

## BOOK REVIEW

**Insects as Predators.** T. R. New. The New South Wales University Press: Kensington. 1991. 187pp. \$19.95.

Predatory insects tend to be ignored in many ecological studies. A few significant exceptions occur in applied entomology, including the famous *Rodalia cardinalis* example, but for the most part this important category of invertebrates remains a "black box" in many ecological and applied investigations. One of the reasons for this may be that insect predators are only rarely introduced to the undergraduate student in a comprehensive way, thus limiting the chances for future research in this exciting area. In this well written introduction to insect predators, Dr Tim New has helped address this problem by supplying a useful undergraduate text on this ecologically-important group.

Written as a teaching text, the book is designed to introduce the key issues of this very large field. After the first chapter which introduces predation *per se*, the following chapters cover the principal insect groups involved with predation (Chapters 2-3), the key behaviours associated with predation (Chapters 4-7), the ecology of predators (Chapter 8), and finally a brief introduction to the use of predators in applied entomology (Chapter 9). The subjects covered are logically presented and are supported by a more than adequate citation list.

A fundamental problem in any work of this sort is choosing the issues to be addressed. Tim New has dealt with this by defining in his first chapter the insects to which he is referring ("classical predator"; an insect which kills and consumes [normally several] animals for its own food), and then adhering in later chapters to the behaviours directly associated with this definition of predation. By doing so he largely ignores the groups fringing the true predators, such as the primary scavengers which may be secondarily predacious, or the parasitoids that normally feed on a (single) host as juveniles. I don't believe the book is adversely affected by this self-imposed limitation, although a discussion on the evolutionary aspects of the predacious life style may have been of benefit.

One part of this work which I feel should have been more adequately addressed is the theory and mathematics behind the modelling of predator/prey relationships. This topic is introduced in the first chapter, but is limited largely to a discussion of Holling-type functional response curves. In my experience, many undergraduate students are turned away from ecological modelling by their introduction to it, which is often based on classical predator/prey interaction equations. I will not debate the value of such models here, but I do believe that they are something with which an undergraduate entomologist/ecologist must come to terms. A chapter in this book, introducing the models, and more particularly the biological meaning of the symbols and equations used, would have been a useful starting point to this training.

Despite this criticism, the book is one likely to be utilised not only by students, but also by teaching staff searching for references to lecture material. The information included is written in a style which should encourage the undergraduate to look for further references and think about the subject in hand. This should be a primary aim of all teaching texts, and in this I think *Insects as Predators* has succeeded. For other research entomologists, the book will have only limited appeal, as it has too broad a base to supply the detailed review material for which a researcher may be looking.

Finally, despite the editorial comments introducing this book (the latest in the *Australian Studies in Biology* series), the work does not have special reference to the local insect fauna, but rather utilises a world-wide literature base. To do otherwise, and concentrate on the Australian fauna, would have produced a slim tome indeed. Perhaps this text will help promote biological research on the Australian insect predators and so increase our rather scant knowledge of this diverse and interesting group.

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