VAN DRIESCHE, R., HODDLE, M. AND CENTER, T. D. 2008. Control of Pests and Weeds by Natural Enemies. An Introduction to Biological Control. Blackwell Publishing, Oxford. x + 473 pp. ISBN 978-1-4051-4571, paperback, $69.95.

Two biological control textbooks were reviewed earlier in the pages of Florida Entomologist, in 1992 (75: 166-167) and 1996 (79: 269-270). This new book is more up-to-date than either of the others, and is affordable as a textbook. It is more up-to-date by including parts on biological invasions (against which classical biological control is targeted), safety (a consideration of much of what has been learned in the last decade or more about non-target effects and how to avoid them), and other targets (in addition to insects, mites and weeds) and new directions. The book is organized into 29 chapters within 11 parts.

Part 1 "Scope of biological control" has a 1-page introductory chapter followed by a 5-page chapter "types of biological control, targets, and agents." Part 2 "Kinds of natural enemies" has 4 chapters dealing respectively with parasitoids, predators, weed biocontrol agents, and pathogens of arthropods. Part 3 "Invasions: why biological control is needed" has two chapters: "The invasion crisis" and "Ways to suppress invasive species." Whole books have been published on invasive species, and the presentation here is well chosen for an introductory textbook to biological control.

Next comes Part 4, the core of biological control, called "Natural enemy introductions: theory and practice" with four chapters. They deal with interaction webs, population ecology (a chapter contributed by J. S. Elkinton), classical biological control, and weed biological control. Part 5 is called "Tools for classical biological control" and has three chapters. The first is on foreign exploration, the second on climate matching, and the third on molecular tools (contributed by R. Stouthamer). This last mentions many new techniques to obtain really useful information not otherwise available.

Part 6, on safety, has three chapters. The first describes fairly the errors made in the early history of biological control in affecting non-target species, and lessons learned. The other two concentrate on predicting host ranges of natural enemies and avoiding indirect effects on non-target species. The complementary Part 7, in two chapters, explains how to measure effects of natural enemies on their targets, without which the practice of biological control is pointless. Part 8, in two chapters, is about conserving biocontrol agents in crops, including interactions with chemical pesticides, pesticide-resistant natural enemies, and even instances where use of chemical pesticides is the most appropriate method for controlling pests.

Part 9 is about biopesticides formulated for use against terrestrial arthropods from bacteria, fungi, viruses, and nematodes. Part 10 is on augmentative biocontrol, in which arthropod biocontrol agents are reared in large numbers and released in greenhouses or outdoors, and it explains why releases in greenhouses have matured into a proven control method. Part 11, "Other targets and new directions" discusses ideas for controlling selected vertebrate pests and invasive pests such as marine organisms using biological control.

Sixteen plates of illustrations in color are provided and numerous black-and-white drawings and photographs are spread through the text. The book has a bibliography of 89 pages and a combined (subject and taxonomic) index of 26. As if all of that were not enough, the lead author makes available free the PowerPoint presentations of the 19 lectures of the biological control course that he prepared (www.invasiveforestinsectandweedbiocontrol.info/index.htm). Until much new information becomes available, it would be very difficult to better this book for its purpose as a textbook.

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