

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.,
Late Reader in Physiology in the University of Oxford.

CHARLES J. MARTIN, C.M.G., M.B., D.Sc., F.R.S.,
Director of the Lister Institute, London.

J. C. G. LEDINGHAM, M.B., D.Sc.,
Bacteriologist-in-Chief, Lister Institute, London.

G. S. GRAHAM-SMITH, M.D., F.R.S.,
University Lecturer in Hygiene, Cambridge.

MAJOR GREENWOOD, M.R.C.P., Lond.,
Medical Officer (Medical Statistics), Ministry of Health.

PUBLISHED QUARTERLY



CAMBRIDGE UNIVERSITY PRESS

C. F. CLAY, MANAGER

LONDON: FETTER LANE, E.C. 4

ALSO

H. K. LEWIS AND CO. LTD., 136, GOWER STREET, LONDON, W.C. 1

WHELDON AND WESLEY, LTD., 28, ESSEX STREET, STRAND, LONDON, W.C. 2

CHICAGO: THE UNIVERSITY OF CHICAGO PRESS
(AGENT FOR THE UNITED STATES AND CANADA)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD.

TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

Price Twelve Shillings and Sixpence net

Issued 15 July, 1921.

The University of Chicago Press

THE UNIVERSITY OF CHICAGO SCIENCE SERIES

The Evolution of Sex in Plants. By JOHN MANNING COULTER. x + 140 pages, 12mo, cloth; 8s. 3d. net.

Individuality in Organisms. By CHARLES MANNING CHILD. x + 122 pages, small

The Origin of t AMBERLIN. xii + 272
pages, small 12m

Finite Collineat ICHFELDT. xii + 194
pages, small 12m

A Chemical Sig x + 142 pages, small
12mo, cloth; 8s.

The Biology of NEWMAN. x + 186
pages, small 12m

Food Poisoning i + 116 pages, small
12mo; 8s. 3d. ne

The Electron: Determinati ment, and the
ANDREWS MILLI ties. By ROBERT
cloth; 11s. 6d. net.

The Living Cycads. By CHARLES JOSEPH CHAMBERLAIN. xiv + 172
pages, small 12mo, cloth; 10s. net.

Problems of Fertilization. By FRANK R. LILLIE. xii + 278 pages,
small 12mo, cloth; 11s. 6d. net.

Volumes Planned or in Preparation

Black Body Radiation. By CHARLES E. MENDENHALL.

Mechanics of Delayed Germination in Seeds. By W. CROCKER.

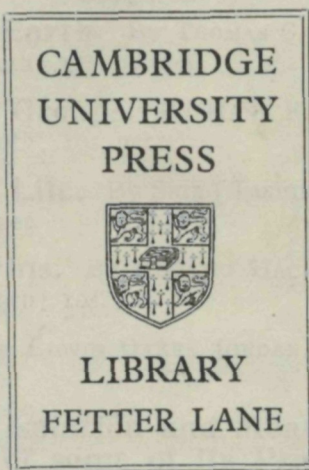
The Rigidity of the Earth and of Materials. By A. A. MICHELSON.

Linear Integral Equations in General Analysis. By ELIAKIM HASTINGS
MOORE.

Agents for the British Empire (except Canada)

CAMBRIDGE UNIVERSITY PRESS

Fetter Lane, London, E.C. 4



2 x 11.21

THE JOURNAL OF HYGIENE

CAMBRIDGE UNIVERSITY PRESS

C. F. CLAY, MANAGER

LONDON: FETTER LANE, E.C. 4



H. K. LEWIS & CO., LTD., 136, GOWER STREET, LONDON, W.C. 1

WHELDON & WESLEY, LTD., 28, ESSEX STREET, STRAND, LONDON, W.C. 2

CHICAGO: THE UNIVERSITY OF CHICAGO PRESS
(Agent for the United States and Canada)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD.

TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

All rights reserved

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.

LATE READER IN PHYSIOLOGY IN THE UNIVERSITY OF OXFORD

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

DIRECTOR OF THE LISTER INSTITUTE, LONDON

J. C. G. LEDINGHAM, M.B., D.Sc.

BACTERIOLOGIST-IN-CHIEF, LISTER INSTITUTE, LONDON

G. S. GRAHAM-SMITH, M.D., F.R.S.

UNIVERSITY LECTURER IN HYGIENE, CAMBRIDGE

MAJOR GREENWOOD, M.R.C.P. (LOND.)

MEDICAL OFFICER (MEDICAL STATISTICS), MINISTRY OF HEALTH

VOLUME XX. 1921

CAMBRIDGE
AT THE UNIVERSITY PRESS

1921

CONTENTS

No. 1 (JULY)

	PAGE
WILSON, WM. H. The Diet Factor in Pellagra	1
WORDLEY, E. A New Method for the Isolation of Organisms from Faeces and Sputum, with some observations on Haemolytic Streptococci in Faeces obtained by this Method	60
SAVAGE, WILLIAM G. Studies upon the Toxicity of Putrid Food	69
TWORT, F. W. and TWORT, D. N. An Investigation on Influenza	85

No. 2 (OCTOBER)

PETRIE, G. F. The Toxigenic Features of Strains of the Diphtheria Bacillus isolated from Horses and from a Mule	99
TOPLEY, W. W. C. The Spread of Bacterial Infection. The Potential Infectivity of a surviving Mouse-population, and their Resistance to Subsequent Epidemics of the same Disease. (With 2 Charts)	103
GARDNER, A. DUNCAN and WALKER, E. W. AINLEY. An Inquiry into the Nature of the Serological Differences exhibited by different Cultures of a Bacterial Species (<i>B. typhosus</i>). (With 5 Charts)	110
FREER, K., MATTICK, A. T. R. and WILLIAMS, R. STENHOUSE. A Study of the Bacteriological Examination of Grade "A" (Cert.) Milk	125
HARRIES, E. H. R. and WILLIAMS, R. STENHOUSE. Bovine Tuberculosis: the Etiological Support of Family History	132
DUDGEON, LEONARD S., WORDLEY, ERIC, and BAWTREE, F. On <i>Bacillus coli</i> Infections of the Urinary Tract, especially in Relation to Haemolytic Organisms	137
MATTICK, A. T. R. The Sterilization of Empty Milk Churns by Steam under Pressure	165
BUXTON, J. B. and ALLEN, H. R. Air Carriage of Pathogenic and other Organisms	173
GLENNY, A. T. and SÜDMERSEN, H. J. Notes on the Production of Immunity to Diphtheria Toxin. (With 15 Charts)	176

No. 3 (NOVEMBER)

	PAGE
TOPLEY, W. W. C., BARNARD, J. E., and WILSON, G. S. A New Method of obtaining Cultures from Single Bacterial Cells. (With Plate I)	221
TOPLEY, W. W. C., WEIR, H. B., and WILSON, G. S. The Interrelationships between the various members of the <i>B. enteritidis</i> — <i>B. paratyphosus</i> B Group of Bacteria. (With 3 Charts)	227
YOUNG, MATTHEW. A Preliminary study of the Epidemiology of Rheumatic Fever	248
BRUCE, MAJOR-GENERAL SIR DAVID. Trench Fever. Final Report of the War Office Trench Fever Investigation Committee	258
GALE, A. M. Some Points in the Epidemiology of an Outbreak of Cerebrospinal Fever in Hong-Kong, 1918. (With 3 Charts, 2 Maps and 1 Figure)	289

No. 4 (DECEMBER)

KHALED, Z. A Comparative Study of Bovine Abortion and Undulant Fever, from the Bacteriological point of view; (With 2 Charts)	319
SCHÜTZE, H. The Permanence of the Serological Paratyphoid B Types, with Observations on the Non-specificity of Agglutination with "Rough" Variants. (With 1 Figure)	330
HOLST, PETER M. Studies on the Effects of Tuberculin. (With 2 Text-figures)	342
WORDLEY, E. Further Results on the Isolation of Organisms from Faeces by a New Method	360
EIJKMAN, C. Pulmonary Tuberculosis and the "Curvature of Van Pesch." (With 2 Text-figures)	363
HEIBERG, DR POV. The Diet in the Different Grades of Society in Denmark	366
FREAR, K., MATTICK, A. T. R. and WILLIAMS, R. STENHOUSE. The Keeping Qualities of Grade A (Certified) Milk. (With 1 Chart)	371
MITCHELL, J. ALEXANDER. Plague in South Africa: Perpetuation and Spread of Infection by Wild Rodents	377
BIGGER, JOSEPH W. The Reliability of the Wassermann Test as performed by different Pathologists	383
INDEX OF AUTHORS	390
INDEX OF SUBJECTS	391