BOOK REVIEWS

SCOBLE, N. J. 1992. The Lepidoptera. Form, Function and Diversity. Oxford University Press (Natural History Museum Publications), xi + 404 p. ISBN 0-19-854031-0. Hardback. $78.00.

There have been few attempts to create a general volume on the form, function, and diversity of the Lepidoptera. Most of these were written near the start of this century, and published in German or French. Now, N. J. Scoble has created a new synthesis in English which deals with the Lepidoptera on a global basis. The author devotes the first half of the volume to a general introduction to the group's biology, while the second half deals with the major taxa in the Lepidoptera. As such, this single volume constitutes a useful compilation of information on this important insect order, and allows the reader to obtain an excellent overview of the biological diversity of the group.

The book is divided into three principal parts. Part 1, dealing with the anatomy of the Lepidoptera in six chapters, concentrates on external anatomy of the adult head, thorax, and abdomen, and then reviews the egg, larva, and pupa, before completing its survey with discussion of hearing organs, sound production, and scent. After dealing with the basic external morphology of each body division, the function of the various structures is discussed. However, a little discussion of internal anatomy is provided. This first section covers 168 pages.

Part 2 is composed of one chapter on the environmental and ecological importance of Lepidoptera. The 14 pages of text consider a limited selection of topics such as the potential of Lepidoptera for environmental impact, the diversity of plants eaten by lepidopteran caterpillars, and the evolutionary consequences of herbivory (e.g., plant defenses). Brief discussions of Lepidoptera as environmental indicators, as prey, and as useful organisms in silk production, are included in this chapter.

Part 3 represents a guide to the major taxa of Lepidoptera, including a treatment of 41 recognized superfamilies. Scoble provides a summary of the structure, diversity, and general biology of each superfamily, using available information from the literature. The first chapter in this part includes a brief discussion of the historical background of lepidopteran classification and critically addresses some of the problems with existing taxonomic schemes. Usually, each family is illustrated by one half-tone illustration, though in larger families more than one species has been illustrated. The book concludes with an extensive reference section and an index to major topics and taxa.

Overall, the stated purposes of the book are reached. The discussions of most of the taxonomic group are quite dry. Illustrations are adequate but not abundant. This is not a book for the amateur to read for pleasure or inspiration. Instead, it is a reference suitable for finding summaries of most of the important basic information about the Lepidoptera. As such, the line drawings are generally satisfactory and complete in their coverage of the discussed structures. Occasional SEM photographs, half-tone photographs, and four ganged plates of color photographs make the book a useful reference for anyone interested in the general characteristics and biological diversity of the order Lepidoptera. On this basis, I would recommend this book for the professional library of anyone working with Lepidoptera.

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