# 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. E. 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: MARUZEN COMPANY, LTD.

Eighteen Shillings and Sixpence net

Tssued 16 July, 1931. https://doi.org/10.1017/S0031182000013640 Published online by Cambridge University Press

PRINTED IN GREAT BRITAIN



## Cambridge University Press

### TICKS. A MONOGRAPH OF THE IXODOIDEA

By G. H. F. NUTTALL, F.R.S., C. WARBURTON, and L. E. ROBINSON

### Part IV. The Genus Amblyomma

By L. E. ROBINSON, PH.D. (CANTAB.). With a frontispiece, 7 plates (2 in colours), and 130 figures, 116 being original Royal 8vo. 20s. net

#### THE TRANSMUTATION OF BACTERIA

By S. GURNEY-DIXON, M.A., M.D., M.R.C.S., L.R.C.P.

Demy 8vo. 12s. net

#### INSECT PESTS AND FUNGUS DISEASES OF FRUIT AND HOPS

A complete manual for growers. By PERCIVAL J. FRYER, F.I.C., F.C.S. With 24 plates (20 in colour and 4 in black and white) and 305 original photographs and diagrams

Crown 8vo. 45s. net

#### FUNGOID AND INSECT PESTS OF THE FARM

By F. R. Petherbridge, M.A., Biological Adviser, School of Agriculture, Cambridge. Second Edition. With 54 illustrations

Large crown 8vo. 6s. net

(CAMBRIDGE FARM INSTITUTE SERIES)

### **BRITISH RUST FUNGI (UREDINALES)**

Their Biology and Classification. By W. B. GROVE, M.A. With 290 figures

Demy 8vo. 21s. net

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

# The University of Chicago Press

## THE NEWER KNOWLEDGE OF BACTERIOLOGY AND IMMUNOLOGY. Edited by E. O. JORDAN and I. S. FALK. 45s. net

A collection of late researches in the field of bacteriology prepared by eighty leading research men in the field.

### FOOD POISONING. (Revised edition.) By EDWIN O. JORDAN.

6s. net

A clear summary of our present knowledge of poisoning through foods.

# LABORATORY OUTLINES IN BACTERIOLOGY AND IMMUNOLOGY. By JOHN F. NORTON and I. S. FALK. 8s. net

Consists of exercises which are designed to acquaint the reader with a variety of the best methods, to give him practice in working with different groups of bacteria, and to illustrate types of immunologic phenomena.

# THE EPIDEMIOLOGY AND CONTROL OF MALARIA IN PALESTINE. By I. J. Kligler. 22s. 6d. net

A complete account of successful control measures.

Agents in Great Britain and the British Empire (except Canada)

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

## **PARASITOLOGY**

## CAMBRIDGE UNIVERSITY PRESS

LONDON: FETTER LANE, E.C. 4



LONDON: H. K. LEWIS AND CO., Ltd., 136 Gower Street, W.C. 1

CHICAGO: THE UNIVERSITY OF CHICAGO PRESS

(Agent for the United States)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN AND CO., Ltd. TOKYO: THE MARUZEN COMPANY, Ltd.

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 XXIII 1931** 

CAMBRIDGE
AT THE UNIVERSITY PRESS
1931



CAMBRIDGE UNIVERSITY PRESS LIBRARY FETTER LAME

PRINTED IN GREAT BRITAIN

### CONTENTS.

No. 1 (JANUARY)

· · · · ·	PAGE
Dobell, Clifford. Researches in the Intestinal Protozoa of Monkeys and Man. IV. An experimental study of the <i>Histolytica</i> -like species of <i>Entamoeba</i> living naturally in Macaques.	1
Wigglesworth, V. B. Digestion in <i>Chrysops silacea</i> Aust. (Diptera, Tabanidae)	73
ROY, D. N. and MAYNE, BRUCE. A Note on the Presence of Supernumerary Lobes in Salivary Glands of Anopheline Mosquitoes.  (With Plate I)	77
JOBLING, B. A New Species of the Genus Raymondia Frauenfeld (Diptera Pupipara, Streblidae) with a note on Raymondia quadriceps Jobling and R. bedfordi Ferris. (With 2 Text-figures).	79
Moghe, M. A. A Supplementary Description of Lytocestus indicus Moghe (Syn. Caryophyllaeus indicus Moghe 1925. Cestoda). (With 6 Text-figures)	84
Brown, F. J. Some Fresh-water Larval Trematodes from Cheshire. (With Plates II and III including 15 figures)	88
Bhalerao, G. D. Two new Trematodes from Reptiles: Paryphosto- mum indicum n.sp. and Stunkardia dilymphosa n.g., n.sp. (With 5 Text-figures)	99
Leigh-Sharpe, W. Harold. Pennella germonia n.sp. A Parasitic Copepod of Germo alatunga. (With 1 Text-figure)	109
Ferris, G. F. The Louse of Elephants. <i>Haematomyzus elephantis</i> Piaget (Mallophaga: Haematomyzidae). (With Plates IV and V	
and 5 Text-figures)	112
No. 2 (APRIL)	
BISHOP, ANN. The Morphology and Method of Division of Trichomonas. (With Plates VI and VII including 60 Figures)	129
Mehra, H. R. A New Genus (Spinometra) of the Family Lepodermatidae Odhner (Trematoda) from a Tortoise, with a Systematic Discussion and Classification of the Family. (With 6 Text-figures)	157

Mehra, H. R. On Two New Species of the Genus Astiotrema Loose belonging to the Family Lepodermatidae Odhner. (With 4
Text-figures)
MEHRA, H. R. On a New Trematode <i>Microderma elinguis</i> n.g., n.s. (With 1 Text-figure)
CANAVAN, WILLIAM P. N. Nematode Parasites of Vertebrates in the Philadelphia Zoological Garden and Vicinity. (With Plates VIII and IX including 25 Figures)
Bedford, G. A. H. Nuttalliella namaqua, a New Genus and Species of Tick. (With Plate X and 1 Text-figure)
LEIGH-SHARPE, W. HAROLD. The Appendages of Basanistes huchonis (Schrank) (Copepoda). (With 4 Text-figures)
Bedford, G. A. H. Descriptions of Three New Species of <i>Tetro-phthalmus</i> (Mallophaga) found on Pelicans. (With 6 Text-figures)
Sikes, Enid K. Notes on Breeding Fleas, with Reference to Humidity and Feeding. (With a Chart)
MEGGITT, F. J. On Cestodes Collected in Burma. Part II. (With 6 Text-figures)
Falcoz, L. Matériaux pour la Connaissance des Diptères Pupipares. I. (Avec 5 figures dans le texte)
MATHESON, ROBERT. Note on the Tick Ornithodorus talaje (GuérMén.)
mon,,
No. 3 (July)
Archibald, R. G. and Marshall, A. A Study of three Non-furco- cercous Cercariae obtained from <i>Bullinus contortus</i> in the Sudan. (With 6 Text-figures)
RILEY, WILLIAM A. Sarcosporidiosis in Ducks. (With Plate XI) .
BISHOP, ANN. A Description of Embadomonas n.spp. from Blatta orientalis, Rana temporaria, Bufo vulgaris, Salamandra maculosa; with a Note upon the "Cyst" of Trichomonas batrachorum.  (With Plate XII)
TAYLOR, E. LEONARD and PURCHASE, HARVEY S. Do Penetrating Nematode Larvae assist Bacterial Invasion from the Bowel?.

Contents	vii
HARPER, W. F. On the Structure and Life Histories of British Freshwater Furcocercariae. (With 3 Figures in the Text)	PAGE
DUKE, H. LYNDHURST. Trypanosoma gambiense in Monkeys and Ruminants; Prolonged Infection, Immunity and Superinfection	325
Wallace, James Montague and Wormall, Arthur. Red-cell Adhesion in Trypanosomiasis of Man and other Animals	346
Ackert, James E. The Morphology and Life History of the Fowl Nematode Ascaridia lineata (Schneider). (With Plates XIII, XIV, and 25 Text-figures)	360
Kearns, H. G. H. The Larval and Pupal Anatomy of Stenomalus micans Ol. (Pteromalidae), a Chalcid Endoparasite of the Goutfly of Barley (Chlorops taeniopus Meig.), with some Details of the Life History of the Summer Generation. (With 5 Figures in the Text)	380
Manter, H. W. Some Digenetic Trematodes of Marine Fishes of Beaufort, North Carolina. (With 25 Figures in the Text) .	396
TIEGS, O. W. Note on the Occurrence of Sarcocystis in Muscle of Python. (With 4 Figures in the Text)	412
No. 4 (OCTOBER)	
HEYDON, G. M. Some Common Queensland Mosquitoes as Intermediate Hosts of Wuchereria bancrofti (Filaria bancrofti)	415
Rees, Gwendolen. Some Observations and Experiments on the Biology of Larval Trematodes. (With Plate XV and 5 Text-figures)	428
Wigglesworth, V. B. Haematin in the Tracheae of Blood-sucking Insects: an Artefact	44]
MUKERJI, S. The Process of Copulation in <i>Phlebotomus argentipes</i> Ann. & Brun. (With 1 Figure in the Text)	443
André, E. Sur la Piqûre du Nabis apterus	445
LUBIMOV, M. P. Gongylonema macrogubernaculum n.sp. (Nematode) from Monkeys. (With 3 Figures in the Text)	446
HOARE, CECIL A. Studies on <i>Trypanosoma grayi</i> . III. Life-Cycle in the Tsetse-fly and in the Crocodile. (With Plates XVI–XIX and 3 Text-figures)	449

	PAGI
SWAN, D. C. On a New Species of <i>Ixodes</i> ( <i>Ix. hydromyidis</i> ) from Western Australia. (With 1 Figure in the Text)	485
HINMAN, E. HAROLD. Pediculus (Parapediculus) atelophilus Ewing 1926 from the Red Spider Monkey, Ateles geoffroyi. (With 2 Figures in the Text)	488
MURRAY, FLORENCE V. Gill Trematodes from some Australian Fishes. (With Plates XX-XXII and 1 Text-figure)	492
DAUBNEY, R. and Hudson, J. R. Nairobi Sheep Disease. (With 6 Charts)	507
COATNEY, G. ROBERT. On the Biology of the Pigeon Fly, Pseudolynchia maura Bigot (Diptera, Hippoboscidae)	525
BAYLIS, H. A. On the Structure and Relationships of the Nematode Capillaria [Hepaticola] hepatica (Bancroft)	533
Index of Authors	545
Index of Subjects	547