The Orthoptera of Michigan: Biology Keys and Descriptions of Grasshoppers, Katydids, and Crickets

Roger Bland
220 pp., $26.95 (spiral bound soft cover)
ISBN 1-56525-017-6 (web2.msue.msu.edu/bulletins)

At last, all the Orthoptera of the Midwest are assembled in one useful guide. This publication represents a high-quality update to Cantrall’s Orthoptera (et al.) of Michigan (Cantrall 1968). The text of The Orthoptera of Michigan includes separate and well-balanced keys to the seven orthopteran families found in Michigan. Furthermore, each family and subfamily has a separate key to the 137 species found in the state. Each species comes with an explanation of geographical distribution, habitat preferences, and a color photograph of the specimen. Each key is supported with drawings and photographs to assist in definitive identifications.

The Acrididae represent the bulk of orthopteran species diversity in Michigan, and the tools for identification of this family are well developed in the text. The Melanoplinae have descriptive drawings of male genitalia cerci, and furcula; the Gomphocerinae key uses concise drawings of the head anatomy; and the Oedipodinae key has nicely tabulated color photos of hind wings. This section is essential, because Michigan fauna is comprised of both eastern and western species and as well as one indigenous species, Appalachia arcane Hubbell and Cantrall.

Other orthopteran families are given excellent coverage in this book as well. The Tetrigidae, Tridactylidae, and Grylotalpidae represent a small portion of the overall orthopteran diversity in Michigan, as they do in much of the Midwest, yet Bland has assembled up-to-date descriptions and references for any researcher willing to dive into these groups. Bland also does a nice job presenting the Rhaphidophoridae, Tettigonidae, and Gryllidae, using descriptive drawings and color photographs, making the keys readily usable. These families have been underrepresented in past taxonomic works, and well thought out descriptions are helpful for individuals working with these groups.

Bland uses the last few pages of this highly functional manual to discuss “Threatened and special concern Orthoptera of Michigan.” Discussion of this topic is long overdue, especially for North American species. In our scientific quest to describe biodiversity and save endangered habitats around the world, this section serves as a helpful reminder that the habitat loss and a lack of basic knowledge exists in our own backyard. An introduction to the plight of the federally endangered grasshopper Trimerotropis huroniana (Walker) will likely be the first exposure to an endangered grasshopper for most reading this book.

In conclusion, this book is a worthwhile investment and will be of great value to researchers and naturalists who are working with Orthoptera, especially those individuals from the upper Midwest and southern Canada. Moreover, the spiral binding makes it a durable, hands-on user’s guide for the laboratory and the field.

References Cited


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World Catalogue of Insects. Volume 5. Tortricidae (Lepidoptera)

John W. Brown
Apollo Books, Stenstrup, Denmark, 2005
741 pp., $174.50 (hard)
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This, the first volume in the Apollo World Catalogue series devoted to Microlepidoptera, also is the first attempt to catalog the world fauna of any major family of Microlepidoptera since the Oecophoridae (sens. lat.) by Gaede in 1938–1939 in the Lepidopterorum Catalogus. The last previous world catalog of Tortricidae was that of Meyrick in 1913, which treated only the Tortricinae of current concepts. In 1980, in Annual Review of Entomology (Powell 1980), I guessed there were >4,000 described species of Tortricidae, which was true but woefully conservative; by 1991 John Brown and I increased the estimate to >5,000 species; and Heppner that same year tallied 6,683! Several hundred new species have been described since then, but our naivété may be prophetic of the state of world cataloging of Lepidoptera, one of the most popular orders among contemporary systematists—this catalogue lists just >9,000 species. With this total, the Tortricoidea, which includes the single family Tortricidae, ranks second only to Gelechioidae in species richness among microlepidopteran clades.

The format is dictionary-like, an alphabetical listing by generic names, with the species currently assigned to each genus listed alphabetically, along with their synonyms. For each species-group, name Brown et al. provide the current and original generic assignment, original literature citation, type locality, sex of the holotype, and location of the type specimen if known. Under the heading for each genus, its original literature citation, and those of its synonyms are given,