
Book review ● Buchbesprechung ● Analyse

HACKER, Hermann: Revision der Gattung *Hadena* Schrank, 1802.

17 × 24 cm, 775 pp., including 25 colour plates, 266 plates with genitalia drawings and numerous text figures, hardback, volume 5 in the series *Esperiana Buchreihe zur Entomologie*, pages 7–696. Bound together with Z. Kljutschko & H. Hacker: *Die Verbreitung der Arten der Gattung *Hadena* Schrank, 1802 und verwandter Genera in Osteuropa*, pages 697–720, 33 maps. Published by Hermann Hacker, Kilianstraße 10, D-96231 Staffelstein, Germany, 15 September 1996. ISBN 3–9802644–4–0. Price DEM 248,- excl. postage.

In this major revision the large genus *Hadena* Schrank, 1802 is redefined and revised. The author describes 3 new subgenera bringing the total number of recognised subgenera to 7. The recognition of these 7 subgenera is mainly based upon the structure of the female genitalia and also on the vesica and its appendages in the male. The division of this complex group is now as follows: *Hadena* Schrank, 1802 (90 species), *Anepia* Hampson, 1918 (29 species), *Maschukia* Hacker, 1996 (3 species), *Klappericola* Hacker, 1996 (3 species), *Pinkericola* Hacker, 1987 (7 species), *Pronotestra* Hampson, 1905 (1 species), and *Sinotibetana* Hacker, 1996 (1 species). Of the total of 134 species currently recognised in the genus *Hadena*, 45 are described in this monograph. Furthermore, 45 new subspecies are described, 3 species are transferred to *Sideridis* Hübner, 1821 and 4 species to *Conisania* Hampson, 1905. Some new synonymies are established, some neotypes and lectotypes are designated.

Each species is treated in the same way. After the complete scientific name and reference to the original description, a list of synonyms is given. The text of the original description is reprinted. A list of type specimens with their depository is given, as is a list of the studied material. This latter list is arranged geographically, giving an idea of the general distribution of the species. The text includes details on the external morphological characters, the variation, the male and female genitalia and diagnostic characters. The geographical distribution is discussed and pictured on a map. Some of the additional distribution maps are taken directly from earlier publications about certain geographical parts in Europe. One wonders why these maps are included.

Nearly all species and subspecies are figured on the colour plates (a total of 450 specimens), together with their labels. Though most of the specimens are depicted in a sharp and nice way, some of the labels are not completely

visible on the photographs. The 266 halftone plates with genitalia contain drawings of male and female genitalia. In most cases several drawings of the same species are shown, in order to give an idea of the individual variation. The emphasis is put on the everted vesica, the valva and the female genitalia. In most cases, more than 10 drawings are given for every species.

This revision contains dichotomic keys for the determination of specimens up to species level. Though some of the used characters include external morphological characters like wing pattern, ground colour, hair tufts on the head etc., many refer to structures in the male and female genitalia.

Though some species have been transferred from the genus *Hadena* to other genera, they are also given full treatment in this publication: genera *Enterpia* Guenée, 1850, *Sideridis* Hübner, 1821, and *Conisania* Hampson, 1905. Some species, formerly treated as belonging to *Hadena*, are now considered to belong to completely different genera. These species are listed only with some details: *Polymixis dubia* (Duponchel, [1836]), *P. filipjevi* (Draudt, 1934), *Bornolis kamburonga* (Holloway, 1976), *Haderonia miserabilis* (Alphéraky, 1892), *Panolis variegatoides* Poole, 1989, *Mythimna vilis* (Gaede, 1916) and *Kenrickodes transcursa* (Saalmüller, 1891).

The study is completed with a zoogeographical analysis, some phylogenetic remarks and an extensive reference list.

The additional paper on the distribution of the *Hadena* species and related taxa in Eastern Europe, is based on the data retrieved from 13 zoological museums, numerous private collections and literature sources. For each of the 33 species occurring in Eastern Europe, a complete list of localities is given, arranged per country, together with references to the literature sources. The distribution is shown on maps where open circles refer to data before 1960, while black dots show the present-day distribution. In a short comment the distribution type of each species is described.

This important revision is the first attempt to bring together all known species of *Hadena* and to clarify their phylogenetic relationships. While the knowledge on the taxonomy and geographical distribution in Europe is rather well known already, much work needs to be done in the Asiatic part of the genus' range. This will probably result in the discovery of more new species, enabling the refinement of the taxonomy of the group as a whole. No student of Palaearctic Noctuidae can allow himself to write on *Hadena* anymore without referring to this important study.

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