

## Yu. S. Balashov, A. B. Daiter: Krovososushchie chlenistonogie i rikketsii.

(Bloodsucking arthropods and rickettsiae). Publ. House Nauka, Leningrad 1973, pp. 1—251, Figs., 199, Price 2.92 r.

The authors have set themselves the difficult task of compiling a monograph which would encompass a comprehensive evaluation of mutual relationships between parasitic arthropods and pathogenous rickettsiae transmitted by them to man. The concept of the book is based, on one hand, on an analysis of detailed morphological, physiological and ecological studies of vectors, and on the other, on an analysis of biological properties of rickettsiae and on the mutual comparison of reached conclusions.

This concept is original, and it may be stated beforehand that the authors succeeded in achieving a work which has no precedence in world literature. The high standard of the book is enhanced by the fact that the first author (Yu. S. Balashov) is a world-famous expert in morpho-physiological problems of arthropods, mainly ticks, while A. B. Daiter has specialized in problems of biology of rickettsiae.

The book is divided into 8 sections. The first two sections represent an introduction to the problems dealt with and contain a brief characterization of rickettsiae and diseases caused by them. The authors compiled here basic knowledge only, as these problems have been already dealt with by other authors in monographic form. The main interest rests with the subsequent 6 sections in which the problems are divided according to groups of vectors: ticks, gamasoid mites, chiggers, lice, fleas and bugs (Heteroptera). The authors have adhered to a consistent plan. Each section has an introductory chapter dealing with morphological and physiological features of vectors, which is followed by a part analysing ecological characteristics and as a conclusion of each section there is a chapter on mutual relationship between vectors and rickettsiae.

The greatest attention is paid to ticks due to their importance and to the fact that the authors (especially Balashov) are specialists in this line and present in the book syntheses of their own experience and results. Apart from the description of external morphology the book

contains data on digestion system, peculiarities of blood digestion and relevant histological and physiological adaptations, on general metabolism, internal tissues, gonotrophic relationships etc. The chapter on ecological features of ticks comprises primarily data on developmental cycles, modes of feeding and parasite-host relationships. The chapter concerned with the relationship between ticks and rickettsiae is devoted mainly to the causative agents of Q-fever and north-Asian spotted fever, that are epidemiologically most important in the territory of the USSR and the authors themselves have for many years directly studied them. The causative agents of other diseases are discussed less in detail; there is a brief account of the causative agent of Rocky Mountain fever which does not occur in the territory of the USSR and the data concerning it serve here mainly as an example for comparative purposes.

Other sections of the book are dealt with according to the same scheme and are based primarily on literature. Quotations in the text and adopted figures reveal that the authors have studied new, original literature. In their scope these sections are about the same, but in the contents there are some disproportions: e.g. the relationship between chiggers and rickettsiae is given the space of 2 pages, although this problem is very acute in the Asian continent, including some regions of the USSR and would certainly deserve a much more detailed treatment.

Apart from numerous figures included in the text the book is provided with an appendix with reproductions of 84 photomicrographs. At the end of the book there is a list of literature containing 922 bibliographical data. This comprehensive list still enhances the value of the monograph under review. The cited publications of both authors show that the book is a work of competent specialists and that its main interest rests with the parts based on original results of their own research.

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