

BOOK REVIEW

JENDEK E. & GREBENNIKOV V.: *AGRILUS* (COLEOPTERA, BUPRESTIDAE) OF EAST ASIA. Jan Farkač, Prague, 2011, 362 pp. ISBN 978-80-903590-6-2 (HB). Price EUR 120.00.

Nearly every year a large, comprehensive book on the attractive family Buprestidae (Coleoptera) is published. Now I have in my hands a really comprehensive study on the genus *Agrilus* Curtis, 1825 of East Asia, which is one of the best publications on this topic.

This book is divided into 13 main chapters: 1. Abstract, 2. Introduction, 3. Acknowledgements, 4. Abbreviations and Codens, 5. Material and Methods, 6. Morphology, 7. Subgeneric Classification, 8. Species Groups, 9. Taxonomic Inventory of *Agrilus* Taxa of East Asia, 10. Analysis, 11. Literature Cited, 12. Appendices and 13. Plates. Three important chapters are further divided as follows: "Material and Methods" (General conventions, Geographical coverage, Information resources, Data gathering and processing, Format of taxonomic data), "Taxonomic Inventory..." (*Agrilus* taxa outside the target area, Misidentifications, nomina nuda, and other unavailable names), and "Analysis" (Taxonomic-nomenclatural analysis, Examined material, Host plants, Taxa diversity, Distribution, Biogeographic analysis, Similarity of sub-regional faunas, Conclusions).

The genus *Agrilus* Curtis, 1825 is the largest genus in the Animal Kingdom containing 2784 species (Bellamy, 2008) world-wide. The distribution of this genus, the number of species and wide range of host plants result in an enormous species diversity. All attempts to divide the genus into subgenera are based only on regional faunas (36 valid subgenera are proposed) so that the subgeneric classification of the genus is highly unsatisfactory. The system of informal species-groups (used also in this book) seems to be much better and efficient.

The target area covers the following countries: Russia (easternmost administrative units), Mongolia, continental China, North Korea, South Korea and Japan (except for the Oriental archipelagos Bonin and Ryukyu). All 278 *Agrilus* taxa known from this area are treated and illustrated including 74 newly described taxa (26.6 %).

The book contains many new taxonomic and nomenclatural acts: 73 new species and 1 new subspecies are described, two names are resurrected from synonymy, one species name is downgraded to a subspecies, four former synonyms are transferred and attributed to different species and 69 new synonyms are proposed. Moreover 72 lectotypes are designated and type species are rectified for three synonyms of *Agrilus* (Teres Harris, 1829, *Paradormorphus* Waterhouse, 1887 and *Engyaulus* Waterhouse, 1889).

The chapter "Morphology" is accompanied by 7 full-page colour plates of morphological characters and their variability.

Instead of uselessly attributing species to the formal, artificial subgenera already described (see above), all *Agrilus* species from the target area are divided into 34 informal species-groups. This is the first attempt to group the east Asian species of this genus. Of course, a few species remain unassigned (page 33).

The core chapter of the whole publication is the chapter "Taxonomic Inventory of *Agrilus* Taxa of East Asia". All 278 *Agrilus* species known from East Asia (incl. newly described species and subspecies) are treated on 202 pages and 3 species from outside the target area are included to explain some taxonomic issues. Treatments of all species contain the following

information: full reference to the original description, type locality, information on type specimen(s), full bibliography (with a brief characterisation of each paper), type deposition, diagnosis (incl. size), list of specimens examined, adult occurrence, host plants and distribution. Also all synonyms are accompanied by references to the original descriptions, all information on the type specimens and their deposition, full bibliography, and type specimens examined. If necessary, a short paragraph "Remarks" is added.

The chapter "Analysis" contains the following paragraphs: Taxonomic-nomenclatural analysis, Examined material, Host plants, Taxa diversity, Distribution, Biogeographic analysis, Similarity of sub-regional faunas, and Conclusions, and it is accompanied by 14 pages of very instructive and self-explanatory graphs, maps and tables.

The chapter "Literature Cited" is also impressive: 748 titles, which are linked to more than 5220 commented taxon-level references. This chapter is followed by 5 appendices: I. New taxonomic and nomenclatural acts, II. Synoptic catalogue of East Asian *Agrilus*, III. Checklist of species-group names, IV. Regional distribution of the *Agrilus* of East Asia, and V. Morphological characteristics of *Agrilus* species-groups of East Asia.

The highlight of the book is the full-page, colour plates: 7 plates of morphological characters (see above), 24 plates of the habitus of all the species (each plate with 12 images), 10 plates of aedeagi (altogether 248 species), and 13 plates of type specimens (325 type specimens). All images are of the highest quality and can be used for the determination of both species-groups and species.

It is very difficult to find any mistakes in a book like this. Initially I missed a species identification key but the absence of a key is sufficiently explained by authors in the chapter "Introduction": to construct a good key for 278 species in such a diverse genus is not only difficult (nearly impossible according to me) but also useless; the user of the key would be lost without comparative material. Moreover the images of habitus and aedeagi are good enough for determining species, especially if the characteristics of species-groups cited in the text are used.

Not many larvae of *Agrilus* are described, therefore these descriptions could have been mentioned in this book.

I found only a few misprints; e.g., in "Abstract" two composed names are written with dash (*A. chaeto-coxalis* and *A. pro-latus*) but this misprint is not repeated in the text.

In summary this book is one of the best recent publications on the family Buprestidae and in addition it includes a summary of the whole life experiences of the senior author, who is a well known world specialist on the genus *Agrilus*. Moreover a lot of *Agrilus* species (namely from East Asia) have been recently introduced into North America and some of them are highly invasive (e.g., the emerald ash borer – *Agrilus planipennis*) so this book can also help with the identification of new invasive species from this area.

REFERENCE

- BELLAMY C.L. 2008: *A World Catalogue and Bibliography of the Jewel Beetles (Coleoptera: Buprestoidea). Vol. 4. Agrilinae: Agrilina through Trachyini. Series faunistica No. 79.* Pensoft, Sofia-Moscow, 722 pp.

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