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Book Review

COBBEN, R. H. 1968. Evolutionary trends in Heteroptera. Part I. Eggs, architecture of the shell, gross embryology and eclosion. 475 pp, 316 Figs. Centre for Agricultural Publishing and Documentation, Wageningen, Holland. \$16.50 U. S.

This is the first of a series of three volumes by Cobben on the phylogeny of the supra-generic taxa of the Heteroptera, and there will be many biologists awaiting the next two volumes.

Cobben approaches the phylogeny of the Heteroptera on a wide front and this can best be summed up by a quotation from the page preceding the preface, "In its best practice, taxonomy is a wonderfully promising area of synthesis for all biological knowledge."

In this volume Cobben has examined the oviposition stance of the female, the detailed structure of the egg and the embryogenesis of as many species of Heteroptera as there was material available.

As might be expected in such a detailed study as this, many new characters of taxonomic value came to light. These, along with previously used characters have all been utilized in synthesizing a phylogenetic scheme which forms the basis for the next two volumes.

Cobben's work on the chorion of the eggs is in such detail that little of previous descriptions can be homologized to the structures he shows. Of particular interest are the "airstatic inner layer" of the Geocorisae chorion and the "porous inner layer" of that of the eggs of Saldidae. These structures along with other porous structures act as a plastron.

The importance that Cobben attaches to the Leptopodoidea is obvious from the arrangement of the contents of the volume. The first chapter is devoted entirely to the eggs of this family. The other families are dealt with in the second chapter. For each family the literature, material used, egg shape, oviposition behaviour, chorion, embryogenesis and eclosion are discussed in turn, enabling detailed information to be extracted rapidly. Chapter III is devoted to evaluating the egg characters. Chapter IV is a preliminary discussion of the

phylogeny of the suborder with a short review of the investigations that will be reported in the other volumes. There is an excellent summary. The book will no doubt become a standard reference text on Heteroptera.

Although the book has been well produced it is surprising in a work of this nature that the abbreviations of morphological terms are not given in the text when the structure is referred to in a figure. Another disturbing feature is that the scales on the figures have not been given any absolute value, although they are probably in millimeters. Proof reading is good apart from some minor spelling mistakes and a series of transpositions in the caption of Figure 273. The line figures throughout the volume are of high standard and are explicit, as are the transmission and scanning electronmicrographs.

If the next two volumes of this series maintain the high quality of the first, then Cobben will have made a significant contribution to the understanding of Heteropteran biology and phylogeny. His approach is one that future taxonomists might well emulate.

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