

THE JOURNAL OF HYGIENE

EDITED BY

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

QUICK PROFESSOR OF BIOLOGY IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

JOHN S. HALDANE, M.D., LL.D., F.R.S.

READER IN PHYSIOLOGY IN THE
UNIVERSITY OF OXFORD

ARTHUR NEWSHOLME, M.D., F.R.C.P.

MEDICAL OFFICER TO THE
LOCAL GOVERNMENT BOARD

CHARLES J. MARTIN, M.B., D.Sc., F.R.S.

DIRECTOR OF THE LISTER INSTITUTE OF PREVENTIVE MEDICINE, LONDON

PUBLISHED QUARTERLY



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.

LEIPSIK: BROCKHAUS

NEW YORK: G. P. PUTNAM'S SONS

BOMBAY AND CALCUTTA: MACMILLAN & CO., LTD.

Entered at New York Post Office as Second Class Matter

Price Seven Shillings net

[Issued June 15, 1910]

THE BACTERIOLOGY OF DIPHTHERIA

INCLUDING SECTIONS ON THE HISTORY, EPIDEMIOLOGY AND PATHOLOGY OF THE DISEASE, THE MORTALITY CAUSED BY IT, THE TOXINS AND ANTITOXINS AND THE SERUM DISEASE. BY F. LOEFFLER, M.D., LL.D., ARTHUR NEWSHOLME, M.D., F.R.C.P., F. B. MALLORY, M.A., M.D., G. S. GRAHAM-SMITH, M.A., M.D., D.P.H., GEORGE DEAN, M.D., WILLIAM H. PARK, M.D. AND CHARLES F. BOLDUAN, M.D.

Edited by

G. H. F. NUTTALL, M.D., PH.D., Sc.D., F.R.S.,
Quick Professor of Biology in the University of Cambridge, Fellow of Christ's College,
AND G. S. GRAHAM-SMITH, M.A., M.D.,
University Lecturer in Hygiene, Cambridge

*Royal 8vo. Buckram. Pp. xx + 718. With 4 portraits and
16 plates. Price 25s. net.*

"It is by far the most complete record of our present knowledge of this disease hitherto written in the English language... There is nothing to say except praise for the editors, who have produced a magnificent exposition of modern knowledge on this important disease—an exposition which must certainly take its place as the classical authority upon the subject."—*Nature*

"The mere enumeration of the writers is a sufficient guarantee of the excellence of the work, and of the authority which it carries; whilst the articles are written in clear and good English, free, for the most part, from the technical terms which make many treatises on bacteriology difficult and unprofitable to read. The articles are well harmonised, and the teaching in regard to difficult and debatable points is marked by moderation and common sense."—*Athenaeum*

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, Cambridge.

The *Journal of Hygiene* having become unduly burdened with papers dealing with the anatomy of mosquitoes, fleas, protozoa and other parasites—of great importance in themselves—but having only an indirect relation to hygiene and preventive medicine, it is proposed in future to relegate all such papers to *Parasitology*.

Parasitology, though a supplement to the *Journal of Hygiene*, will be issued in the form of a separate yearly volume of four to five hundred pages. The parts will be issued when sufficient material has accumulated. The first four parts are now ready. The subscription price is £1. 1s. per volume (post-free), payable in advance; single numbers 7s. net. Subscribers to the *Journal of Hygiene* may obtain single numbers of *Parasitology* at the reduced price of 5s. net or may become subscribers at the reduced rate of 15s. Subscriptions may be sent to any Bookseller, or to MR C. F. CLAY, MANAGER, Cambridge University Press, Fetter Lane, London, E.C. A Prospectus will be sent on application.

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

THE JOURNAL OF HYGIENE

EDITED BY

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

QUICK PROFESSOR OF BIOLOGY IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

JOHN S. HALDANE, M.D., LL.D., F.R.S.

READER IN PHYSIOLOGY IN THE
UNIVERSITY OF OXFORD

ARTHUR NEWSHOLME, M.D., F.R.C.P.

MEDICAL OFFICER TO THE
LOCAL GOVERNMENT BOARD

CHARLES J. MARTIN, M.B., D.Sc., F.R.S.

DIRECTOR OF THE LISTER INSTITUTE OF PREVENTIVE MEDICINE, LONDON

Volume X. 1910

With Index to Vols. I—X (1901—1910)



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

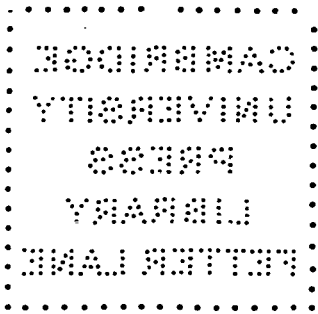
BOMBAY AND CALCUTTA: MACMILLAN & CO., LTD.

Entered at New York Post Office as Second Class Matter.

[All rights reserved]

.....
: CAMBRIDGE :
: UNIVERSITY :
: PRESS :
: LIBRARY :
: FETTER LANE :
:.....

Cambridge :
PRINTED BY JOHN CLAY, M.A.
AT THE UNIVERSITY PRESS



CONTENTS.

No. 1 (April).

	PAGE
COBBETT, L. and GRAHAM-SMITH, G. S. An Investigation of the Pathology of "Grouse Disease." (Plates I—V.)	1
ALEXANDER, D. MOORE. An Investigation into the Acid-fast Bacteria found in Human Faeces with Special Reference to their Presence in Cases of Tuberculosis	37
KAJIURA, S. and ROSENHEIM, O. A Contribution to the Etiology of Beri-Beri. (Plate VI.)	49
HEWLETT, R. TANNER, VILLAR, SIDNEY and REVIS, CECIL. On the Nature of the Cellular Elements Present in Milk. Part II. Quantitative and Qualitative Results. (One Text figure.)	56
BUCHAN, GEORGE F. The Contamination of Ice-cream. (Plate VII.)	93
International Hygiene Exhibition Dresden 1911	131
NICOLLE, CH. Investigations on Typhus Fever	135

No. 2 (August).

HILL, ERNEST and ROSS, G. A. PARK. Epidemic Generalised Vaccinia	137
LOGIE, W. J. The Action of Dysentery Bacilli on Nitrites and Nitrates	143
WILSON, W. J. The Etiology of Typhus Fever	155
WELSH, D. A. and CHAPMAN, H. G. On the Differentiation of Proteins of Closely Related Species by the Precipitin Reaction	177
TODD, CHARLES and WHITE, R. G. On the Haemolytic Immune Isolysins of the Ox and their Relation to the Question of Individuality and Blood-relationship	185
DE SOUZA, ANTONIO, ARRUDA, JACINTHO and PINTO, MANUEL. Report on Experiments undertaken to Discover whether the Common Domesticated Animals of Terceira Island are Affected by Plague	196
BRADLEY, C. H. BURTON. Observations on Leucoprotease and "Anti-leucoprotease." (Two Figures.)	209
O'BRIEN, R. A. Guinea-pigs as Chronic Carriers of an Organism Belonging to the Food-poisoning Group	231

	PAGE
CHICK, HARRIETTE. The Process of Disinfection by Chemical Agencies and Hot Water. (With 21 Text Figures.)	237
PETRIE, G. F. and O'BRIEN, R. A. A Guinea-pig Epizootic Associated with an Organism of the Food-poisoning Group but probably caused by a Filter-passer	287
PUBLICATIONS RECEIVED	306

No. 3, Extra "Plague Number" (November).

REPORTS ON PLAGUE INVESTIGATIONS IN INDIA,
issued by the Advisory Committee.

(Continued from Volume VIII, p. 308.)

XXXIII. The experimental production of plague epidemics among animals. (<i>Third Communication.</i>) (Diagrams I—VII.)	315
XXXIV. Resolving (chronic) plague in rats. (Plate VIII.)	335
XXXV. On the spread of epidemic plague through districts with scattered villages: with a statistical analysis by Dr M. Greenwood. (Maps I—XLVIII.)	349
XXXVI. Observations on rat and human plague in Belgaum. (Maps I—XVII, Plates IX and X, and Charts I—III.)	446
XXXVII. Observations on rat and human plague in Poona. (Maps I—V, Plate XI, and Charts I—VIII.)	483
XXXVIII. Experiments on the vaccination of animals against plague by Dr S. Rowland	536
XXXIX. Interim report by the Advisory Committee	566

No. 4 (December).

BUCHAN, GEORGE F. Typhoid Fever and Mussel Pollution. (1 Chart.)	569
GLENNY, A. T. and WALPOLE, G. S. The Action of Rubber on Mercurial Antiseptic Solutions	586
McCoy, GEORGE W. Plague among Ground Squirrels in America. (Plates XII and XIII, 1 Map.)	589
PETERS, O. H. Observations upon the Natural History of Epidemic Diarrhoea	602
Index of Authors, Vols. I—X (1901—1910)	779
Index of Subjects, Vols. I—X (1901—1910)	794