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BOOK REVIEW

CARDÉ R.T. & BELL W.J. (eds): CHEMICAL ECOLOGY OF INSECTS 2. Chapman & Hall, New York, 1995, 433 pp. ISBN 0-412-03961-3.

This book represents a second volume of *Chemical Ecology of Insects* (the first volume was issued in 1984) and reflects the fast development of knowledge in the field during the past ten years. Rapid expansion has been allowed by the adoption of new sophisticated methods of analytical and synthetic biochemistry on one hand and by a deeper insight into functional, ecological and evolutionary complexities of insect chemical interactions on the other.

The editors (R.T. Cardé, University of Massachusetts, Amherst; W.J. Bell, University of Kansas, Lawrence) did not try to cover the entire field of insect chemical ecology but instead they have selected topics that offer a perspective on some of the most interesting advances in this field. They managed to collect contributions from nineteen highly respected experts (16 U.S. authors, 2 New Zealanders, 1 Netherlander) and left them space in ten chapters to provide proximate examinations of the ways in which chemical cues modify ecological interactions.

There are chapters treating more general subjects such as intergration of different sensory modalities in behaviour output (chapter 1 by Harris & Foster); the role of prior experience in host finding and acceptance (2, Bernays); the role of learning (3, Vet, Lewis & Cardé); and the strategies of locating chemical resources (4, Bell, Kipp & Collins). The intriguing complexity of plant-insect interactions is documented on two case examples: Host tree chemistry affecting colonization in bark beetles (5, Byers); and host plant choice in *Pieris* butterflies (6, Chew & Renwick). Chemical communication in social insects mediating recognition and exploitation of signals coding their trails, territoriums, nestmates and mates is reviewed in chapters 7 (Traniello & Robson) and 8 (Smith & Breed). Chapter 9 (Aldrich) summarizes knowledge on heteropteran defensive glands, their use for adult aggregation and courtship and their exploitation by complex parasitoids. Fascinating examples of employment of the chemical signals for propaganda, camouflage or chemical mimicry are explored in the last chapter (10, Howard & Akre).

It was not the main intention of the editors to give the reader comprehensive information about the whole span of chemical ecology of insects. Instead, individual chapters explore into details about specific topics and thus identify the boundaries of our current knowledge. This book will satisfy anybody interested in really deep and fascinating details of interactions between living organisms. It contains much valuable information and numerous references; both will be useful for students and specialists in ecology and entomology.

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