

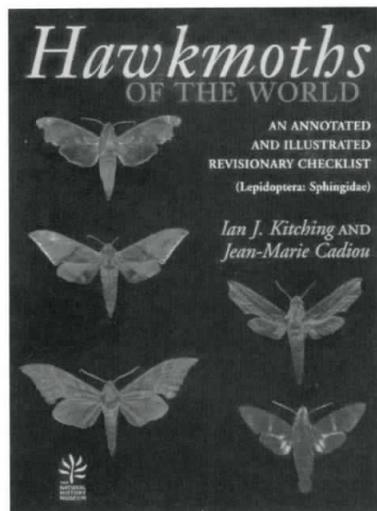
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BOOK REVIEW

HAWKMOTHS OF THE WORLD: An Annotated and Illustrated Revisionary Checklist (Lepidoptera: Sphingidae)

by Ian J. Kitching and Jean-Marie Cadiou

2000. Cornell Univ. Press, Ithaca, NY (in cooperation with the Natural History Museum, London, England). 226pp, 8 pl. (22 x 29cm), \$99.00 cloth. ISBN 0-8014-3734-2.



This new checklist for the world fauna of the large family Sphingidae, the hawkmoths (or sphinx moths), is a welcome addition to the large literature on this popular and widespread group of moths. It treats about 1000+ species of known hawkmoths: I could not actually find a precise count noted in the book, and the checklist is unnumbered, with the only reference made to the world total being the notation that d'Abrera (1986) had a total of 1050 species illustrated in his book. As well-known as hawkmoths now are (perhaps comparable only to butterflies and giant

silk moths in terms of being close to knowing the total extant species of the world fauna), there continue to be new species described every year, notably by Cadiou and a few other enthusiasts of the family.

The new work revises the last world list of the species of hawkmoths (Sphingidae), by Wagner (1913-19, *Lepidopterorum Catalogus*, Pt. 12, 18, 21, 23) and also supercedes the last worldwide revision of the family, by Rothschild and Jordan (1903). A revision of the lepidopterous family Sphingidae (*Novit. Zool. (Tring)*, 9 (suppl.):1-972). There also is the illustrated coverage of the family in the well-known Seitz series from 1911-32 (*Macrolepidoptera of the World*), for Sphingidae among several volumes for the different faunal regions of the world. Sphingid literature also has the Bridges catalog (1993), with all names listed as culled from the pages of *Zoological Record*, but this is replete with errors, as Kitching and Cadiou point out. Although we have the newer fully illustrated work by d'Abrera (1986), *Sphingidae Mundi*, the present new work by Kitching and Cadiou offers a more detailed and taxonomically precise review of the entire family. Ian Kitching is a curator of moths, particularly Sphingidae and other macro-moths, at the Natural History Museum (formerly the British Museum (Natural History), London) (BMNH), while Jean Cadiou is a sphingid enthusiast with extensive experience with the family through his collecting worldwide and his study of the taxa at museums and his own collection.

The new checklist is clearly needed by anyone working on hawkmoths, but the book is a rather curious compilation in having more than half its pages devoted not to the main checklist but to the over 600 taxonomic and nomenclatural notes. The book includes an introduction to Sphingidae, their morphology, biology, life history and bionomics, and their classification. Then follows the actual checklist, which is in alphabetical order, as most such recent lists are when originated from the Natural History Museum staff: the listing of sphingid species in alphabetical order is rather unfortunate, inasmuch as hawkmoths are among the best known families of Lepidoptera and, thus, one does not really have the justification that is usually used, that the group is so little known phylogenetically that an alphabetical listing is the best one can do for a species catalog at this time. Fortunately, the introduction

provides a listing of the higher classification of the family, and a phylogenetic list of the included genera, so the user can see how the authors place the various genera in their classification. The checklist proper does not offer any notation as to what country any species occurs in or even what faunal region; the only notations, if any, refer the user to one of the 627 end notes. There is a small section of 8 color plates, illustrating a few examples of various kinds of hawkmoths, plus the new species described in a short appendix to the end of the book where 2 new species and 2 new subspecies are described. There is also a one-page addendum listing a few species newly described while the book was being printed, plus some errata corrections. There is an extensive bibliography to sphingid literature and an index to taxa names.

The extent of research for the 627 taxonomic notes for the book is a clear testament to the effort by the authors to clarify the species and generic names of the family, and for this, anyone working on hawkmoths must consult this new reference. For identification of species worldwide, however, the new work is largely useless, thus the subtitle "*An Illustrated Revisionary Checklist*" is somewhat of a misnomer: a more accurate subtitle would have been "*An Annotated Checklist and Nomenclatural Review*." One must refer to the d'Abrera book to see figures of most of the species of the world. However, neither of these two works have any identification keys, even to subfamilies and genera, nor other detailed data on each species, and thus are not monographic in nature. Likewise, the new work by Kitching and Cadiou does not have any illustrations of genitalia or other morphological features of Sphingidae, not even for each genus as part of a generic review. Clearly, the new work fulfills part of its intended purpose, of revising the worldwide classification of the family and providing a simple checklist to known taxa (although only in alphabetical order), but the average hawkmoth enthusiast will not find it useful for anything other than reference to the correct names, along with the accompanying notes. The lack of any notation as to the origin and distribution of each species is a great omission of the work. Likewise, there is no listing of any of the known hostplants of the species. Thus, a further compendium on the family is still needed for the average enthusiast and scientist alike to find all relevant data on each species.

Whatever shortcomings the new work has, at least what is noted in the book appears to be accurate and precise information on the names of the species and genera and their status. In this regard, the new work has a great number of taxonomic changes (new synonymies, new combinations, etc.) that need to be consulted by anyone working on the family. The authors are to be congratulated for the extent of research involved in this new work on hawkmoths: one only wishes the omitted available data (type localities, distributions, hostplants) had also been included, and perhaps as well, at least a key to genera (since this is purported to be a revisionary work). In any case, it is a book needed on the shelf of anyone interested in this large and fascinating family of large and showy moths.

J. B. HEPPNERFlorida State Collection of Arthropods, FDACS, DPI,
P. O. Box 147100, Gainesville, Florida 32614