamin B<sub>1</sub> is supplied in the diet as well as vitamin B<sub>2</sub>, so that both fractions are necessary for growth. Also it is stated that mammalian liver contains vitamins A and D: it appears probable that the latter is absent from mammalian liver, although fish livers provide a rich source of this vitamin. These criticisms, however, detract in no way from the usefulness of the book to those who wish to regulate their diet; but people should not be advised to give themselves ultra-violet irradiation in their own homes, owing to the dangers of possible over-exposure. The book is quickly read and can be recommended to the intelligent layman for perusal.

*Übungen aus der vergleichenden Physiologie: Atmung, Verdauung, Blut, Stoffwechsel, Kreislauf, Nervenmuskelsystem.* Von Hermann J. Jordan. Unter Mitwirkung von G. Chr. Hirsch. Pp. viii + 272. (Berlin: Julius Springer, 1927.) 18 gold marks.

THIS manual gives the course of laboratory exercises in comparative physiology which the authors have evolved for students of biology in their laboratory at Utrecht. Experiments have been selected which are readily performed by the student and require only easily obtainable biological specimens and apparatus, wherever possible, of a simple rather than of a costly character. The book deserves the attention of zoologists, since it is primarily biological and not merely an adaptation of medical physiology.

## Psychology.

*An Historical Introduction to Modern Psychology.* By Dr. Gardner Murphy. With a Supplement by Dr. Heinrich Klüver. (International Library of Psychology, Philosophy, and Scientific Method.) Pp. xvii + 470. (London: Kegan Paul and Co., Ltd.; New York: Harcourt, Brace and Co., Inc., 1928.) 21s. net.

A PRELIMINARY glance at this very substantial volume—one of the largest in the important series to which it belongs—might cause one to wonder at certain of its features. Why, for example, should several pages be devoted to Alexander Bain, and only a few words to James Ward? The answer to this question reveals one of the many limitations which the unquestionably learned author has imposed upon himself. Bain stood strongly for the physiological approach, whereas Ward's contribution, though equally distinctive, consisted in applying evolutionary concepts to introspective analysis; and Dr. Murphy's main concern is to trace the changes which have led to an increasing emphasis upon the objective method of study, which has passed from the physiological to the experimental and quantitative methods so assiduously cultivated to-day. It is for this reason that such a thinker as Ward does not come much into Dr. Murphy's picture. The author has provided a most interesting and satisfying account of modern psychological developments in Europe and America. In a supplement, Dr. Klüver shows how recent German psychology has proceeded on lines of its own.

*Practice, Fatigue and Oscillation: a Study of Work at High Pressure.* By J. C. Flügel. (*British Journal of Psychology*, Monograph Supplements, 13.) Pp. v + 92. (Cambridge: At the University Press, 1928.) 8s. 6d. net.

THIS is the latest addition to the series of monograph supplements issued in connexion with the *British Journal of Psychology*, and is a good example of the kind of work which is being done by the scientific or objective school of psychologists at the present time—a school which has found great favour in America, but less in Great Britain. 'Fatigue' and 'practice,' and the relations between them, are familiar subjects of experimental investigation. By 'oscillation' is meant those short-period variations in efficiency usually referred to as fluctuations of attention.

Mr. Flügel's object has been to experiment, on a larger scale than has hitherto been attempted, with the view of discovering any general characteristics of these three functions, and also to apply statistical methods to the study of their inter-relationships. The thoroughness of his procedure, the extreme caution with which inferences are drawn, and the frank admission, or rather insistence, that complete success was not achieved in carrying out a rather ambitious programme, are all in the most exacting spirit of scientific method. It is on such studies as these that an important group of modern psychologists have hopes of real advance.