

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

Author: Bomar, Charles

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## A Book Review of

## The Orthoptera of Michigan: Biology Keys and Descriptions of Grasshoppers, Katydids and Crickets by Roger Bland

Central Michigan University, Michigan State University Extension Bulletin E-2815, 2003. 220 pages. (http://web2.msu.edu/bulletins)

Reviewed by Charles Bomar, University of Wisconsin-Stout, Menomonie, WI 54751

I first met Roger 12 years ago when he was reviewing Orthoptera collections at Ferris State University. At that time he explained he was working on an updated version of Cantrall's (1968) Orthoptera (et al.) of Michigan. I was excited about the possibilities of seeing an updated version, but expected a similar outcome— a black and white manuscript with notes and comments about expanded ranges and new state records.

The final product greatly exceeded my expectations and preconceived notions of what this project would be in the end. This spiral-bound manual includes (balanced) dichotomous keys of the 7 families of Orthoptera found in Michigan, with descriptive biographies of each family and subfamily.

Especially welcome is the key to the camel or cave cricket species, which are difficult to separate, and the key to Melanopline grass-hoppers, complete with drawings of male cerci. At last, all the keys to Midwestern Orthoptera are in one useful guide.

An excellent checklist of the 137 species is provided, including color photos and anatomical drawings of the Orthoptera found in state. Bland makes an extra effort to show sexual dimorphism when present, providing color photos of male and female specimens. This manual also provides a nice display of spread wings from the Oedipodinae.

Only 2 minor criticisms come to light in a review of this wonderful manual. First it would be informative to highlight the differences from Cantrall's 1968 work. By my count, Cantrall reported 130 Orthoptera from Michigan, and Bland reports 137. Some of this comes from revised taxonomy, from repeated field surveys, and in the case of *Saga pedo pedo* (Pallas) introduction of an exotic species. Second, Bland develops a worthwhile discussion on rare, threatened and endangered species (pp 194-197), and proposes a list of candidates, but does not clarify the reasons for listing.

Overall, this is a valuable contribution to the Orthopteran literature and should be a useful resource for many years to come. Orthopterists and naturalists from the North Central US and South Central Canada will find this manual useful, as well as an incredible bargain at \$26.95 USD.

## Literature Cited

Cantrall, I. J. 1968. An annotated list of of the Dermaptera, Dictyoptera, Phasmatoptera, and Orthoptera of Michigan. Michigan Entomologist. 1:299-346.

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