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Biology of Mosquitoes, Volume 1

Development, Nutrition and Reproduction

By: **Alan Clements**, Emeritus Professor of Medical Entomology, London School of Hygiene & Tropical Medicine, UK

January 1992 | Hardback | 532 Pages | 9780851993744

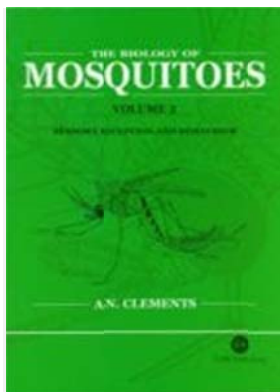
Description

A detailed account of the embryology, growth and metamorphosis of mosquitoes, the nutrition of larvae and adults, and egg production by the adult females. Physiological adaptations of larvae to their aquatic environment are also described. Written in a manner to be comprehensible to any informed biologist, the book has received glowing reviews.

Table of contents

- 1: Aspects of genetics
- 2: Embryology
- 3: The egg shell
- 4: Larval feeding
- 5: Larval nutrition, excretion and respiration
- 6: Osmotic and ionic regulation
- 7: Growth and development
- 8: Metamorphosis
- 9: The circulatory system
- 10: The endocrine system and hormones
- 11: Adult food and feeding mechanisms
- 12: The adult salivary glands and their secretions
- 13: Structure of the adult alimentary canal
- 14: Adult digestion
- 15: Adult energy metabolism
- 16: Adult diuresis, excretion and defaecation
- 17: Structure of the gonads and gonoducts
- 18: Spermatogenesis and the structure of spermatozoa
- 19: Oogenesis
- 20: Vitellogenesis
- 21: Hormonal regulation of ovarian development in anautogenous mosquitoes
- 22: Nutrition and fertility of anautogenous mosquitoes
- 23: Autogeny

Published by Chapman and Hall in 1992, this volume is now available from CABI Publishing



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Biology of Mosquitoes, Volume 2

Sensory Reception and Behaviour

By: **Alan Clements**, Emeritus Professor of Medical Entomology, London School of Hygiene & Tropical Medicine, UK

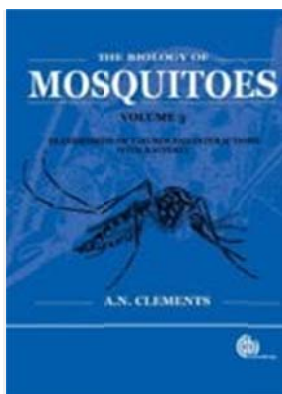
June 1999 | Hardback | 752 Pages | 9780851993133

Description

Mosquitoes are important as transmitters of widespread major diseases and as nuisance insects. They are also one of the most studied and well-known group of insects, both in the laboratory and in the field. The first volume in The Biology of Mosquitoes series is a key reference work and has received excellent reviews. This second title in the three volume series focuses on the functioning of the mosquito sense organs that provide them with information about the environment and that enable the adult females to find and attack their vertebrate hosts. It also reviews knowledge of the circadian rhythms and other internal mechanisms that regulate the onset and timing of different behaviours. This integrated review of the sensory mechanisms and behaviour of mosquitoes provides a unique insight into their biology. The contents, which are fully up-to-date, include much important work from the past which is often overlooked.

Table of contents

- : (Chapter numbers continued from Volume 1)
- Introduction: Cycles, rhythms, and other periodicities in mosquito behaviour
- 24: Larval integumental sensilla
- 25: Adult integumental sensilla: Their structure, physiology and connections with the brain
- 26: The antennae and hearing
- 27: Larval eyes and vision
- 28: Adult eyes and vision
- 29: Behaviour and aspects of the biology of larvae and pupae
- 30: Adult circadian rhythms
- 31: The regulation of adult behaviour
- 32: The modification of adult behaviour by geophysical and climatic factors
- 33: Flight
- 34: Genitalia and associated organs
- 35: Mating
- 36: Feeding on plant sugars
- 37: The sources and characteristics of host cues
- 38: Host finding
- 39: Mosquito–host interactions
- 40: Egg laying



<https://www.cabi.org/bookshop/book/9781845932428/>

Biology of Mosquitoes, Volume 3

Transmission of Viruses and Interactions with Bacteria

By: **Alan Clements**, Emeritus Professor of Medical Entomology, London School of Hygiene & Tropical Medicine, UK

December 2011 | Hardback | 592 Pages | 9781845932428

Description

The great importance of mosquitoes lies in their role as transmitters of pathogens and parasites, and in their use as experimental animals well suited to laboratory investigations into aspects of biochemistry, physiology and behaviour. The largest part of this latest volume of *The Biology of Mosquitoes* concerns interactions between mosquitoes and viruses and the transmission of arboviruses to their vertebrate hosts, while the remainder concerns symbiotic interactions between mosquitoes and bacteria. The introduction provides a timely review of the first major development in mosquito taxonomy for several decades. Further chapters describe the interactions between mosquitoes and the viruses that infect them, the transmission and epidemiology of seven very important arboviruses, and the biology of bacteria that are important control agents or of great biological interest. Like the earlier volumes, Volume 3 combines recent information with earlier important findings from field and laboratory to provide the broadest coverage available on the subject.

Table of contents

- a: Introduction: The traditional and revised classifications of aedine mosquitoes
- Chapter 41: Host-parasite interactions
- Chapter 42: Immune responses of mosquitoes
- Chapter 43: Viruses
- Chapter 44: Arboviruses - characteristics and concepts
- Chapter 45: Arboviruses - case studies of transmission
- 45a: Transmission of Eastern equine encephalitis virus
- 45b: Transmission of dengue viruses
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- 45d: Transmission of Japanese encephalitis virus
- 45e: Transmission of La Crosse virus
- 45f: Transmission of Rift Valley fever virus
- 45g: Transmission of West Nile virus
- Chapter 46: Pathogenic and symbiotic bacteria
- 46a: *Bacillus thuringiensis israelensis*
- 46b: *Lysinibacillus sphaericus*
- 46c: *Wolbachia pipientis*