

BOOK REVIEW

VAN DRIESCHE R., HODDLE M. & CENTER T.: CONTROL OF PESTS AND WEEDS BY NATURAL ENEMIES. AN INTRODUCTION TO BIOLOGICAL CONTROL. Blackwell, Malden, MA & Oxford, 2008, 473 pp. ISBN 978-1-4051-4571-8. Price: USD 69.95.

Volumes and reviews dealing with biological control (BC) have to be produced more or less continuously, due to steady progress in the field. The volume of knowledge is permanently augmented by a steady influx of numerous original papers published not only in three specialised BC journals (*Biological Control*, *BioControl*, *Biocontrol Science and Technology*), but also in many other journals where new essential findings on the genetics, physiology and behaviour of BC agents occupy a great proportion of space. While it is extremely important that accumulated basic findings are brought together and analysed in specialised books, such as the recent "*Behavioral Ecology of Insect Parasitoids*" published also by Blackwell (see review in *EJE*, 2008, **105**: 512), it is also important, particularly for BC practitioners, to have a recent general BC treatise that can serve as a guide for the use of various BC approaches.

The reviewed volume fulfils this task and is essentially an update of the book "*Biological Control*" by Van Driesche & Bellows (1996). Its scope is, however, widened by inclusion of BC of weeds, thanks to the co-authorship by Ted Center from the USDA ARS invasive plants laboratory. Weed BC is treated within all chapters and ch. 12 is focused specially on the classical approach to BC of weeds. A further great step forward, compared to the 1996 book, is the stress on non-target effects of BC in three chapters of the section 6 (Safety), where one finds historical negative experiences and the ways of predicting and avoiding non-target impacts.

The book is authored collectively by three specialists, working and teaching in the field: R. Van Driesche, M. Hoddle and T.D. Center. Their individual contributions to the 11 sections divided into 29 chapters is not defined, with the exception of the weed BC specialist T. Center. The first two introductory sections define the scope and aim of biological control, and describe the four kinds of BC agents (parasitoids, predators, pathogens and weed BC agents). Section 3 discusses insect invasions and advances arguments for the use of classical biological control through introductions, on which the greatest part of the book (164 pp., 4 sections with 12 chapters) is concentrated. The authors explain in the Preface their conviction why the importation of natural enemies is the most important form of BC: it is efficient in control of invasive pest species and has a long record of success. In the opinion of authors, the faults of classical BC have been exaggerated in recent years. Thus, it is not surprising that great space is given to this type of BC – almost half of the book. The other two types of BC are treated in much shorter sections, because they are viewed "as largely unproven approaches": conservation in section 8 (26 pp.) and augmentation in section 10 (34 pp.). This view will perhaps not be viewed favorably by many entomologists studying natural enemies, but is reasonable in a book that is essentially aimed at BC practitioners, as mentioned in Preface. Also the use of bio-pesticides (both pathogens and nematodes, in section 9, 26 pp.) is de-emphasized, as they "have largely failed to play major roles in pest control".

New directions are discussed in the last section 11. The book will be an important help for all those working in biological control, particularly classical BC, and may "instill in them a sense of power of this tool to combat invasive plants and arthropods", as the authors hope.

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