

BOOK REVIEW

Lamp W.O., Berberet R.C., Higley L.G., Baird C.R. (Eds.). 2007. Handbook of Forage and Rangeland Insects. Entomological Society of America, Lanham and the American Phytopathological Society, St. Paul, Minnesota, U.S.A. 180 pp. ISBN 0-9776209-0-5.

This handbook co-authored by 43 specialists from the USA and Canada is a highly successive, authoritative and practical reference guide to injurious and beneficial arthropods occurring on forage and rangeland crops. Distinguishing the insects from these two ecological groups is basically important for the management of crop pests. As indicated in the introductory section "How to Use this Handbook" (p. 1) its primary goal is to help producers, consultants, researchers and academic teachers, and students to identify the arthropods and to outline methods for the protection and augmentation of beneficial arthropods and to control harmful ones.

The handbook contains the following four sections with several chapters and subchapters. Section "Forage and Rangeland Production" (p. 2–24) provides in a descriptive and tabulated manner useful information and short characteristics of 12 major forage legumes and 17 major forage grass species from the following plant genera: *Astrogalus*, *Coronilla*, *Lotus*, *Lespedeza*, *Medicago*, *Melilotus*, *Onobrychis*, *Medicago*, and *Trifolium*. It may be mentioned that there are more than 32 million hectares of land used for hay and silage crops in North America and their total production accounts 134,2 million tonnes. Interesting information on ecology and physiology of forage crops and production practices are also given in this section.

Section "Arthropod and Their Management" (p. 25–41) provides in descriptive and tabulated form very useful practical information on principles of integrated pest management and basic sampling procedures for arthropods. Of special practical value are useful keys for recognizing some common insects occurring in forage and rangeland crops based on their morphology and type of damage made to plants (p. 23–40).

Section "Injurious Arthropods" (p. 41–128) makes the main part of the handbook. It starts with a table titled "Common Groups of Arthropods That Feed on Forage and Rangeland Crops in North America" (41–42). This table contains Latin names of orders and families, their common names and information on the type of damage which allows the readers to go to the appropriate pages in the book regarding the following pest categories: foliar pests (p. 43–113), root feeders (p. 113–125), flower and seed feeders (p. 125–128). Each species or pest category is characterized in reference to the economic importance, morphological description and life cycle, injury caused, and management. For each pest a distribution map for North and Central America is provided as well as good photographs of life stages and injury caused to plants.

Section "Beneficial Organisms" (p. 129–163) contains description of major groups of natural enemies that suppress arthropod pests described in other parts of the handbook. The beneficial role of natural enemies is characterized in a descriptive and tabular manner being supported by good photographs and maps.

The topic of biological control of weeds in North America with the established natural enemies is also well covered and interesting information is provided on biocontrol of thistles (*Carduus* spp. and *Cirsium* spp.), spotted knapweed (*Centaurea maculosa*), leafy spurge (*Euphorbia esula*), and multiflora rose (*Rosa multiflora*).

Continued on page 160

Review of the book Lamp W.O. – continued from the page 146

Extensive "Literature" (186 references), good "Glossary" (p. 170–172), and a list of "Sources of Local Information" (70 addresses) make this handbook an excellent source of information on rangeland crops. Therefore, I strongly recommend this book to the attention of plant protection specialists and librarians.

Jerzy J. Lipa
Department of Biological Control and Quarantine
Institute of Plant Protection – National Research Institute
Władysława Węgorka 20, 60-318 Poznań, Poland
J.J.Lipa@ior.poznan.pl