**A. Kaestner: Lehrbuch der speziellen Zoologie. Band I. Wirbellose. 3. Teil. Insecta: B. Spezieller Teil.** *VEB Gustav Fischer Verlag, Jena 1973: 273—907, 405 figs.*

This is another volume in the series covering fundamental fields of zoology; it follows the volume on general entomology. The author of this volume is Professor Dr. Alfred Kaestner, the subject dealt with is special entomology. The book contains data on anatomy and morphology of the adults and developmental stages, on reproduction, the mode of life and the system of each insect order arranged on the basis of the individual orders and higher systematic units. The continuity of the individual volumes of this series is shown also by the continuation in pagination.

The systematic arrangement of the class Insecta is based, in this book, on that suggested by Martynov from whom the author accepted the names of several higher systematic groups, while for other groups his concept was different. As regards the division of insects into Entognatha and Ectognatha, the author emphasized basic differences occurring in the orders of apterygotic insects, recorded earlier by Tillyard, and raised their systematic position above that of Apterygota and Pterygota. He raised also suborders of the order Thyssanura to the statute of independent orders.

Although the author accepted the division of pterygotic orders into Palaeoptera and Neoptera as suggested by Martynov, he introduced a number of new, higher systematic units, but failed to arrange to them all orders which leads to a certain asymmetry. Moreover, he did not observe uniformity in the formation of names for units of the same taxonomical value. E.g. in the group Paurametabola (=Polynooptera according to the division by Martynov and Jeannel) he did not include the order Embioptera, and arranged the remaining orders to the group Orthopteromorpha. This he subdivided into the superorders Blattopteriformia, Blattopteroidea and Orthopteroidea.

In the group Paraneoptera, the orders Mallophaga and Anoplura were given the value of suborders, and combined in the order Phtiraptera. Rhynchophtirina were removed from the order Anoplura to constitute an equivalent suborder. The orders Hemiptera and Homoptera were joined into one order — Hemiptera (Rhynchota) — and divided into the suborders Heteropteroidea, Auchenorrhyncha and Sternorrhyncha. The designation of these higher units might be misleading in view of a certain uniformity in the designation of different categories (e.g., the superorder Orthopteroidea, the suborder Heteropteroidea).

The next large group are Holometabola which the author divided substantially in accord with the systems of Martynov and Obenberger. He created new units in the superorder Mecopteroidea in order to show the closer relationships between several orders — Amphiesmenoptera and Antliophora. Here again, the lack of uniformity might lead to systematic mistakes. The orders Siphonaptera and Strepsiptera were arranged to the artificial group "Ordines incertae sedis."

The system in this study bases also on several signs of internal anatomy and embryology. Descriptions of these signs are cursory, without indication of origin (phylogenitical or adaptive). For the higher systematic groups, the system is no too well balanced and, therefore, can hardly be considered a progress in insect systematics.

The data presented for the individual orders are these: number of species, extent of bodily measurements, brief characteristics of the order, notes on morphology and the mode of life of adults and larvae, reproduction, the system. Some of the chapters received increased attention, e.g., the chapter on morphology and anatomy, although this has been treated extensively in the previous volume, while others were reduced to a minimum, e.g., the system, for which the author has given only a list of the principal families and the most important species.

Of great value are the mostly new data on the mode of life of the insects and, particularly, on reproduction of several groups and species, on specialized habits in acquiring nutrition, on adaptation to various conditions of the external environment, on the type of parasitism involved, various forms of intra- and interspecific relationships etc. These are the most valuable data in the textbook. Considerable attention has been given to this part of the insect's life particularly for groups with a more complicated mode of life, and for social insects.

Parasitic Diptera families and fleas have been treated only briefly with notes on the most important genera (sometimes species), the type of parasitism and remarks to whether the species concerned is a vector of infection transmitted by insects. Increased attention was given to mosquitoes. The author used the outdated arrangement of warble flies to the family Hyperdermatidae as a mere subfamily of the family Oestridae, having the same systematic position to that of the subfamilies of this family, although their position in the system is completely different.

The presented book enlarges knowledge on the anatomy, morphology and, particularly, on the mode of life of insects of the individual orders. The text is completed with numerous figures which add to the value of the publication. The systematic part, unfortunately, has been treated too briefly and, hence, offers only general information. The system suggested is no improvement of the present system. The book has been written as a textbook for university students in general and applied entomology.

*Dr. J. Minář, C.Sc.*