

lack of original material. Even so, I expect the book to become a classic because it is so thorough. It proved a useful text for a butterfly gardening class I taught in 1987.

Both books are well illustrated. Rothschild and Farrell's has eight exquisite color photographs by Kazuo Unno, Carl Wallace, and Tony Evans, a color dust jacket, and 21 pen-and-ink drawings and decorations by Elisabeth Luard. Tekulsky's has 43 lovely pencil drawings and a beautiful color cover by Susanah Brown. Luard's designs are often very fine (especially the frontispiece), and her drawings do successfully communicate concepts, but poor technique frequently shows in an irritating overuse of stipple-dots. Brown's pencil drawings are wonderful. Both artists have depicted plants and butterflies in lifelike poses.

Each book contains appendices on garden butterflies; wild and cultivated nectar flowers; commercial sources of seeds, plants, butterflies, and equipment; organizations and publications dealing with horticulture, Lepidoptera, wildflowers, and conservation; and references. Tekulsky's section on "Further Reading" is the most complete bibliography of the subject I have seen. The appendices are the most practical sections of the works.

For those who derive great pleasure from seeing the living, moving color of wild butterflies among their blooms, these books are a must!

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Journal of the Lepidopterists' Society
42(2), 1988, 149-151

SPHINGIDAE MUNDI. Hawk Moths of the World, by Bernard D'Abrera. E. W. Classey, Faringdon, England. 226 pp. 79 plates. 250 × 340 mm, hard cover. £97.50 (ca. \$145.00).

Somebody once remarked to Dr. O. Niemeyer, the architect who designed most of the government buildings in Brasilia, the modern capital of Brazil, "your architecture is beautiful, but not always functional". Niemeyer kindly replied: "beauty *is* a function". D'Abrera's book *is* a beautiful book, and, in Dr. Niemeyer's concept, this book fulfills that function perfectly. It is artistically designed, and the plates are magnificent. The colors of specimens, especially those of Neotropical species, are well-balanced. Except for species represented by old, faded, and descaled specimens, the creatures would not be ashamed of their portraits.

To help the reader understand viewpoints to follow, we provide some background information. The first author met D'Abrera in 1979 at the British Museum (Natural History). They frequently spent long hours discussing work, dreams, and difficulties. D'Abrera does not regard himself a professional entomologist. He is, above all, an artist whose main interest is to express his talents through butterflies and moths, and at the same time to produce something beautiful and useful to others. Also, he is not supported by taxpayers, so has to work under great pressures, especially economic pressures. It is difficult to write books on butterflies and moths for a livelihood and to finance publication. This includes the cost of travelling more than 12,000 miles (19,300 km) from his home to the British Museum (Natural History), where he has to do his work, and production financing which includes preparing plates, writing text, designing, type setting, color separation, printing and binding, and export!

We offer this background for several reasons. First, it is important to recognize the motivation and personal sacrifice behind D'Abrera's books. Second, previous reviews of D'Abrera's books may have been unfair. We do not deny there are mistakes, but are they solely the author's fault, or do they reflect the chaotic state of lepidopteran taxonomy? D'Abrera clearly says that the main objective of this book "... is to provide, in a synoptic form, a modern illustrated systematic list of the known species of the Hawk Moths

(Sphingidae) of the World. It is not a revision." Is it the responsibility of authors who produce such books to solve all the taxonomic problems before publishing something useful? The task would take many years and involve many workers. Finally, it is possible that some previous reviewers did not, or did not try to, understand the audience to which D'Abbrera's books are directed. Professional entomologists might feel that D'Abbrera's books only add to the confusion already accumulated. But, what about the people who do not have access to good collections, who cannot travel to museums around the world to examine material, who do not have access to an extensive library? Should they wait another century until the taxonomic chaos is sorted out? In this case, it is preferable to have his work with errors than nothing at all.

This book is divided into four sections: introduction, text and plates, bibliography, and index. The introduction consists of a Foreword explaining objectives, conditions under which the work was carried out, and the style followed throughout. It is followed by an Acknowledgements section expressing gratitude to the late Alan Hayes. The book is based on a check list prepared by Hayes, and on the collection he curated for more than 20 years at the British Museum (Natural History). The Introduction is elegantly written, and describes previous works and general sphingid biology. A useful two-page section entitled "Notes for the Guidance of the Reader" explains abbreviations and symbols used in text and plates, and includes three figures showing important features of wings, pretarsal joint, and head. A Systematic Catalogue of Genera, listing genera in the same order as the text, ends the introduction.

The body of the book—the text and plates—is organized practically. The book was designed to present text alternating with plates so that when the book is opened, text is on the left-hand side, and figures are on the opposite page. This allows the reader to consult the book without having to turn pages back and forth to compare text and figures. This format could not be followed consistently, however, because when many small specimens are on a plate, the accompanying text cannot be included on a single page. The text provides useful information such as variation in color patterns, diagnostic characters, and larval host plants. The plates show entire moths in actual size, and in several cases the underside is also shown to distinguish similar species. The Appendix consists of 4 plates which illustrate 39 type specimens of species not represented in the British Museum (Natural History). They vary in quality: some are good; others are poor, but useful, since most have never been figured. Selected References omits some important works such as M. Draudt (1931. *In A. Seitz, Macrolepidoptera of the World*); W. Rothschild & K. Jordan (1907. *Genera Insectorum*); and H. Wagner (1913–1919. *Lepidopterorum Catalogus*). Finally, there are two indexes, one for genera and one for species.

This book has long been needed. The last comprehensive treatment of Neotropical Sphingidae was that of Draudt (cited above). D'Abbrera recognizes approximately 1050 species, and illustrates more than 1000. Draudt listed only around 480 names and figured 260 Neotropical specimens. Further, Draudt's work had many faults, specifically with regard to combinations, that are corrected in D'Abbrera's book. But we disagree with the sinking of *Neococytius*, and the transfer of *N. cluentius* to *Cocytius*; several cases pointed out by D'Abbrera, such as *Dolba* and *Dolbogene*, should have been synonymized following the same criteria. D'Abbrera himself regards the latter differences as "trivial." It would have been better to use the same criteria throughout, or to leave genera alone.

The Neotropical species were checked, and no misidentifications found. However, the book has a few mistakes that should have been corrected by the editorial panel. The most serious is authorship and date of family Sphingidae, which is actually Latreille 1802, not Samouelle 1819; and the nominate subfamily name should bear the same authorship and date. Other mistakes include incongruences between numbers of species given by the author and numbers treated in genera. For example, under *Paonias* it is stated that there are two species, but three are actually treated. The same occurs with *Hemeroplanes*, where the numbers are four and five, respectively. In the plates, *Calliontma neivai* and *Eumorpha adamsi* are identified as "*neavei*" and "*damasi*." A figure of *Protaleuron rhodogaster* is stated to be in the Appendix, but no figure was found.

By examining this book, it becomes evident that Sphingidae are in desperate need of a revision of higher classification. Several groups such as *Xylophanes*, *Theretra* and

Cechena have species that are difficult to tell apart superficially but are kept in separate genera because they occur in different faunistic regions. Because the groups were too large, or because of difficulties in communication, each fauna was studied separately. The result is that each faunistic region has an independent set of genera. It would be useful to subject the genera to a rigorous character analysis. Cladists, here is a good subject to study!

D'Abbrera did a good job on this book. For those who want to start or to organize a collection, and to study the group, it is a good starting reference. We recognize that for many who live in the Poor World, £97.50 is a lot of money. However, when we consider the quality of this book, the prices of books of lesser quality, and the fact that this is a book one would buy only once in a lifetime, it is a bargain.

We thank R. W. Hodges for critically commenting on the review.

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