September, 1929

CAMBRIDGE

UNIVERSETY

PRESS

LIBRARY

FEFTER LAWE

## PARASITOLOGY

EDITED BY

GEORGE H. F. NUTTALL, M. D., PH.D., Sc.D., LL.D., F.R.S.

Quick Professor of Biology and Director of the Molteno Institute for Research in Parasitology in the University of Cambridge

ASSISTED BY

D. KEILIN, Sc.D., F.R.S. University Lecturer in Parasitology, Cambridge



#### CAMBRIDGE UNIVERSITY PRESS LONDON: FETTER LANE, E.C. 4

ALSO

 H. K. LEWIS AND CO., LTD., 136, GOWER STREET, LONDON, W.C. 1
CHICAGO: THE UNIVERSITY OF CHICAGO PRESS (AGENT FOR THE UNITED STATES)
BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD.
TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

#### Fifteen Shillings net

[Issued 30 September, 1929]

PRINTED IN GREAT BRITAIN

## **Cambridge University Press**

TICKS. A	<b>MONOGRAPH OF</b>	THE IXODOIDEA		
By G. H.	F. NUTTALL, F.R.S., C.	WARBURTON, and L. E.	Robinson	
Part IV.	The Genus Amblyomn	na		
	ROBINSON, PH.D. (CANT. 6 being original	AB.). With a frontispiece	e, 7 plates (2 in colours), and Royal 8vo. 200	
THE TRA	NSMUTATION OF	BACTERIA		
By S. Gu	RNEY-DIXON, M.A., M.D	., M.R.C.S., L.R.C.P.	Demy 800. 12	s. net
A comple (20 in col	te manual for growers our and 4 in black and	white) and 305 original 1	RUIT AND HOPS R, F.I.C., F.C.S. With 24 p photographs and diagrams <i>Crown 8vo.</i> 45	
the second subjects of the	Contraction of the second s	STS OF THE FARM		
	dition. With 54 illustra		ool of Agriculture, Cambr Large crown 8vo. 6 (HES)	
BRITISH	RUST FUNGI (URE	EDINALES)		
	the second se	. By W. B. Grove, m.a.	With 290 figures Demy 8vo. 21	s. ne
0	I lawrence	Dance Emmo	Lem Lauman E	~ /
			Lane, London, E.C.	
Th	e Univers	sity of Chi	LANE, LONDON, E.C. icago Press	5
Th THE NE	e Univers	sity of Chi	icago Press	5 OGY.
The NEW Edited by E A	e Univers	<b>Sity of Chi</b> <b>OF BACTERIOLO</b> FALK. Irches in the field of bac	icago Press	5 OGY.
The NEY Edited by E A eig	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea	<b>Sof BACTERIOLO</b> FALK. Inches in the field of bac en in the field.	icago Press	S OGY. . net
THE NEY Edited by E A eig FOOD PC	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI	<b>Sof BACTERIOLO</b> FALK. Inches in the field of bac en in the field.	icago Press OGY AND IMMUNOLO 458 cteriology prepared by 55. 9d	S OGY. net
THE NEY Edited by E A eig FOOD PC A LABORA	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI clear summary of our p	<b>Sity of Chi</b> <b>COF BACTERIOLO</b> FALK. Inches in the field of bac en in the field. IN O. JORDAN. present knowledge of po	icago Press OGY AND IMMUNOLO 458 cteriology prepared by 55. 9d bisoning through foods. AND IMMUNOLOGY.	GGY . net
THE NEY Edited by E A eig FOOD PO A LABORA JOHN F. No CA	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI clear summary of our p CORY OUTLINES I WATON and I. S. FALK. Insists of exercises whit itigty of the best method	<b>Sity of Chi</b> <b>COF BACTERIOLO</b> FALK. Inches in the field of bac en in the field. IN O. JORDAN. present knowledge of po	icago Press OGY AND IMMUNOLO 458 cteriology prepared by 55.9d bisoning through foods. AND IMMUNOLOGY. 88 haint the reader with a working with different	GGY. net
THE NEY Edited by H A eig FOOD PC A LABORA JOHN F. No Ca va gr	e Univers VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI clear summary of our p CORY OUTLINES I BRTON and I. S. FALK. Insists of exercises whit itigty of the best method oups of bacteria, and to	<b>Sity of Chi</b> <b>COF BACTERIOLO</b> FALK. In the field of back en in the field. IN O. JORDAN. present knowledge of por IN BACTERIOLOGY ich are designed to acquis, to give him practice in	icago Press OGY AND IMMUNOLO 45s cteriology prepared by 5s. 9d bisoning through foods. AND IMMUNOLOGY. 8s maint the reader with a working with different mologic phenomena.	By . net
THE NEY Edited by H A eig FOOD PC A LABORA JOHN F. NA CA va gr THE ANI	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI clear summary of our CORY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OF DISEA	<b>SOF BACTERIOLO</b> FALK. Traches in the field of bac en in the field. IN O. JORDAN. present knowledge of por IN BACTERIOLOGY ich are designed to acqui is, to give him practice in o illustrate types of immu	icago Press OGY AND IMMUNOLO 45s cteriology prepared by 5s. 9d bisoning through foods. AND IMMUNOLOGY. 8s maint the reader with a working with different mologic phenomena.	By . net
THE NEY Edited by H A eig FOOD PC A LABORA JOHN F. NA CA va gr THE ANI	<b>E Univers</b> VER KNOWLEDGE O. JORDAN and I. S. H collection of late resea hty leading research m ISONING. By EDWI clear summary of our CORY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OUTLINES I ORTY OF DISEA	<b>SE.</b> By R. L. MOODIE	icago Press OGY AND IMMUNOLO 45s cteriology prepared by 5s. 9d bisoning through foods. AND IMMUNOLOGY. 8s maint the reader with a working with different mologic phenomena.	By . net

....

## PARASITOLOGY

#### CAMBRIDGE UNIVERSITY PRESS LONDON: FETTER LANE, E.C. 4



H. K. LEWIS & CO., LTD., 136, GOWER STREET, LONDON, W.C. I CHICAGO: THE UNIVERSITY OF CHICAGO PRESS (Agents for the United States) BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD. TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

All rights reserved

# PARASITOLOGY

EDITED BY

#### GEORGE H. F. NUTTALL, F.R.S.

QUICK PROFESSOR OF BIOLOGY AND DIRECTOR OF THE MOLTENO INSTITUTE FOR RESEARCH IN PARASITOLOGY IN THE UNIVERSITY OF CAMBRIDGE

ASSISTED BY

D. KEILIN, F.R.S.

VOLUME XXI 1929

#### CAMBRIDGE

#### AT THE UNIVERSITY PRESS

1929

		•
5		•
-		
-		-
	neenee dawy	

BERN BARN Arta Extra Erret Erret Santa Erret Erret Erret Erret PRINTED IN GREAT BRITAIN

### CONTENTS

## Nos. 1 and 2 (May)

.

	PAGE
EASTHAM, L. E. S. The Post-embryonic Development of <i>Phaeno-</i> serphus viator Hal. (Proctotrypoidea), a Parasite of the Larva of <i>Pterostichus niger</i> (Carabidae), with Notes on the Anatomy of the Larva. (With Plates I-III and 1 Text-figure)	1
LITTLE, PERCY A. The Trematode Parasites of Irish Marine Fishes. (With a Map)	22
Тать, P. On the Enzymes of certain Dermatophytes, or Ringworm Fungi	31
LOEWEN, SOLOMON L. A Description of the Trematode Catoptroides lacustri n.sp., with a Review of the known species of the Genus. (With 3 Text-figures)	55
CANAVAN, WILLIAM P. N. Nematode Parasites of Vertebrates in the Philadelphia Zoological Garden and Vicinity. I. (With Plates IV-VIII)	63
WATERSTON, JAMES. On a Chalcidoid Parasite bred from a Flea Larva. (With 1 Text-figure)	103
LITTLE, PERCY A. Trochopus gaillimhe n.sp., an Ectoparasitic Tre- matode of Trigla hirundo or Trigla lucerna. (With Plates IX-	107
XI and 8 Text-figures)	107
BHATIA, B. L. On the Distribution of Gregarines in Oligochaetes . MACGREGOR, MALCOLM E. The Significance of the $pH$ in the	120
Development of Mosquito Larvae. (With 1 Text-figure) .	132
MARSHALL, J. F. and STALEY, J. A newly observed reaction of certain species of Mosquitoes to the Bites of Larval Hydrach- nids. Preliminary Contribution. (With 3 Text-figures).	158
WATERSTON, JAMES. On a New Louse from a Ceylonese Shrew .	161
ESSEX, HIRAM E. Crepidobothrium fragile n.sp., a Tapeworm of the Channel Catfish. (With Plate XII, including 8 Figures).	164

#### Contents

PAGE
168
180
189
220

### No. 3 (September)

SANDGROUND, J. H. A Consideration of the Relation of Host- specificity of Helminths and other Metazoan Parasites to the	
Phenomena of Age Resistance and Acquired Immunity	227
BAYLIS, H. A. Some New Parasitic Nematodes and Cestodes from	
Java. (With 9 Text-figures)	256
BECKER, ELERY R. and HSIUNG, T. S. Buxtonella sulcata Jameson,	
1926 (Protozoa, Ciliata): Cysts and Cyst Formation. (With	0.00
7 Text-figures)	266
THOMPSON, W. R. On Natural Control	<b>269</b>
JEPPS, MARGARET W. Further Note on Haemogregarina lepido- sirenis. (With 4 Text-figures).	282
WIGGLESWORTH, V. B. Digestion in the Tsetse-Fly: A Study of Structure and Function. (With Plate XIV and 16 Text-	
figures)	<b>288</b>
JEPPS, MARGARET W. A Holostomid Larva from the Pericardiac	
Cavity of Lepidosiren paradoxa. (With 7 Text-figures)	322
LITTLE, PERCY A. The Anatomy and Histology of Phyllonella	
soleae Ben. & Hesse, an Ectoparasitic Trematode of the Sole	
Solea vulgaris Quensel. (With Plates XV-XVII and 10 Text-	994
figures)	324

vi

#### Contents

### No. 4 (DECEMBER)

	<b>.</b>
BAYON, H. P. The Pathology of Transmissible Anaemia (Erythro- myelosis) in the Fowl; its similarity to Human Haemopathies. (With 3 Text-figures)	page 339
ROBERTSON, MURIEL. The Action of Acriflavine upon <i>Bodo caudatus</i> . A study of heritable modification in a non-conjugating proto- zoan and its relation to certain aspects of chemotherapy in trypanosomiasis. (With 3 Text-figures and 23 Graphs) .	375
JOBLING, B. A Comparative Study of the S ire of the Head and Mouth Parts in the Streblidae (Diptera Pupipara). (With Plates XVIII–XX and 6 Text-figures)	417
DOBELL, CLIFFORD with BISHOP, ANN. Researches on the In- testinal Protozoa of Monkeys and Man. III. The action of emetine on natural amoebic infections in Macaques. (With a Chart)	446
LOEWEN, SOLOMON L. A New Cestode, <i>Taenia rileyi</i> n.sp., from a Lynx. (With Plate XXI)	469
MYERS, J. G. Facultative Blood-sucking in Phytophagous Hemi- ptera	472
BISHOP, ANN. Experiments upon the Action of Emetine in Cultures of Entamoeba coli	481
HUNTER, GEORGE W., III. Life-history Studies on Proteocephalus pinguis La Rue. (With 12 Text-figures)	487
Index of Authors	497
Index of Subjects	499