

PREFACE

The need for another textbook on insect physiology may not seem particularly compelling, as students of this subject are already well served by a number of outstanding texts. These include several excellent review series like *Advances in Insect Physiology* and *Annual Review of Entomology*; a number of good co-operative enterprises among which "Insect Physiology", edited by K. Roeder, and "The Physiology of Insecta", edited by M. Rockstein, may be mentioned; and, bright among these lesser lights, successive editions of Wigglesworth's unrivalled "The Principles of Insect Physiology". It is my experience as a teacher, however, that these books provide too heavy a fare for undergraduates who are not yet fully committed to the study of insect physiology, and it is for such students that the present volume is intended. It attempts to provide a less detailed account of a field which continues to be fruitful for the elucidation of many fundamental aspects of physiological function; and it is written in the hope that a broader approach may better serve to quicken the interest of potential converts.

In order to present a general treatment of insect physiology in a book of manageable size, it has been necessary to assume a certain knowledge of physiology on the part of the reader. Against this assumed background, those aspects of insect physiology which appear to be characteristic of the class have been singled out for detailed discussion. Attempts have been made, wherever possible, to sketch in the experimental background to the information which is presented, by coupling the account of a given topic with appropriate illustrations from the research literature. To these illustrations full reference is provided, giving a point of entry into the literature for readers who may wish to go more deeply into a particular subject; the text itself has been kept free of references, except where it has been thought desirable to draw attention to important work not included among the text figures.

The common names of insects, like cockroach or blowfly, are often used in the text where there seems little to be gained by a more precise designation. This practice does raise the difficulty that there are a number of quite different types of blowfly or cockroach, and what is said of one type does not necessarily apply to another. To avoid possible misinterpretation, an appendix is provided that sets out the common names of insects mentioned in the text, and lists the scientific names of species of that type which have been used as experimental material, together with a page reference to the corresponding item of information.

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