

BOOK REVIEW

DENNO R.F. & PERFECT T.J. (eds): *PLANT-HOPPERS: THEIR ECOLOGY AND MANAGEMENT*. Chapman & Hall, New York, London, 1994, 799 pp., 65 GBP.

This is an outstanding review of our knowledge on the ecology of planthoppers (Delphacidae: Auchenorrhyncha). The book is a very well balanced account of planthopper life histories, population dynamics, community structure, and their interactions with host plants, predators, parasitoids, and transmitted pathogens, and the relevance of this information to biological control of pest planthoppers. It is well edited, so that, although written by many contributors, it retains the character of a coherent book, not of a grouping of disparate chapters.

There are not many insect families, especially in orders other than Lepidoptera and Coleoptera, that a concise review of their ecology would occupy nearly 800 pages. Like most insects dull in colour and small in size, planthoppers have been studied not so much for their own sake, to fill in a lacuna in our knowledge on another insect family, but rather as either a model group in the context of more general ecological research, or as a group containing several pest species.

These priorities, i.e. those concerning planthoppers as a taxon ad hoc, have resulted in unevenness in the progress of the research. This book, as a detailed review of the current situation, is equally invaluable as a reference source for what is known, and also what remains terra incognita.

Most of our information on planthoppers, a family with more than 2,000 described species, is in fact based on the study of a few species only. This '*Drosophila* phenomenon' represents a serious obstacle in any research into broad evolutionary and ecological patterns in the taxon. Thus, any host-

plant is known for only less than 25% of scientifically described planthopper species (Chapter 1), and for only less than 5% of them any parasitoid species has been recorded (Chapter 13), while information on tropical planthoppers other than pests is negligible. In addition to this, inadequate information on phylogenetic relationships in planthoppers makes interspecific comparisons of distribution of various ecological traits difficult (e.g., Chapter 4).

Planthoppers were found to be an excellent model group for the study of acoustic communication (Chapter 5) and wing polymorphism (Chapters 4, 7, 8, 9). Wing polymorphism, as polymorphism generally, provides excellent possibilities for the research upon trade-offs between various fitness components. This challenge has been taken up with success, so that it is now known how different wing forms in planthoppers are determined, and how differences in other traits of bionomy, such as fecundity, relate to wing forms. That the research into even such a well-known area as wing polymorphism is far from complete is indicated by a very recent and interesting discovery by Denno and Roderick (referred to in Chapter 7), that wing form frequencies, and hence a species' emigration from a habitat, can be influenced by the species' potential competitor.

This book provides extensive overview of facts, e.g., detailed lists of host plants, parasitoids, and predators of planthoppers, more than 1700 references, as well as stimulating ideas based on these facts, and thus, it is highly commended to entomologists as well as ecologists. In addition this hard bound volume of impressive size, with two cheerful planthoppers depicted on its green cover, would be of a highly ornamental value on any book shelf.

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