PARASITOLOGY

A SUPPLEMENT TO THE JOURNAL OF HYGIENE

EDITED BY

GEORGE H. F. NUTTALL, F.R.S. Quick Professor of Biology in the University of Cambridge

AND

A. E. SHIPLEY, F.R.S. Reader in Zoology in the University of Cambridge



CAMBRIDGE AT THE UNIVERSITY PRESS

LONDON: FETTER LANE. C. F. CLAY, MANAGER
AND H. K. LEWIS, GOWER STREET
EDINBURGH: 100, PRINCES STREET
BERLIN: A. ASHER & CO.
LEIPSIC: BROCKHAUS
NEW YORK: G. P. PUTNAM'S SONS
BOMBAY AND CALCUTTA: MACMILLAN & CO., LTD.

Price Seven Shillings net

[Issued January 8, 1912]

OBSERVATIONS UPON THE NATURAL HISTORY OF EPIDEMIC DIARRHOEA

By O. H. PETERS, M.D., D.P.H.

Royal 8vo. Price 7s. net

This treatise, here reprinted from the Journal of Hygiene (Vol. X), embodies both the practical observations made at Mansfield, and also the results of previous theoretical inquiry into the phenomena of the epidemic curve, representing three years of close research.

"Dr Peters has done his work in a thoroughly scientific manner....It is a valuable addition to the literature of a subject which yearly demands a toll of many thousand lives."—Athenaeum

"This monograph is a thoughtful and valuable contribution to the literature of a devastating disease, and deserves careful consideration by all who are concerned in its study."—Lancet

"The book bears obvious evidence of the thoroughness and intensity of effort with which the statistics were collected, and the minute records as well as the very elaborate analyses which accompany them deserve careful consideration and study, and are a valuable contribution to our knowledge of the aetiology of epidemic diarrhoea."—Medical Officer

THE JOURNAL OF AGRICULTURAL SCIENCE

Edited by

Professor R. H. BIFFEN, M.A., Cambridge, A. D. HALL, M.A., F.R.S., Rothamsted, and Professor T. B. WOOD, M.A., Cambridge.

The Journal of Agricultural Science is issued in quarterly parts of about 100 pages, with plates and figures, four parts constituting a volume.

Volumes I, II and III now ready. In Four Parts, paper covers, 15s. net per volume. Bound in Buckram, 18s. 6d. net per volume.

The subscription price, payable in advance, is 15s. per volume (post free); single numbers 5s. net.

CAMBRIDGE UNIVERSITY PRESS, FETTER LANE, LONDON C. F. CLAY, Manager



Medical, Hygiene, Literary, Educational, Scientific, Law,
Theological, and on ALL other Subjects.

SECOND-HAND AT HALF PRICES!
New at 25 per cent. Discount.

Catalogue No. 479. Post Free. State Wants Books sent on Approval.

BOOKS BOUGHT: Best Prices Given.

W. & G. FOYLE, 135 Charing Cross Rd., London, W.C.

PARASITOLOGY

CAMBRIDGE UNIVERSITY PRESS

Mondon: FETTER LANE, E.C. C. F. CLAY, MANAGER



Edinburgh: 100, PRINCES STREET

London: H. K. LEWIS, 136, GOWER STREET, W.C.

Berlin: A. ASHER AND CO.

Leipzig: F. A. BROCKHAUS

pew Bork: G. P. PUTNAM'S SONS

Bombay and Calcutta: MACMILLAN AND CO., LTD.

All rights reserved

PARASITOLOGY

A SUPPLEMENT TO THE JOURNAL OF HYGIENE

EDITED BY

GEORGE H. F. NUTTALL, F.R.S. Quick Professor of Biology in the University of Cambridge AND

A. E. SHIPLEY, F.R.S. Reader in Zoology in the University of Cambridge

Volume IV 1911

Cambridge at the University Press Cambridge:

PRINTED BY JOHN CLAY, M.A.

AT THE UNIVERSITY PRESS

CONTENTS

No. 1 (March).

GILRUTH, J. A., SWEET, GEORGINA, and DODD, SYDNEY. Observations on the occurrence in the blood of various animals (chiefly monotremes and marsupials) of bodies apparently identical with	PAGE
Anaplasma marginale Theiler, 1910. (With Plate I)	1
HUFFMAN, O. V. and Wherry, Wm. B. A description of four Filaria loa from the same patient. (With Plate II)	7
Drew, G. Harold. A note on the application of Giemsa's Romanowsky stain to the blood and tissues of marine invertebrates	19
PORTER, Annie. Some remarks on the genera Crithidia, Herpetomonas and Trypanosoma	22
Hindle, Edward. The passage of $Trypanosoma\ gambiense$ through mucous membranes and skin	24
Mackinnon, Doris L. On some more protozoan parasites from Trichoptera. (Plate III and 8 Text-figures)	28
Nuttall, George H. F. and Merriman, G. The process of copulation in Ornithodorus moubata. (With 1 Text-figure)	39
NUTTALL, GEORGE H. F. On the adaptation of ticks to the habits of their hosts. (With 26 Text-figures)	46
BACOT, A. W. The persistence of <i>Bacillus pyocyaneus</i> in pupae and imagines of <i>Musca domestica</i> raised from larvae experimentally infected with the bacillus	68
HIFFMAN, OTTO V. The embryos of Filaria loa. (With Plate IV).	75

No. 2 (June).

DARLING, S. T. The probable mode of infection and the methods used	PAGE
in controlling an outbreak of equine trypanosomiasis (Murrina) in	
the Panama Canal zone	83
Sant' Anna, José F. On a disease in man following tick-bites and	
occurring in Lourenço Marques	87
NUTTALL, GEORGE H. F. On symptoms following tick-bites in man .	89
SEIDELIN, HARALD. An iron-haematein stain. With remarks on the Giemsa stain. (With Plate V)	94
SWELLENGREBEL, N. H. and STRICKLAND, C. Some remarks on Dr Swingle's paper "The transmission of <i>Trypanosoma lewisi</i> by rat fleas," etc	104
Swellengrebel, N. H. Note on the morphology of <i>Herpetomonas</i> and <i>Crithidia</i> , with some remarks on "physiological degeneration." (With 12 Diagrams)	108
WOOLLEY, PAUL G. and HUFFMAN, OTTO V. The ova of Schistosoma	
japonicum and the absence of spines	131
HINDLE, EDWARD. The transmission of Spirochaeta duttoni	133
WOODCOCK, H. M. A reply to Miss Porter's note entitled "Some remarks on the genera Crithidia, Herpetomonas and Trypanosoma"	150
PORTER, Annie. Further remarks on the genera Crithidia, Herpetomonas and Trypanosoma, and Dr Woodcock's views thereon.	154
HOWARD, C. W. An experiment in fumigation of ticks	164
MERRIMAN, GORDON. The geographical distribution of Ornithodorus	
moubata (Murray, 1877). (With a Map)	168
MAXWELL-LEFROY, H. Notes on entomological boxes	174
No. 3 (October). Nuttall, George H. F. Notes on Ticks. I. (1) Ixodes caledonicus, description of male, together with considerations regarding the structure of the foot in male Ixodes. (2) Types of parasitism	
in ticks, illustrated by a diagram, together with some remarks upon longevity in ticks. (3) Regarding the loss of life in ticks occurring on wandering hosts. (With 2 Figures)	175

Contents

	PAGE
HINDLE, EDWARD. The relapsing fever of Tropical Africa. A Review. (With 2 Maps and 1 Chart)	183
Wells, R. T. Aerial contamination as a fallacy in the study of amoebic infections by cultural methods. (With Plate VI)	204
McCov, George W. A microfilaria (<i>Microfilaria rosenaui</i> n. sp.) from the California ground squirrel (<i>Citellus beecheyi</i>). (With Plate VII)	220
STRICKLAND, C. Description of a <i>Herpetomonus</i> parasitic in the alimentary tract of the common green-bottle fly, <i>Lucilia</i> sp. (With Plates VIII and IX and 2 Text-figures)	222
PORTER, Annie. The structure and life history of Crithidia pulicis, n. sp., parasitic in the alimentary tract of the human flea, Pulex irritans. (With Plate X)	237
Acton, Hugh W. and Harvey, W. F. The nature and specificity of Negri bodies. (With Plate XI and 2 Text-figures)	255
Wenyon, C. M. Oriental sore in Bagdad, together with observations on a gregarine in <i>Stegomyia fasciata</i> , the haemogregarine of dogs and the flagellates of house flies. (With Plates XII-XVI and 36 Text-figures)	273
No. 4 (December).	
SWELLENGREBEL, N. H. The life-history of <i>Pleistophora gigantea</i> Thélohan (<i>Glugea gigantea</i> Thél.). (With Plates XVII and XVIII and 20 Diagrams)	345
Johnstone, James. Tetrarhynchus erinaceus van Beneden. I. Structure of larva and adult worm. (With Plates XIX-XXIV and 9 Text-figures)	364
LEBOUR, MARIE V. A review of the British marine Cercariae. (With Plates XXV-XXIX)	416
Huffman, Otto V. The Kurloff-body, a spurious parasite. (With 11 Text-figures)	457
HINDLE, E. On the life-cycle of Spirochaeta gallinarum. Preliminary Note. (With 5 Figures and Diagram in Text)	463
Robinson, L. E. New species of ticks (Haemaphysalis, Amblyomma). (With 4 Text-figures)	478
INDEX OF AUTHORS	405
	485