Furumi Komai, Yutaka Yoshiyasu, Yoshitsugu Nasu & Tosihisa Saito (eds) 2011. A Guide to the Lepidoptera of Japan. – Tokai University Press, Hadano, Kanagawa, Japan. xx + 1307 pp. (incl. 248 colour plates). ISBN 978-4-486-01856-8. Hard cover, format 180 × 255 mm. Price: 40,000 Yen (postage included). Contact: E. Ina, email: inaair@tsc.u-tokai.ac.jp

Although written in Japanese, this wonderful, richly illustrated book should be of interest to many lepidopterists in Europe and elsewhere in the world. Indeed, captions are in English for all figures and plates throughout most of the book (from p. 67 onwards). Only the first chapter has figure captions in Japanese, but, in the morphology section, the abbreviations placed on the drawings correspond to Latin or English words and are usually easy to understand.

After a few introductory pages (with, in particular, authorship indications for certain figures), the book includes three main chapters, namely: I. Morphology and biology (pp. 1-56); II. Phylogeny and higher classification (pp. 57-496); III. Diversity of Japanese Lepidoptera (pp. 497-930). Chapter I deals with lepidopteran morphology (34 pp.; three authors), feeding habits (12 pp.; author: Y. Nasu), and sex pheromone chemistry and evolution (8 pp.; author: T. Ando). Chapter II, which is much longer, starts with six pages (by F. Komai) about the history of the higher classification of the Lepidoptera: the systems proposed by different authors are clearly presented, with tables and a cladogram which include both Japanese and Latin names. This cladogram is that considered by N. P. Kristensen, M. J. Scoble and O. Karsholt in 2007 (Zootaxa 1668: 699-747), i.e. a tree essentially based, for the Ditrysia, on my 1991 Entomologica Scandinavica paper and, for non-ditrysian Lepidoptera, on the excellent research work of Niels P. Kristensen, long realized in collaboration with the late Ebbe S. Nielsen. It corresponds to the classification adopted in the Guide to the Lepidoptera of Japan (published in February 2011, i.e. before an important, innovative article that came out later in 2011: Nieukerken et al. in Zhang's Zootaxa issue about animal biodiversity and classification). Pages 65-496 of the Guide treat, in detail, the morphology and classification of all lepidopteran families and subfamilies occurring throughout the world. This part of the book is illustrated with numerous, high-quality line drawings and photographs, which represent all lifecycle stages. As a rule, the nomenclature of the family-group taxa is quite reliable, although the authors should not have preferred "Amphitheridae Meyrick" to the senior, widely used name "Roeslerstammiidae Bruand" (issue discussed in Nota lepidopterologica 29: 113-120). Between pages 480 and 483, one finds a large foldout with a well-made table that compares the systems considered by many authors for the classification of the quadrifid Noctuoidea: it starts with "Hampson, 1900-1920" and ends with "Zahiri et al., 2010" (2011 actually - Zoologica Scripta 40: 158-173), although the system chosen in the Guide is more conservative than the latter. Chapter III is subdivided into four sections: "Lepidopteran fauna of Japan" (13 pp. by U. Jinbo; with a table showing, for every family, the number of species recorded from Japan), "Lepidopterous pests in Japan" (9 pp. by Y. Nasu and U. Jinbo), "Key to the families and to some subfamilies of Japanese Lepidoptera" (28 nicely illustrated pp.) and "Biology of Japanese Lepidoptera" (pp. 549-930). This last section – in Japanese like the rest of the text – covers about 992 species selected among all moth families known to occur in Japan. It includes host-plant Latin names and a number of figures illustrating the pre-imaginal morphology of certain species (most of which belong to the Gelechioidea). Pages 931-1180 correspond to 248 superb colour plates showing, for each of the above-mentioned 992 species, at least larva(e) and one or two imagos, often also eggs, the pupa and/or cocoon, the resting posture of the imago, etc. Then follow a long list of references (mostly not in Japanese), an "Index to scientific names" (i.e. Latin and Japanese names of moths and butterflies), a "General index" (including, in particular, English or Latin morphological terms), a "Host index" (with Latin and Japanese names of host-plants), and the list of the 27 contributors, which includes the four editors.

Non-Japanese entomologists will find in this handbook detailed information about host-plants and an abundant, high-quality artwork that documents, for example, the larval chaetotaxy, the head capsule ornamentation, the pupal morphology, and the imaginal wing venation (illustrated for, respectively, about 100, 90, 180, and 175 species). It should be emphasized that the 490 (usually numbered) text-figures of the book correspond, in fact, to approximately 1930 line drawings, 79% of which are original drawings. This Guide can thus be warmly recommended to all those interested in the biology, early stages and comparative morphology of the Lepidoptera.

Book review

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