divided into two families in which are included fifty-two genera; the Paradermaptera, in which there is but one family, including two genera; and the Eudermaptera, divided into three families, containing seventy-seven genera.

Dr. Burr is recognized to-day as the most eminent student of this order of insects, which until recently has been somewhat neglected, but with which, thanks to his patience and learning, no entomologist need now claim ignorance for lack of adequate and authoritative treatises upon the subject. The end of Dr. Burr's labors has not, however, been reached, and he intimates that he is preparing a still more complete and elaborate work, which will deal with all known species from all parts of the world. When this task shall have been completed no order of insects will have been more thoroughly monographed than this.

The plates illustrating the present work are excellent, and with the exception of a few errors in punctuation the typography is as good as the illustrations.

W. J. HOLLAND

College Zoology. By ROBERT W. HEGNER. Macmillan. 1912. Pp. xxv + 733.

In this book "(1) Animals and their organs are not only described, but their functions are pointed out; (2) the animals described are in most cases native species; and (3) the relations of the animals to man are emphasized." The discussion of each phylum is introduced by an account of one or more types. The general plan is not unlike that in Parker and Haswell's "Text-book of Zoology." Hegner's book will, however, probably prove to be better suited to American students because it discusses types they may meet every day.

The book is progressive and up-to-date. Such topics as the recent work on the hookworm in the United States, and the investigations of the United States Department of Agriculture on bird foods are considered. Many old familiar names are replaced by more modern terms and we find *Trichinella* for *Trichina, Ameba* for *Amœba, Dolichoglossus* for *Balanoglossus, Anthozoa* for *Actinozoa, Branchiostoma* for *Amphioxus,* etc. The derivation of all scientific terms is given, and there is full citation of the authorities for figures. Few of the figures are original, but have been largely selected from other works. They are good for the most part.

Evidences of carelessness or hasty preparation appear in several places. For example, it is said that in the Metazoa, "the entoderm becomes the epithelium of the digestive tract, pharynx and respiratory tract" (p. 89)—a statement that will not hold true for all invertebrates; the aboral pole of crinoids is said to be "Usually with cirri or sometimes with a stalk" (p. 190) when the opposite is true; the eyes of the crayfish are said "to produce an erect mosaic or 'apposition image'" (p. 286), which would doubtless lead a student to believe that the two types of images were the same; on page 300 "*Cyclops*" is referred to as a species; *Branchipus stagnalis* is said to be a form of *Artemia salina* (p. 293), a view that has long been given up; *Polychœrus* is listed as a triclad turbellarian (p. 156); the pericardium is affirmed to be a part of the cœlom (p. 406). The book is remarkably free from typographical errors.

In the opinion of the reviewer this work is the best general college text-book of zoology that has been written up to the present time for use in the United States. The publishers have done their part in excellent fashion; the text is generally clear and understandable; the figures are good; and there is a fine index. The book contains many loose statements and some small errors; the writer has evidently been actuated by a desire to get out a good book *quickly* and has not always made conservative statements nor checked errors carefully. Nevertheless these defects are not serious enough to detract from the general value or usefulness of the work and it will doubtless continue to be popular for several years. A second printing has already been issued.

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