
Preface

In this second edition of *Insect Physiology and Biochemistry*, the chapter topics of the first edition have been retained and four new chapters have been added. Two of the new chapters (Chapter 6, Diapause, and Chapter 15, Immunity) cover topics and material not included in the first edition. Several anonymous reviewers of the first edition suggested that diapause and immunity needed to be included in any future edition, and I thank these reviewers for this advice. I also thank Dan Hahn for discussions of diapause and for valuable criticism and advice on Chapter 6, as well as Drion Boucias for helpful criticism and advice on immunity in Chapter 15. I take responsibility, however, for any shortcomings or errors in these chapters.

Flight and Vision have been expanded into new chapters (Chapters 11 and 13, respectively) because of the large amount of new material discovered on the mechanics and dynamics of flight and color vision. New references have been added to each of the earlier chapters, as well as to the new chapters, so the book now includes nearly 1800 references to the literature. Published work in insect physiology and biochemistry seems to be expanding exponentially, and students and scientists need a guide to the literature. References from the 1960s, 1970s, and 1980s, and a few even earlier, have been retained because I think it is important to have an understanding of how insect physiology developed. I have been frustrated while reading books that supply few or no references to the literature with statements or views that I would like to check to see if my interpretation agrees with the author's view. Just knowing facts usually is not as satisfying to me as knowing the evidence that supports why and how we know, or think we know, something.

As in the first edition, my goal has been to provide a textbook that will serve advanced undergraduate and graduate students studying entomology and/or zoology, and for working scientists in molecular biology, genetics, endocrinology, virology, microbiology, and plant sciences who may have limited experience, but have an interest in the broader field of insect physiology. Teachers of college and university courses in insect physiology likely will have to be somewhat selective in how much of the book to cover in a one-semester course. I hope students will find the book interesting to read, and find it useful as a reference source as they go through graduate school and into one of the life sciences as a profession.

I thank again those who aided and encouraged the first edition: Glenn Hall, Marie Nation Becker, Jon Harrison, Tom Miller, Kathy Milne, Christine Andreasen, and anonymous reviewers, because without their help I would not be doing a revision. I thank John Sulzycki for continuous encouragement with the first edition and this revision, and Pat Roberson, Jennifer Smith, and Zoe Tzanev at Taylor & Francis Group for editorial help with the revision. I appreciate the numerous illustrations that colleagues have let me use, and acknowledgment accompanies the appropriate illustrations in the book. Illustrations enhance a textbook, and I have tried to find and use good, illustrative ones. I thank Taylor & Francis Group for allowing several pages of color photos. I appreciate, as well, the permission that has been given to use many published figures. Finally, I thank my wife, Dorothy, for continued support and patience with this revision.

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