

BOOK REVIEW

PATOČKA J. & TURČÁNI M.: LEPIDOPTERA PUPAE. CENTRAL EUROPEAN SPECIES. VOL. I, II. Apollo Books, Stenstrup, 2005, 542 + 321 pp. (271 Pls). ISBN 87-88757-47-1. Price DKK 960,00.

While the adults of the extensive order *Lepidoptera* are well studied and the systematics of this insect order is based on their morphology, the immature stages, especially the pupae, are rarely used in systematic studies. In the entomological literature there are only a few comprehensive books on this subject and papers are dispersed mainly in agricultural and forestry journals as the correct determination of immature stages is very important for applied entomologists. Immature stages are rarely present in collections due to technological difficulties (conservation), availability or attractiveness.

This book on pupae by two authors tries to correct this at least for the Central European region. The major part of this publication is the life-work of J. Patočka, who has been studying lepidopteran pupae and collecting them for several decades. No wonder this author – a forest entomologist – is near to this subject. During his research career and with help of many lepidopterologists he has collected enormous numbers of pupae, of about 2500 species, i. e. about two thirds of the Central European species. He has also produced more than 8000 drawings. The other author M. Turčány contributed fewer species (superfamilies *Hesperoidea* and *Papilionoidea*), but translated the work into English and produced the graphics, and was responsible for the redaction. The drawings of the genus *Phyllonorycter* (s. l.) were made by F. Gregor.

Due to its size this book is in two volumes (hardback), the first contains the text and the other the drawings. A very short introduction deals with methods of collecting, conservation and studying pupae and their external morphology (it is a pity the

opportunity for a more detailed survey was not exploited) and biology. Then follows identification keys to superfamilies and families, then genera of individual families and species of individual genera. Every family is introduced by a short text, which includes basic information on each genus (number of species in Europe) and species (size and colour of the pupa, host plants of the caterpillar, ecological character of the species etc.).

The key is presented in an exemplary way with every item and description illustrated by an accurate drawing, which should prevent misunderstanding. Lack of such illustrations makes it difficult to use many keys, which are excellent in other respects. Drawings from many Patočka's papers, mainly in German, which are sometimes presented with more detailed systematic reviews of pupae are also used. These were standardized in terms of size and arranged in individual plates with maximum utilization of page area. This layout does not hinder but obscures interesting and important structures (cremasters) used in determination, which should be drawn in more detail and enlarged. The legends of the figures might have been arranged more clearly as they could be easily overlooked. This could have been achieved by a better use of the page area in which figure notes are grouped while more than half of each column remains blank. Another aid in the keys would have been graphic marks or bold types indicating important features (introductory key numbers).

Apart from those technical points this is an excellent book in principle. Nevertheless, the practical usefulness of the key can only be assessed by use. The successful work is a fitting monument to the first author's life activity and links subsequent generations of lepidopterologists. The authors and publisher are to be congratulated on producing this book.

I. Novák