

## Book review — Boekresensie

# Tsetse biology and ecology: their role in the epidemiology and control of trypanosomosis

S G A Leak

1999. CAB International, Wallingford and New York, 568 pp., hard cover. Price £65 (\$120) ISBN 0 85199 300 1. Published in association with the International Livestock Research Institute, Kenya.

When I was asked to review this book, I planned to read it from cover to cover. This I have not achieved, as there is so much information that I do not have the concentration span to succeed! I therefore dived into the book at various places, and each time I was amazed at how much reading the author must have done to produce such a comprehensive tome on tsetse and trypanosomosis. This book summarises the literature and highlights some of the areas concerning epidemiology that are relevant to current control techniques. Aspects requiring future research are also discussed. Rather than attempt to thoroughly cover subjects that have already been reviewed by experts in their fields, some of the pertinent points are summarised and the reader is referred to recent reviews for further details – there are 114 pages of closely-packed references!

The book is divided into 4 parts, namely: tsetse biology and ecology, epidemiology, vector control and control of trypanosomosis. These parts comprise a total of 20 chapters, including classification and anatomy, biology, physiology, genetics, sampling populations, distribution and habitats, behaviour, population dynamics, odour attractants, host-parasite interactions, human sleeping sickness epidemiology, epidemiology of trypanosomosis in domestic livestock, estimation of disease risk, including models of disease transmission, insecticidal spraying, traps and targets, insecticides on livestock, non-insecticidal tsetse control, general issues relating to the successful use of tsetse control techniques, and, finally, the control of trypanosomosis in domestic livestock. The chapters are further

divided up into sections on 315 separate aspects such as: the processing of the blood meal, trap efficiency, quantitative methods for the determination of distribution and abundance, blood meal identification, population dynamics, trypanosome infection of tsetse, reservoirs of *Trypanosoma brucei rhodesiense* and *T. b. gambiense*, distribution of cattle and their origins in Africa, mechanisms of trypano-tolerance, modelling trypanosomosis transmission, aerial spraying, trap and target design, pour-on insecticides, biological control, economics of tsetse control, public and private goods, privatisation of animal health care, chemoprophylaxis, and vaccines and immunological strategies for trypanosomosis control, to name but a few.

All this information has been fitted into an 'easy to hold and read' book weighing only 1 kg. This has been achieved by a small but easy-to-read print font, the use of tables to summarise information, very useful diagrams to summarise and visualise aspects such as digestive processes, hormonal and nervous control of the reproductive cycle, trap designs, hunger phases of tsetse flies, etc., so that there is a maximum of text and information. This book therefore allows one to rapidly explore the work that has been published on a specific aspect, concentrating on the past 28 years. Whether you conduct tsetse research, teach about tsetse and trypanosomosis, or are simply interested in this field, this book should be on your desk.

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