



This work is licensed under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0/us/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

A periodical record of entomological investigation published at the Department of Entomology, University of Alberta, Edmonton, Alberta.

Volume 12

Number 2

April 1976

CONTENTS

Book Review – Howe, W. H. (editor) 1975. The Butterflies of North America	115
Book Notice – Wigglesworth, V. B. 1974. Insect Physiology.	116
Whitehead – Classification and Evolution of <i>Rhinochenus</i> Lucas (Coleoptera: Curculionidae: Cryptorhynchinae), and Quaternary Middle American Zoogeography	118
Griffiths – Studies on Boreal Agromyzidae (Diptera).	
X. <i>Phytomyza</i> Miners on Crassulaceae	203
XI. <i>Chromatomyia</i> Miners on Elaeagnaceae	211

BOOK REVIEW

HOWE, W. H. (editor) 1975. The Butterflies of North America. Doubleday and Company, Inc; Garden City, New York. Hard covers, xiii + 633 pages, 97 color plates and 33 black-and-white text figures. One page addendum, Glossary, Bibliography (126 references), index to food plants, index to scientific and common names of butterflies combined with general subject index. Size: 19 x 26.5 cm; Price: U. S. \$39.95.

“The Butterflies of North America” was conceived as a guide and as a replacement for Holland’s classic (1900, 1931 updated) “Butterfly Book”, (Doubleday, Page and Company, Garden City New York), which is now out-of-print. William H. Howe, illustrator and coordinating editor, and twenty other contributors have produced an impressive, magnificently illustrated book. A more accurate title would be “The Butterflies of North America and Hawaii”, since the Hawaiian fauna is also covered.

The text is printed on high quality paper and is generally free of typographical errors. The black-and-white line drawings are well labelled, and of good quality, except for Figure 10 which, at least in my copy, is not well reproduced. Some structures would be better illustrated with photographs. As pointed out elsewhere by R. Leuschner (1975, News of the Lepidopterists Society, 6: 1-2), the nine specimens depicted on the front cover are representatives of mainly Middle American species. A selection of nine North American representatives would have been more appropriate. A statement on the back flap of the book, that the “result isthe definitive guide to the butterflies of North America . . .” is an unjustified exaggeration, because there are no definitive guides.

The book is organized into the following sections (number of pages for each given in brackets): preface (13); Introduction (72); Systematic part (507 + 97 color plates); Glossary (2); Bibliography (7); A list of major North American Lepidoptera collections (1); Index to food plants (10); Index to butterflies and other features (30).

The introductory section encompasses a wide range of topics, including: synopsis of structural characteristics of adults, life stages, natural history, life cycle and span, and food habits. Distribution and zoogeography are briefly considered, as well as principles of classification. The section on zoological nomenclature is rather brief. Though the International Code of Zoological Nomenclature is mentioned, the International Commission on Zoological Nomenclature is not, nor are its publications. The 2.5 pages devoted to this topic are inadequate considering the significance that zoological nomenclature has in zoology. The rest of this section includes a

wide variety of practical suggestions to potential collectors and students of butterflies, including tips on how to catch butterflies, where to collect them, how to make a collection, the importance of proper labelling of specimens, how to dispose of a collection, a list of sources of equipment and supplies, and information about lepidopterists' societies and journals.

In the systematic part, the only new taxon described is a subspecies. However, the ranks of several taxa have been changed. New families are erected, specific rank is accorded taxa originally described as subspecies, and *vice versa*, but no supporting evidence or discussion is provided for most of these changes. The year when, and a reference to original descriptions of included taxa are not provided. Type-species, type specimens, and type localities are not listed for any of the taxa treated, even though "types" are discussed in the introduction.

The bibliography section is said to be (in the introduction) "a highly selective list of the most important reference works". Further, it is stated, that "it was impracticable to include the hundreds of small articles on which most of our knowledge is really based". It is unfortunate that references to these articles were not provided. Their inclusion would have enhanced the value of this book immensely. Their exclusion is an indication that this volume is not "definitive".

The 97 color plates are superbly reproduced, and portray 2093 specimens, representing 695 taxa that are accorded specific rank. A valuable addition to each figure would have been short lines or arrows, pointing to the features used in identifying the species.

A general fault of this book is the difficulty of finding all of the information needed to identify a butterfly. There are no keys. The only way a specimen can be identified is by comparison with the colored illustrations. However, the sequence of taxa illustrated is chaotic. For example, figures representing the species of *Colias* occur on Plates 73, 74, 75, 78, and 97. If one finds a picture resembling the specimen to be identified, the legend opposite each plate provides the scientific name, but reference to material in the text can be found only by consulting the index. In association with the figure legends, page numbers could have been provided for the material in the text, and furthermore, for each species, references should have been provided to plates on which are found illustrations of similar species. A section on how to use the book would have been useful and appropriate since it is supposed to be a guide.

"The Butterflies of North America", in spite of the serious criticisms raised above, is unfortunately, an indispensable reference for any lepidopterist interested in North American butterflies. I hope that succeeding editions not only provide supporting evidence and discussion for the classificatory changes proposed in this one, and that already established facts are documented by inclusion of a complete reference list in the "Literature cited", but also keys and cross-referencing to make easier the task of identification.

Joseph Bělíček
Department of Entomology
University of Alberta
Edmonton, Alberta T6G 2E3

BOOK NOTICE

WIGGLESWORTH, V. B. 1974. *Insect Physiology*. Chapman and Hall, London. Seventh edition. Science Paperbacks. ix + 166 p., illustrated.

The newest edition of this book, first published in 1934, is not very different from the sixth edition (1966) in content. Most additions are single sentences inserted in appropriate places, but there is one new chapter, four pages long, on the endocrine system. A few new illustrations are added and most chapters have one or two new references. The most obvious change is in the layout of the text; most paragraphs now have their own subtitle in bold type making it very easy to locate a specific topic. The binding leaves much to be desired; my copy fell apart on first reading.

B. K. Mitchell
Department of Entomology
University of Alberta