

Book Review

Lastůvka, Z. & Lastůvka, A., 2001. The Sesiidae of Europe. 245 pages, 9 colour plates, 107 plates with line drawings incl. distribution maps. -- Apollo Books, Stenstrup. ISBN 7-88757-52-8. Price: DKK 370,00.

The book provides a comprehensive monograph on the European clearwing moths (Sesiidae) prepared by Zdeněk Lastůvka, one of the leading experts in this field, and by his brother Ales, a well-known lepidopterist and specialist in leaf mining moths (Nepticulidae). It is an updated and extended version of „An Illustrated Key to the European Sesiidae (Lepidoptera)“ which was published by the same authors in 1995 and became sold out only a few months after its appearance. The book summarises the information on the more than 100 known species of European clearwings including 10 taxa newly described and another four species newly discovered in Europe since publication of the first edition.

After a short historical outline of scientific research on European Sesiidae in the last two centuries, the authors give a very helpful introduction in the advanced morphology of clearwing moths including brief explanations and illustrations of the adult and preimaginal stages. This is especially helpful for entomologists who start to work on this interesting family. The following chapter is devoted to the biology of the Sesiidae. The authors give a general overview of the highly specialised bionomics, behaviours and feeding habits of the members of this family. Attached to this, a complete list of the hostplants recorded for the European species of Sesiidae is provided, followed by a general outline on collecting and rearing. The general part of this book closes with two chapters on the distribution and phylogenetics of European clearwing moths. The systematic fraction of the work is introduced by a checklist and separate keys to the subfamilies, tribes and genera as well as to all Sesiidae species occurring in Europe. The main part of the book is devoted to the systematic treatment of all European Sesiidae species. In a condensed way descriptions of the external characters and the genitalia are provided, followed by a short account of the bionomics, preferred habitats and distribution of each species in Europe. For all species, subspecies and synonyms the original descriptions are cited together with the type localities and the collection in which the types are preserved. The main focus of the book are the illustrations. On nine colour plates all European species, usually male and female specimens, are figured by photographs at about 1.8 x of their natural size. On 107 plates line drawings of male and female genitalia and additional illustrations of important species characters are given, enabling the reader to determine most European Sesiidae species quite easily. These plates also contain distribution maps for all species. The book closes with a distributional checklist and an extensive reference list on the taxonomy, biology and faunistics of European Sesiidae.

Overall, the book is produced in a fine quality and the plates and drawings are very valuable. However, the colour plates are not of the highest standard. Moreover, it would have been helpful to consistently figure male and female specimens of all species, especially of rather dimorphic species such as *Chamaesphex masariformis* (Ochsenheimer, 1808). It has to be appreciated that the treatment of the taxa was done in a rather strict way leading to new synonymizations of some poorly supported nominal species and of one genus. Several taxa formerly considered as valid species are now classified as subspecies, though this appears not always to be well founded and may partly be inconsistent. For example, *Bembecia psoralea* Bartsch & Bettag, 1997 is considered as a subspecies of *Bembecia albanensis* (Rebel, 1918)

although both taxa occur in sympatry. However, depending on the species concept adopted the treatment of taxa as valid species, subspecies or synonyms will always be an object of controversy among taxonomists to some degree, and the proposed changes in this book will stimulate further research.

In a future edition the authors will hopefully have the possibility to expand the presently rather short paragraphs on bionomics and ecology. It would also be helpful to include some information on the pheromone reactions and more specified differential diagnoses for species which are difficult to determine.

Overall, this book is the only handy, yet comprehensive work on European Sesiidae presently available. It combines detailed and specific data on the systematics and taxonomy useful for advanced entomologists with practical information and nice illustrations helpful for anyone who has the intention to become familiar with the European Sesiidae or who simply wants to identify specimens collected in the field. In view of the reasonable price it is a good alternative for all whose interest in Sesiidae does not exceed the European fauna. Moreover, since this book contains several recently described species and taxonomic changes it is as well a suitable supplement to the monograph on the Palaearctic Sesiidae published recently by Spatenka *et al.* (1999) and should not be missing in any entomological library.

Reference

- SPATENKA, K., GORBUNOV, O., LASTUVKA, Z., TOSEVSKI, I. & ARITA, Y. (1999): Sesiidae – Clearwing Moths. In NAUMANN, C. (ed.), Handbook of the Palaearctic Macrolepidoptera. Vol. 1, 569 pp., Gem Publishing Company, Wallingford, England.

CD-ROM Review

Meijerman, L. & K. R. Tuck 2000. **Arthropods of economic importance. Interactive tutorial for the preparation of genitalia in Microlepidoptera.** – World Biodiversity Database CD-ROM Series. – Expert Center for Taxonomic Identification (ETI), University of Amsterdam. – ISBN 90-75000-18-9. Price: 49.00 €.

The investigation of morphological features of the genitalia is a basic requirement for the precise identification of most Lepidoptera. Various methods are used to prepare the genitalia for investigation. Sometimes it may be sufficient just to remove some scales to reveal the necessary character to differentiate between two similar species. In most cases, however, a detailed investigation of genitalia structures is necessary and requires the preparation of the entire (sclerotised) genitalia complex. Generally, the preparation technique used is the same for all Lepidoptera, but to prepare genitalia of smaller moths requires a much more delicate touch than is necessary for most Macrolepidoptera.

The numerous papers explaining dissecting methods and standards of lepidopterous genitalia cannot replace a personal introduction into the practical preparation process. Just tuition in the many subtle “tricks of the trade” enables a beginner to produce a reasonable quality of genitalia slides or the “professional” to improve his standard. The novel “Interactive tutorial for the preparation of genitalia in Microlepidoptera”, produced by professionals, comes close to a personal teaching course. This CD-ROM explains by written text and colour photographs as well as spoken text and video-clips how to prepare lepidopterous genitalia using a stereo-microscope.

The user can watch the entire preparation procedure on the screen as if watching through the oculars while the speaker explains every step. It enables one to see how to handle instruments (such as the mounted snipe feathers¹ used in the cleaning process) and objects under the microscope. Additionally, the user can view an introduction into the morphology of lepidopterous genitalia, look up terms in the glossary or literature references as well as obtain an overview of the equipment necessary for the entire preparation process. One may work through the programme step by step or use the “Navigator” window to choose which part of the programme to access directly. At any moment the user may look for terms via the “Find” window. In this way, the entire programme is easy to use and understand, even for beginners of genitalia preparation or computing (or both).

Unfortunately, less is explained about requirements for the stereo-microscope. This is the most expensive of all the tools necessary for genitalia preparation. The microscope should have a magnification from about 7 to 70 times and there should be enough distance (c. 8cm) between the microscope stage and the object lens for handling instruments during the preparation process. Also, transmitted light is indispensable to facilitate discovery and removal of minute soiling. Without transmitted light it is nearly impossible to produce a clean genitalia slide good enough to photograph for publication.

The advanced user will notice the absence of a comprehensive list of literature or explanations of certain preparation techniques such as eversion of the vesica of the male aedeagus, or how to preserve the original shape of the female bursa copulatrix or the spermatophore(-s), but it might be not the intention of the authors to produce this tutorial for professionals. This CD-ROM reflects the main standard for the preparation of the genitalia of Lepidoptera. It is without any doubt a comprehensive and ‘personal’ teaching course about the preparation technique of the genitalia of the smaller Lepidoptera. It can be recommended for professional scientists and amateurs, and its usefulness is not restricted to research on “Microlepidoptera”. Never before everybody could have his personal teacher for the technique of genitalia preparation available at any time. The programme is adapted to both Microsoft Windows and Macintosh computer systems. Information is also available at www.eti.uva.nl.

MATTHIAS NUSS

¹ Somebody who have difficulties in obtaining snipe-feathers may try to replace them by penguin-feathers which may be obtained from Zoological Gardens.

The Distribution Atlas of European Butterflies

OTAKAR KUDRNA

Publication spring 2002. 29 x 21 cm. Approx. 400 pages. Distribution maps to all species. (Oedippus No. 20.) ISBN 87-88757-56-0. Hardback. DKK 390,00

The book: In a very short time - only about six years since the *Mapping European Butterflies* project was announced or some seven years since the preparations were started - the results in the form of *The Distribution Atlas of European Butterflies* can now be presented to the public. The database of the Atlas consists of 228931 data records provided by 250 recorders from all over Europe or extracted from all the major national, regional and private data banks. The Atlas contains about 450 dot distribution maps of all the European butterflies. For the first time ever a distribution atlas of European butterflies will be available and at the same time Europe will be the first continent ever to have all its butterfly species plotted on precise and comprehensive distribution maps. Apart from providing significant species specific chronological data for taxonomists and biogeographers, the prime purpose of the Atlas is to aid and promote the conservation of European butterflies. The analysis and evaluation of the distribution data contained in the Atlas will facilitate the identification of priorities in selecting species and areas for European significance for conservation purposes. Thus, *The Distribution Atlas of European Butterflies* constitutes a major contribution towards the advancement of our knowledge of European butterflies.

The author: *Dr. Otakar Kudrna* (63, British, but Czech born) has devoted most of his life to the scientific study of butterflies, concentrating mostly on those of Europe. He is the author of about 80 original papers and books on systematics, biogeography, ecology and conservation of butterflies published in English and German. Early retirement relieved him of his university duties and enabled him to conceive and conduct the *Mapping European Butterflies* project, his long-held dream. Nonetheless, without the support of Naturschutzbund Deutschlands e.V. (NABU) and the Gesellschaft für Schmetterlingsschutz e. V. (GfS), Mapping European Butterflies could never have been started, and without the co-operation of the 250 recorders, the project would never have been successfully accomplished.

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Erratum

The editors apologize for a missing indication of authorship for the book review of Lastuvka, Z. & A. Lastuvka, 2001, *The Sesiidae of Europe* published in *Nota lepidopterologica* 24 (4): 85–86. This review has been written by AXEL KALLIES.

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