

BOOK REVIEWS

KEYS TO THE INSECTS OF THE EUROPEAN PART OF THE USSR (G. S. Medvedev, chief editor). VOLUME IV (LEPIDOPTERA), PART II, by M. I. Falkovitsh (ed.) et al. 1990. E. J. Brill, Leiden. (translation of: OPREDELITEL NASEKOMYKH EVROPEISKOI CHASTI SSSR, TOM IV, CHESHUEKRYLYE, VTORAIA CHAST. Nauka Publishers, Leningrad, 1981—*translator*: B. R. Sharma). x + 1092 pp., 675 figs. Hard cover, 16 × 24 cm, ISBN 90-04-08926-8. \$160.00 U.S. Available from E. J. Brill (U.S.A.) Inc., 24 Hudson Street, Kinderhook, New York 12106.

This remarkable, bulky handbook is the second part of a work devoted to the Lepidoptera of western Russia. The English version of Part One was issued in 1987 (Amerind Publishing Co. Pvt. Ltd, New Delhi—edition supervised by the U.S.D.A., Washington, D.C.), and it covered the non-ditrysian families (with only a superficial treatment of the Nepticulidae), and eight families among the lower Ditrysia, namely the Psychidae and all members of the Zygaenoidea, Cossioidea, Sesioidea and Tortricioidea. Part Two deals with a larger number of families (29 if one accepts the classification that I proposed in 1991: see *Entomol. Scand.* 22:90-91). These are the Eriocottidae and Tineidae (including the "Euplocamidae" and "Hieroxestidae"), all members of the Gracillarioidea, Yponomeutoidea, Choreutoidea, Urodoidea (*Wockia* Heinemann: p. 508, as a "plutellid" genus), Schreckensteinoidea, and Epermenioidea, and all the gelechioid families with the exception of most Coleophoridae (only the Amphisbatinae being treated: pp. 792 and 801, among the Oecophoridae *sensu auct.*). Parts One and Two thus provide keys to the "Micromoths" of nearly all the families known to occur in the European part of Russia.

The present book is firmly bound in boards, nicely presented, and has a good quality paper, i.e., opaque and whiter than that of the Russian edition. Compared with the latter, the book is thicker (approximately 7 cm) and of a different format: 15.5 by 24 cm instead of 17.5 by 27 cm. Most figures, however, have not been reduced and are as good as those of the original publication. Only a few figures are less satisfactorily printed, such as Figures 191 and 193. The page numbers of the Russian original are mentioned in the lefthand margin, and thus often precede the numbers of the figures (which may be a bit confusing). The arrangement of the figures is usually rather practical, although it should have been slightly different in a few cases: for example, Figures 11 and 12 (*Euplocamus* Latreille) are found on page 16, in the "Key to suborders and families," whereas they correspond to the "Euplocamidae" text (pp. 24-25); Figures 499 to 505 (*Schreckensteinia* Hübner and *Heliodines* Stainton) should have been placed between the Schreckensteiniidae (pp. 697-698) and Heliodinidae (pp. 699-700), rather than at the end of the Stathmopodidae chapter; etc.

On the whole, the English translation appears quite faithful, and no changes were introduced, either nomenclatural or taxonomic. That is definitely a reasonable option, although typographical errors might have been rectified for certain Latin names. For instance, *Bucculatrix gnaphaliella* (p. 193), *B. frangulella* (p. 195), *Caloptilia populatorum* (p. 252), *Milliereia* (p. 414), *Mompha propinguella* (p. 704), *Pseudatemella* (p. 792), and *Oliaria* (p. 1001), are all incorrect spellings for, respectively, *Bucculatrix gnaphaliella* (Treitschke), *B. frangutella* (Goeze), *Caloptilia populetorum* (Zeller), *Millieria* Ragonot, *Mompha propinquella* (Stainton), *Pseudatemelia* Rebel, and *Uliaria* Dumont.

Nine authors contributed to Part Two, namely: A. S. Danilevsky (Choreutidae), M. I. Falkovitsh (Heliodinidae, Scythridae, Stathmopodidae, Schreckensteiniidae, Epermenidae), Z. S. Gershenson (Yponomeutidae), V. I. Kuznetzov (Gracillariidae, Glyphipterigidae, Choreutidae), A. L. Lvovsky (Oecophoridae *sensu auct.*), V. I. Piskunov (Symmocidae, Lecithoceridae, Blastobasidae, Gelechiidae), S. V. Seksajeva (Bucculatricidae, Gracillariidae, Phyllocnistinae, Lyonetiidae), S. Yu. Sinev (Elachistidae, Batrachedridae, Momphidae, Cosmopterigidae), and A. K. Zagulajev (Tineoidea, Douglassiidae, Roeslerstammidae, Urodidae, and several yponomeutoid and gelechioid families). Most of these entomologists are well known specialists of the families in question, so that the proposed keys are usually quite reliable. Sometimes they could not examine a number of foreign (European) species, their work in such cases being largely based on that of other specialists

(e.g., R. Gaedike's papers on Douglassiidae and Epermeniidae). Much in the same way, the drawings were made by several artists or even, sometimes, by certain of the above-mentioned lepidopterists. These illustrations range from fair to excellent, and are often original, though explicitly taken from other works in several cases. I would like to emphasize the abundance of the figures provided throughout the book: nearly 530 drawings represent adults or their wing pattern; nearly 240, wing venation schemata; about 1700 and nearly 470, male and female genital structures, respectively; and so on. As in Part One, photography was not used, probably because diagnostic features may be more easily distinguishable with line drawings.

After a short abstract (p. v), a preface (pp. vii–viii) and a table of contents (pp. ix–x), the handbook starts with a key to suborders and families (pp. 1–23). Elaborated by M. I. Falkovitsh and A. K. Zagulajev, this key is almost identical with that published in Part One, except for minor changes: the translation is better, abbreviations have been avoided, and illustrations are slightly more numerous. Various parts of the key are interesting and original, but a few remarks have to be made:

- * many of the characters selected for a given family cannot be generalized on a worldwide scale
- * according to the seventh alternative, tibial spurs would be absent from the Hepialidae, but they are actually present in genus *Gazoryctra* Hübner, one species of which is treated in Part One (as a member of *Korscheltellus* Börner)
- * alternatives 13 and 22 are chiefly based on a slight difference in the "breadth" of the head, not on a clear-cut demarcation between two traits
- * several inaccuracies must be corrected: ocelli are present in many Eriocottidae (contrary to alternative 16 statement), the maxillary palpi may be well developed in Adelidae since *Nematopogon* Zeller definitely belongs to this family (90), the Sesiidae possess a long frenulum (118), tympana are distinctly present in the Thaumetopoeinae (Notodontidae) (182), etc.
- * "Endromidae" has been omitted after "In forewings R with 4 branches (R2–R5) stalked together" (alternative 190); in the description of the Nolidae (alternative 202), "ocelli" obviously represents a slip, and should be replaced by "compound eyes"
- * the nomenclature is wrong or outmoded for certain groups: in particular, Brachodidae must be substituted for "Atychiidae," Saturniidae for "Attacidae," and Thyatirinae (Drepanidae) for "Tetheidae"
- * several "families" have to be downgraded to subfamily rank (or even to tribe rank): "Phyllocnistidae," "Ethmiidae," "Galleriidae," "Phycitidae," "Pyraustidae," "Lithosiidae," "Ctenuchidae," and so on.

The following section deals with about 30 families, for which are provided keys for the identification of genera and species (pp. 24–1024). For each family, one can find a general diagnosis and at least one illustrated key to species, based on external characters and genitalia. Frequently, there are two separate keys to species (one being based on external characters; the second, on male genitalia), and there may also be a third one, based on female genitalia. In addition, there is a key to genera (or to subfamilies and genera), unless the family contains only one genus in western Russia. By and large, all these keys are more accurate than the one to suborders and families. Although the book is not intended as a taxonomic revision, it provides useful data for each species (e.g., distribution and larval food plants), and includes some interesting proposals or suggestions: *Eretmocera* Zeller, often misplaced in recent literature, is rightly placed within the Scythridae ("Scythrididae"); in the Oecophoridae *sensu auct.*, *Anchinia* Hübner follows immediately *Hypercallia* Stephens, probably because A. L. Lvovsky regards these genera as close relatives, a point of view in agreement with my recent reappraisal of the gelechioid classification (I have transferred both genera to the Elachistidae Hypertrophinae: *Alexanor* 16:239–255); *Uliaria* Dumont is rightly considered a member of the Gelechiidae Dichomerinae (the genus has been occasionally allocated to the "Autostichinae"); etc. Of course, the adopted classification and nomenclature would also require a number of amendments: *Odites* Walsingham is definitely not a member of the Xyloryctidae [see,

e.g., Hodges 1978: *Moths Am. N. of Mexico* 6(1):8–9]; *Millieria* Ragonot belongs to the Choreutidae, not to the Glyphipterigidae (see, e.g., Heppner 1982: *Smithson. Contr. Zool.* 370:1–27); *Phyllonorycter* Hübner must be substituted for *Lithocolletis* Hübner, *Ypsolopha* Latreille for *Ypsolophus* Fabricius, *Lecithocera nigrana* (Duponchel) for *Lecithocera luticornella* (Zeller), and so on.

A list of references (pp. 1025–1041) and an index of Latin names (pp. 1061–1092) conclude the book, along with a list of abbreviations of authors (pp. 1042–1043), and a useful list of botanical names, which gives the correspondence between common and Latin denominations (pp. 1044–1060). The present handbook is highly valuable because it includes a large portion of the European fauna of “Micromoths,” for which no equivalent, recent work has been published up to now. For instance, it takes into account a high percentage of the species known to occur in France: nearly 80% for *Bucculatrix* Zeller, more than 90% for *Caloptilia* Hübner and *Ypsolopha* Latreille, 90% for *Ethmia* Hübner, about 60% for the Scythridae, 93% for the Momphidae, 100% for the Choreutidae, etc.

In conclusion, this work should be included in the private library of any microlepidopterist interested in the Palearctic fauna. It is to be wished that a similar translation will soon be available for Part Three (dealing chiefly with Pyrales and Plume Moths).

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BUTTERFLY GARDENING IN THE SOUTH: CULTIVATING PLANTS THAT ATTRACT BUTTERFLIES, by Geyata Ajilvsgi. 1990. Taylor Publishing Company, Dallas, Texas. xi + 348 pp., 196 color photographs, 2 line drawings and 7 diagrams. Hard cover, 20.3 cm × 28 cm, ISBN 0-87833-738-5. \$34.95.

Novice and master gardeners in the southern U.S., particularly in the Rio Grande Valley, Texas, have an extraordinary treat in store with this volume. Ms. Ajilvsgi investigates every aspect of a butterfly garden, from her brief introduction on the significance of butterflies and their means of survival to appropriate commercial and private sources for obtaining seed and other garden supplies. The brief forward by Chess Ezzell McKinney, Chairman, Preservation of Butterflies, National State Garden Clubs, sets the stage for this treasury of information, and, although the title focuses on butterfly gardening, the emphasis is on gardening with a capital “G.”

There are special sections of the book devoted to creating a personal butterfly garden and to methods of attracting butterflies, highlighted by personal observations on such topics as the important characteristics of floral nectaries (color, shape and fragrance) and how to choose the appropriate plants, with one of my favorites—adopt a weed. Two other chapters detail the actual planning and planting of a butterfly garden. For the novice, or for butterfly watchers with limited space, there is the “instant” butterfly garden. For example, a fence, porch, or wall can accommodate hanging baskets or vines, and even the edges of driveways or window boxes can function as butterfly gardens. Special attention is given to the selection of plants, maintenance of the garden, and even to the introduction of caterpillars and chrysalids. For those lepidopterists with a grander vision in mind, a series of diagrams (pp. 78–83) provides garden plans for almost any geographic setting in the south. This thorough chapter on planning includes discussions of soils, preparation of the flower beds, and selection of appropriate plants, including native species, in addition to some forethought about flight patterns through the garden and appropriate areas for water and puddling stations. A chapter on “butterfly-friendly pest controls” emphasizes biological and physical controls, companion and repellent plants, and natural insecticides. Butterflies of south Texas, and especially of the Rio Grande