Book Reviews

Untersuchungen über die Tiergemeinschaften des Bodens: Die Oribatiden und ihre Synusien in den Böden Norddeutschlands. Karl Strenzke. *Zoologica,* Band 37, Heft 104, Stuttgart, 1952. 172 pp.

Because of the increasing realization of the importance of mites in relation to man and animals and agriculture, this publication is timely. It deals with the oribatid fauna of North Germany and is an outstanding contribution to the study of the role of mites and their relation to the soil.

Few people realize that among the dominant inhabitants of the upper layer of the soil are the tiny oribatid mites (Oribatei) which feed on litter, reducing it to usable organic matter. These mites are found by the thousands and, as Strenzke has pointed out, a study of the oribatid species is indispensable as a foundation for understanding the soil-biological processes in land and forest economy. Since populations are limited by ecological factors, the species can be used as indicators of soil condition. Two factors which regulate the distribution of a large number of species are the degree of humidity and the pH of the substratum. Strenzke has divided the soil into 6 major categories, each characterized by a dominant mite species. The oribatids include species that have been shown to be carriers for various tapeworms such as those found in sheep and other pasture animals.

With so little known about mites, this publication on their ecology, covering 240 species and subspecies of North Germany, with detailed notes and a complete bibliography, is a necessary tool for anyone interested in soils or arthropods, as well as for those interested only in the taxonomy of mites. It is hoped that more American workers will soon turn to the biological aspects of the Acarina, especially of this group so little known in our country.

EDWARD W. BAKER
Bureau of Entomology and Plant Quarantine
U. S. Department of Agriculture
Washington, D. C.

The Sulfapyrimidines. Lawrence H. Sophian, David L. Piper, and George H. Schneller. New York: A. Colish, for the Lederle Laboratories, 1952. 180 pp.

This book was compiled for the use of the practicing physician, and the last half is devoted to the general utility of the sulfapyrimidines, individually and as the triple-sulfa mixture, in the management of clinical infections. It should be a useful handbook in clinical practice. The first 90 pages, concerned with the history, chemical and physical properties, and mode of action of sulfa drugs, are of more interest to the research scientist. The pharmacology of these drugs, their absorption, metabolism, excretion, and toxic effects, are discussed separately.

The sulfapyrimidines have been chosen as the subject of a monograph because of the belief that, in this series, the sulfa drugs have reached the highest possible degree of activity. Although there is good chemical and physiological evidence to back up this belief (for example, Bell and Roblin, *J. Am. Chem. Soc.,* 64, 2905 [1942]) these authors have not cited it. They have reported instead numerous tests on infected animals which show that these compounds are highly active, but do not necessarily imply that the peak of activity has been obtained.

In the first paragraph of the book, an interesting problem in semantics is raised by the statement "[No one] feels that the antibiotics are threatening to supersede chemotherapy." This implies that treating infections with antibiotics is not chemotherapy. If treating infectious diseases with natural products (antibiotics) differs from treatment with synthetic products (chemotherapy), what then is the process involved when synthetic chloromycetin is used?

E. E. CAMPAIGNE
Chemistry Department, Indiana University

Visceral Circulation. A Ciba Foundation Symposium. G. E. W. Wolstenholme, Ed., with assistance of Margaret P. Cameron and Jessie S. Freeman. Boston: Little, Brown, 1953. 278 pp. Illus. + plates. $6.50.

This interesting volume contains the papers and general discussions of the symposium on visceral circulation held in London in July, 1951. In it are represented the efforts and the varied points of view of many internationally outstanding authorities in the field of the circulation. Composed of 25 scientific papers, together with the opening and closing remarks of symposium chairman J. McMichael, the book presents a many-sided approach to the general problem of circulation and introduces a wealth of techniques currently applied to its study in various tissues and organs.

The volume is logically divided into four parts, the first of which is devoted to anatomical studies of Visceral Vascular Architecture, opening with a general survey of visceral vascular structures by J. D. Boyd. Following this are four papers dealing in order with details of the vascular architecture of the alimentary canal, lungs, kidney, and liver. Throughout these presentations, attempts are made to correlate anatomical structure and functional activity.

Part II, dealing with General Factors in Blood Flow Regulation, opens with an excellent article of fundamental importance on the laws of physics and flow in blood vessels, by A. C. Burton. Discussing the problem of the relation between rate of blood flow and the pressure which drives it, Burton carries the reader from the early physical experiments of Poiseuille through his own ingenious biophysical investigations. Subsequent articles in this section are concerned with the roles of adrenaline, noradrenaline, and amine oxidase in the regulation of blood flow, and with pain perception by dilated visceral arteries.