

Biology of the Kinetoplastida

Volume 1

edited by W. H. R. Lumsden and D. A. Evans

September 1976, xxvi+564 pp., £18.00/\$45.50 0.12.460201.0

This volume is the first of a major new series designed to consider the biology of the Kinetoplastida as a whole.

The volume begins by considering the systematics and the cell biology of the Order. Substantial reviews follow of *Trypanosoma* spp., grouped according to the hosts which they infect – such as birds, bats and non-human primates – or according to kinetoplastid taxonomy – such as the subgenera *Megatrypanum* and *Herpetosoma*, or the remarkable

aberrant species, *Trypanosoma rangeli*. Thereafter follow contributions on biochemical methods of taxonomy, oxidative metabolism and on some immunological aspects, such as innate resistance and antigenic variation. Throughout the book contributors point out new approaches to the study of these organisms, e.g., in their morphology and physiology and in the complexities of the hosts' responses to invasion.

Academic Press

London New York San Francisco

A Subsidiary of Harcourt Brace Jovanovich, Publishers

24–28 Oval Road, London NW1, England
111 Fifth Avenue, New York, NY 10003, USA
Australian Office: PO Box 300, North Ryde,
NSW 2113, Australia



PARASITOLOGY

PARASITOLOGY

(*Founded by G. H. F. Nuttall, F.R.S.*)

EDITORS

D. W. T. CROMPTON and B. A. NEWTON

EDITORIAL ASSISTANT

M. ELISABETH PAINTER, Ph.D.

EDITORIAL BOARD

GWENDOLEN REES, F.R.S. (*Chairman*)

W. PETERS*	L. G. GOODWIN
D. L. LEE*	C. A. HOPKINS
D. R. ARTHUR	J. LLEWELLYN
S. COHEN	W. F. MAI
S. R. SMITHERS	

* Representing the British Society for Parasitology

PANEL OF REFEREES

C. ARME	D. A. ERASMUS	M. ELAINE ROSE
J. R. BAKER	D. I. GIBSON	J. H. ROSE
J. BARRETT	L. P. JOYNER	J. F. RYLEY
ELIZABETH U. CANNING	C. R. KENNEDY	G. SALT, F.R.S.
THERESA CLAY	A. M. LACKIE	K. VICKERMAN
R. M. CONNAN	R. J. LINCOLN	P. J. WHITFIELD
R. R. A. COOMBS, F.R.S.	S. H. P. MADDRELL	H. H. WILLIAMS
F. E. G. COX	M. C. NESHEIM	C. A. WRIGHT
G. A. M. CROSS	BRIDGET M. OGILVIE	

VOLUME 73, 1976

CAMBRIDGE UNIVERSITY PRESS

CAMBRIDGE · LONDON · NEW YORK

PUBLISHED BY
THE SYNDICS OF THE CAMBRIDGE UNIVERSITY PRESS
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
Bentley House, 200 Euston Road, London NW1 2DB
32 East 57th Street, New York, N.Y.10022

© Cambridge University Press, 1976

CONTENTS

(All rights reserved)

PART 1 AUGUST 1976

	PAGE
ADAM, KATHERINE M. G., BLEWETT, D. A., BROCKLESBY, D. W. and SHARMAN, G. A. M. The isolation and characterization of a <i>Babesia</i> from red deer (<i>Cervus elaphus</i>)	1
HALTON, D. W., STRANOCK, S. D. and HARDCASTLE, ANNE. Fine structural observations on oocyte development in monogeneans	13
ROSE, M., ELAINE and HESKETH, PATRICIA. Immunity to coccidiosis: stages of the life-cycle of <i>Eimeria maxima</i> which induce, and are affected by, the response of the host	25
GHAZAL, A. M. and AVERY, R. A. Observations on coprophagy and the transmission of <i>Hymenolepis nana</i> infections in mice	39
SMITH, M. A. and CLEGG, J. A. Different levels of acquired immunity to <i>Schistosoma mansoni</i> in two strains of hamster	47
SMITH, M. A., CLEGG, J. A. and WEBBE, G. Cross-immunity to <i>Schistosoma mansoni</i> and <i>S. haematobium</i> in the hamster	53
CROMPTON, D. W. T., ARNOLD, SUSAN and WALTERS, D. E. The number and size of ovarian balls of <i>Moniliformis</i> (Acanthocephala) from laboratory rats	65
HOPKINS, C. A. and ZAJAC, A. Transplantation of <i>Hymenolepis diminuta</i> into naive, immune and irradiated mice	73
ORPIN, C. G., HUSKISSON, N. S. and WARD, P. F. V. Molecular structure and morphology of glycogen isolated from the cestode, <i>Moniezia expansa</i>	83
LACKIE, ANN M. Evasion of the haemocytic defence reaction of certain insects by larvae of <i>Hymenolepis diminuta</i> (Cestoda)	97
BARRETT, J. Studies on the induction of permeability in <i>Ascaris lumbricoides</i> eggs	109
KEMP, D. H., KOUDSTAAL, D., ROBERTS, J. A. and KERR, J. D. <i>Boophilus microplus</i> : the effect of host resistance on larval attachments and growth	123

PART 2 OCTOBER 1976

RYLEY, JOHN F. and WILSON, ROBERT G. Drug screening in cell culture for the detection of anticoccidial activity	137
TRIGG, P. I. and SHAKESPEARE, P. G. The effect of incubation <i>in vitro</i> on the susceptibility of monkey erythrocytes to invasion by <i>Plasmodium knowlesi</i>	149

	PAGE
CHRISTENSEN, NIELS ØRNBJERG, NANSEN, PETER and FRANDSEN, FLEMING. Molluscs interfering with the capacity of <i>Fasciola hepatica</i> miracidia to infect <i>Lymnaea truncatula</i>	161
MCLAREN, DIANE J. and HOCKLEY, D. J. <i>Schistosoma mansoni</i> : the occurrence of microvilli on the surface of the tegument during transformation from cercaria to schistosomulum	169
GRAY, J. S. The cellular response of the fowl small intestine to primary and secondary infections of the cestode <i>Raillietina cesticillus</i> (Molin)	189
EURE, HERMAN. Seasonal abundance of <i>Proteocephalus ambloplitis</i> (Cestoda: Proteocephalidae) from largemouth bass living in a heated reservoir	205
LE JAMBRE, L. F. and RACTLiffe, J. H. Response of <i>Haemonchus contortus cayugensis</i> to a change in the ratio of smooth to linguiform	213
LE JAMBRE, L. F. and WHITLOCK, J. H. Changes in the hatch rate of <i>Haemonchus contortus</i> eggs between geographic regions	223
Proceedings of the British Society for Parasitology, 7-9 April 1976	i

PART 3. DECEMBER 1976

STURROCK, R. F., BUTTERWORTH, E. A. and HOUBA, V. <i>Schistosoma mansoni</i> in the baboon (<i>Papio anubis</i>) parasitological responses of Kenyan baboons to different exposures of a local parasite strain	239
UPATHAM, E. S., STURROCK, R. F. and COOK, J. A. Studies on the hatchability of <i>Schistosoma mansoni</i> eggs from a naturally infected human community on St Lucia, West Indies	253
CHAPMAN, H. D. <i>Eimeria tenella</i> : experimental studies on the development of resistance to robenidine	265
CHAPMAN, H. D. Further studies on the use of chicken embryo infections for the study of drug resistance in <i>Eimeria tenella</i>	275
WILSON, R. G. Studies on short-term application of drugs to <i>Eimeria tenella</i> in tissue culture	283
RYLEY, J. F. and WILSON, R. G. Laboratory studies with some older anticoccidials.	287
RYLEY, J. F., MEADE, R., HAZELHURST, JUDITH and ROBINSON, THELMA E. Methods in coccidiosis research: separation of oocysts from faeces	311
LONG, P. L. and MILLARD, B. J. Studies on site finding and site specificity of <i>Eimeria praecox</i> , <i>Eimeria maxima</i> and <i>Eimeria acervulina</i> in chickens	327
SHIRLEY, M. W. and MILLARD, B. J. Some observations on the sexual differentiation of <i>Eimeria tenella</i> using single sporozoite infections in chicken embryos	337

Contents

vii

	PAGE
PARKIN, J. T. The effect of moisture supply upon the development and hatching of the eggs of <i>Nematodirus battus</i>	343
EURE, H. Seasonal abundance of <i>Neoechinorhynchus cylindratus</i> taken from largemouth bass (<i>Micropterus salmoides</i>) in a heated reservoir	355
DUBEY, J. P. and FAYER, R. Development of <i>Isospora bigemina</i> in dogs and other mammals	371
AHERN, W. B. and SCHMIDT, G. D. Parasitic helminths of the American avocet <i>Recurvirostra americana</i> : four new species of the families Hymenolepididae and Acoleidae (Cestoda: Cyclophyllidae).	381
WILSON, P. A. G., GENTLE, MAUREEN and SCOTT, D. S. Dynamic determinants of the route of larval <i>Strongyloides ratti</i> in lactating rats and the control of experimental error in quantitative studies of milk transmission of skin-penetrating roundworms	399
PEIRCE, M. A. Haemoproteid parasites of <i>Passer</i> spp.	407
HEATH, D. D. and LAWRENCE, S. B. <i>Echinococcus granulosus</i> : development <i>in vitro</i> from oncosphere to immature hydatid cyst	417

PARASITOLOGY

SUBSCRIPTIONS may be sent to any bookseller or subscription agent or direct to Cambridge University Press, P.O. Box 92, London NW1 2DB. Subscriptions in the U.S.A. and Canada should be sent to Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022. The subscription price of volumes 72 and 73, 1976, is £16.50 net (including postage) for a volume of three parts (US \$46.00 in the U.S.A. and Canada) payable in advance (£33.00 or US \$92.00 per year); separate parts cost £7.50 net or US \$21.00 each (plus postage).

BACK VOLUMES. Vols. 1–39: Inquiries should be addressed to Wm Dawson & Sons Ltd, Cannon House, Folkestone, Kent. Vols. 40 onwards: Quotations for parts still in print may be obtained from the London or New York offices of the Cambridge University Press.

FOR PERMISSION to reproduce material from *Parasitology*, please apply to the London or New York office of Cambridge University Press.

ISI TEAR SERVICE, 325 Chestnut Street, Philadelphia, Pennsylvania 19106, U.S.A. is authorized to supply single copies of separate articles for private use only.

CLAIMS for missing issues can only be considered if made immediately after receipt of the subsequent issue.

ADVERTISING. Details of advertising in *Parasitology* may be obtained from the publisher.

The previous part was published on 14 October 1976

PARASITOLOGY

Volume 73, Part 3, December 1976

CONTENTS

	PAGE
STURROCK, R. F., BUTTERWORTH, A. E. and HOUBA, V. <i>Schistosoma mansoni</i> in the baboon (<i>Papio anubis</i>) parasitological responses of Kenyan baboons to different exposures of a local parasite strain	239
UPATHAM, E. S., STURROCK, R. F. and COOK, J. A. Studies on the hatchability of <i>Schistosoma mansoni</i> eggs from a naturally infected human community on St Lucia, West Indies	253
CHAPMAN, H. D. <i>Eimeria tenella</i> : experimental studies on the development of resistance to robenidine	265
CHAPMAN, H. D. Further studies on the use of chicken embryo infections for the study of drug resistance in <i>Eimeria tenella</i>	275
WILSON, R. G. Studies on short-term application of drugs to <i>Eimeria tenella</i> in tissue culture	283
RYLEY, J. F. and WILSON, R. G. Laboratory studies with some older anticoccidials	287
RYLEY, J. F., MEADE R., HAZELHURST, JUDITH and ROBINSON, THELMA E. Methods in coccidiosis research: separation of oocysts from faeces	311
LONG, P. L. and MILLARD, B. J. Studies on site finding and site specificity of <i>Eimeria praecox</i> , <i>Eimeria maxima</i> and <i>Eimeria acervulina</i> in chickens	327
SHIRLEY, M. W. and MILLARD, B. J. Some observations on the sexual differentiation of <i>Eimeria tenella</i> using single sporozoite infections in chicken embryos	337
PARKIN, J. T. The effect of moisture supply upon the development and hatching of the eggs of <i>Nematodirus battus</i>	343
EURE, H. Seasonal abundance of <i>Neoechinorhynchus cylindratus</i> taken from largemouth bass (<i>Micropterus salmoides</i>) in a heated reservoir	355
DUBEY, J. P. and FAYER, R. Development of <i>Isospora bigemina</i> in dogs and other mammals	371
AHERN, W. B. and SCHMIDT, G. D. Parasitic helminths of the American avocet <i>Recurvirostra americana</i> : four new species of the families Hymenolepididae and Acoelidae (Cestoda: Cyclophyllidae)	381
WILSON, P. A. G., GENTLE, MAUREEN and SCOTT, D. S. Dynamic determinants of the route of larval <i>Strongyloides ratti</i> in lactating rats and the control of experimental error in quantitative studies of milk transmission of skin-penetrating roundworms	399
PEIRCE, M. A. Haemoproteid parasites of <i>Passer</i> spp.	407
HEATH, D. D. and LAWRENCE, S. B. <i>Echinococcus granulosus</i> : development <i>in vitro</i> from oncosphere to immature hydatid cyst	417

© Cambridge University Press 1976

Bentley House, 200 Euston Road, London NW1 2DB
32 East 57th Street, New York, N.Y. 10022

Printed in Great Britain at the University Printing House, Cambridge