Book Reviews

Physiology: vegetative physiology. (Part I.) (Fiat Review of German Science, 1939–1946.) Berlin, Germany: U. S. Army, Economics Division, Research Control Branch, APO 742, 1948. Pp. 224.

This review was organized by the Field Information Agencies Technical (FIAT) of the military government for Germany under the editorship of F. H. Rein. It covers, year by year, German literature on vegetative physiology and other literature on the subject with which the Germans were in contact for the years 1939 through 1946. The contents are "Further Developments of Physiological Methods," by H. Brünner, "Physiology of the Gaseous Components of the Blood," by E. Opitz, "Physiology of Blood Coagulation," by E. Wöhlisch, "The Peripheral Circulation," by M. Schneider, "Physiology of the Heart," by K. Kramer, and "Electrocardiography," by E. Schütz. All of the authors have covered their subjects well.

It is not easy to summarize a review which refers to half a dozen papers on nearly every page. The section on methods deals particularly with electrical methods, including electrical manometers and technics for gas analysis. Among these is an "oxygen sound," by which a lamp and photocell can be introduced into the heart in animals to measure oxygen content of mixed venous blood *in situ*. The second deals with arteriovenous oxygen differences in different organs; that of pure muscle blood is high during rest (30 to 70%) and very high in maximal work (over 90%). References are made to the German Himalayan expedition reports. The section on blood coagulation should be valuable to those working in this complex field. The fourth section gives attention to Rein's work on the subordination of chemical and nervous vasoconstrictor mechanisms to local effects during activity. The fifth section discusses the control of the intact heart as compared with the isolated heart, and Rein's theory of interrelations between liver and heart metabolism. "Electrocardiography" is not amenable to analysis.

The review refers to many other papers of importance which could not possibly be listed here.

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Biochemical evolution. Marcel Florkin. (Edited, translated and augmented by Sergius Morgulis.) New York: Academic Press, 1949. Pp. vi + 157. (Illustrated.) $4.00.

This short monograph fails to achieve the author's purpose as stated in his foreword. In the translator's preface it is suggested that "Some may object that the title is overambitious . . . and beyond the true measure of the book's scope." The reviewer does object and not only because, as suggested by the translator, "it deals with only half of the biological world." A major part of the book is devoted to a secondary purpose, i.e., to showing that a biochemical classification of animals does not differ from the taxonomy of morphologists. That a static classification of the animal kingdom, either biochemical or morphological, supports the common conception of evolution as a dynamic and continuing aspect of life is at least a debatable point. Approximately one-fourth of the text describes examples of so-called biochemical adaptations. The pitfalls encountered in considering adaptions as a factor in the evolutionary process are too well known to be emphasized. In the extreme analysis life itself could be cited as an adaption. The contribution of modern genetics to our understanding of evolution is barely mentioned.

The volume is well bound and the typography is excellent. The style of presentation is dull and uninspiring; perhaps it suffers in translation. Both biologists and biochemists will encounter a peculiar difficulty in reading the text: common, general taxonomic, and specific names are intermingled; thus, rat, oyster, and *Tenebrio molitor*. The important and extensive studies of the biochemistry of lower forms of animal life by Florkin and co-workers are discussed briefly in relation to the author's views on biochemical evolution. These studies could provide the material for a monograph apart from their relation to evolution. The reviewer suggests that this would have been of more interest as the present volume contains little about biochemical evolution that has not been expressed better by previous writers.

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Climatic accidents in landscape making: a sequel to "Landscape as developed by the processes of normal erosion." (2nd printing.) C. A. Cotton. New York: John Wiley, 1948. Pp. xx + 354. (Illustrated.) $7.00.

This is the second printing of a book issued in 1942. It is in part a sequel to the author's *Landscape*, which treats of land forms developed by common processes in humid climates. This volume deals with "interruptions" in "normal" geomorphic cycles.

Section I discusses dry and dry-seasonal climatic landscape types. It includes eolian erosion, arid erosion cycle, the cycle under semi-arid conditions, piedmont slopes and lateral planation, sheetflood erosion, the cycle of desert mountains, savana landscapes and inselbergs, and sand dunes. The reviewer does not consider these forms to be climatic accidents in a strict sense but rather results of specific climatic conditions, as "normal" as those resultant from humid climates.

Section II is a treatment of the salient features of glaciated landscapes. It treats of glaciers (in a brief and somewhat elementary fashion), glacial erosion (rather briefly), the manifold land forms resulting from glacier