

THE JOURNAL OF HYGIENE

(Founded in 1901 by G. H. F. Nuttall, F.R.S.)

EDITED BY

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

READER EMERITUS IN PREVENTIVE MEDICINE IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

SIR JOHN LEDINGHAM, C.M.G., M.B., D.Sc., F.R.S.,
Professor of Bacteriology in the University of London,
Director of the Lister Institute, London.

M. GREENWOOD, D.Sc., F.R.C.P., F.R.S.,
Professor of Epidemiology and Vital Statistics in the University of London.

SIR DAVID MUNRO, K.C.B., C.I.E., M.B.,
Secretary, Industrial Health Research Board, Medical Research Council.

W. W. C. TOPLEY, M.D., M.Sc., F.R.C.P., F.R.S.,
Professor of Bacteriology and Immunology in the University of London.



CAMBRIDGE UNIVERSITY PRESS

LONDON: BENTLEY HOUSE

CHICAGO: The University of Chicago Press
(Agents for the United States)

BOMBAY, CALCUTTA, MADRAS: Macmillan

All rights reserved

Price Fifteen Shillings net

PRINTED IN GREAT BRITAIN

CAMBRIDGE
UNIVERSITY
PRESS
LIBRARY
LONDON

The Quarterly Journal of Medicine

Edited by

CRIGHTON BRAMWELL, O. L. V. S. DE WESSELOW, A. W. M. ELLIS, F. R. FRASER,
D. HUNTER, J. W. McNEE

with the help of

E. FARQUHAR BUZZARD, GORDON HOLMES, ARTHUR F. HURST, J. A. NIXON, R. A. PETERS, E. I. SPRIGGS

CONTENTS

NEW SERIES. VOL. XI, No. 43. JULY 1942

(Vol. XXXV of the continuous series)

Fibrous Dysplasia of Bone with Endocrine Disorders and Cutaneous Pigmentation (Albright's Disease). By MURRAY A. FALCONER and CUTHBERT L. COPE. With contributions on pathology by H. M. TURNBULL and A. H. T. ROBB-SMITH. With Plates 5 to 10.

Pneumonia in Infants, Children, and Adults. By GEORGE ORMISTON, DOROTHY WOODMAN, and F. J. W. LEWIS

SINGLE NUMBERS 10s. 6d. NET EACH SUBSCRIPTION 35s. PER ANNUM

VOLUMES 45s. NET

„

BOUND VOLUMES 40s. NET

CLOTH CASES 5s. NET

OXFORD UNIVERSITY PRESS, London, E.C. 4

TEMPORARY ADDRESS

SOUTHFIELD HOUSE, OXFORD

BIOLOGICAL ASPECTS OF INFECTIOUS DISEASE

By F. M. BURNET

15s. net

A general survey of the nature of infectious disease, written easily and comprehensibly from the point of view of a biologist to whom man and the micro-organism are objects of equal interest

CAMBRIDGE UNIVERSITY PRESS

THE JOURNAL OF HYGIENE

CAMBRIDGE UNIVERSITY PRESS
LONDON: BENTLEY HOUSE



CHICAGO: THE UNIVERSITY OF CHICAGO PRESS
(Agents for the United States)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN

All rights reserved

THE
JOURNAL OF HYGIENE

(FOUNDED IN 1901 BY G. H. F. NUTTALL, F.R.S.)

EDITED BY

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

READER EMERITUS IN PREVENTIVE MEDICINE IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

SIR JOHN LEDINGHAM, C.M.G., M.B., D.Sc., F.R.S.

PROFESSOR OF BACTERIOLOGY IN THE UNIVERSITY OF LONDON,
DIRECTOR OF THE LISTER INSTITUTE, LONDON

M. GREENWOOD, D.Sc., F.R.C.P., F.R.S.

PROFESSOR OF EPIDEMIOLOGY AND VITAL STATISTICS
IN THE UNIVERSITY OF LONDON

SIR DAVID MUNRO, K.C.B., C.I.E., M.B.

CHIEF MEDICAL OFFICER, MINISTRY OF SUPPLY

W. W. C. TOPLEY, M.D., M.Sc., F.R.C.P., F.R.S.

SECRETARY OF THE AGRICULTURAL RESEARCH COUNCIL

VOLUME XLII. 1942

CAMBRIDGE
AT THE UNIVERSITY PRESS

1942

C O N T E N T S

No. 1 (JANUARY 1942)

	PAGE
GLAZEBOOK, A. J. and THOMSON, SCOTT. The administration of vitamin C in a large institution and its effect on general health and resistance to infection. (With 3 Figures in the Text)	1
GLAZEBOOK, A. J. and THOMSON, SCOTT. Sulphonamide compounds and acute rheumatism	20
TAYLOR, C. B. The ecology and significance of the different types of coliform bacteria found in water. A review of the literature	23
SHERWOOD, H. P. and CLEGG, L. F. L. Further studies of incubation at 44° C. as a test for 'faecal coli'. (With 2 Figures in the Text)	45
BATTY-SMITH, C. G. The Eijkman test for faecal coli in the bacteriological examination of water supplies. A survey and discussion of the experimental work from 1929 to the present day with a study of 104 water samples and of 602 cultures	55
RHODES, A. J. A small outbreak of diarrhoea associated with the paracolon bacillus	99

No. 2 (APRIL 1942)

THOMSON, SCOTT, GLAZEBOOK, A. J. and MILLAR, W. G. Vitamin C and anaemia. With a description of a photo-electric colorimeter. By W. G. MILLAR. (With Plates 1-3 and 4 Figures in the Text)	103
KLIENEBERGER, EMMY and SMILES, J. Some new observations on the developmental cycle of the organism of bovine pleuropneumonia and related microbes. (With Plates 4-7, containing Figs. 1-18)	110
WITHELL, E. R. The significance of the variation in shape of time-survivor curves. (With Figs. 1-27 in the Text, and Figs. 28-46 in Appendix I)	124
BURTENSHAW, J. M. L. The mechanism of self-disinfection of the human skin and its appendages	184
BUCHANAN-WOLLASTON, H. J. Notes on the subject-matter of a previous paper	211
BARKWORTH, H. and DAVIS, J. G. A cheap and efficient medium for the plate count of milk	218
DE LOUREIRO, J. A. A modification of Wilson and Blair's bismuth sulphite agar (stabilized stock solutions)	224

No. 3 (MAY 1942)

	PAGE
MARTIN, W. J. Diphtheria. The age incidence during epidemic years in London	227
STALKER, W. STEWART, WHATLEY, ELIZABETH and WRIGHT, JOYCE. Cross-infection in scarlet-fever bed isolation wards	231
EDWARDS, J. L. An anaerogenic strain of <i>Proteus</i>	238
ELFORD, WILLIAM J. and VAN DEN ENDE, JOAN. An investigation of the merits of ozone as an aerial disinfectant. (With Plates 8 and 9 and 4 Figures in the Text)	240
TWORT, C. C. and BAKER, A. H. Further researches on bactericidal mists and smokes	266
TAYLOR, C. B. Bacteriology of fresh water. III. The types of bacteria present in lakes and streams and their relationship to the bacterial flora of soil	284
RAINSFORD, S. G. The preservation of Vi antigen in T.A.B.C. vaccine. With a note on combined active immunization with T.A.B.C. vaccine in tetanus formol-toxoid. (With 2 Figures in the Text)	297
HAINES, R. B. The occurrence of toxigenic anaerobes, especially <i>Clostridium botulinum</i> , in some English soils	323
IRWIN, J. O. The distribution of the logarithm of survival times when the true law is exponential. (With 2 Figures in the Text)	328
BARKWORTH, H. The effect of small amounts of chlorine on the reduction time of milk	334

No. 4 (JULY 1942)

WITHELL, E. R. The evaluation of bactericides. (With 3 Figures in the Text)	339
FINN, S. R. and POWELL, E. O. The chemical and physical investigation of germicidal aerosols. II. The aerosol centrifuge. (With 11 Figures in the Text)	354
GREEN, C. A. Epidemiology of haemolytic streptococcal infection in relation to acute rheumatism. I. Haemolytic streptococcal epidemic and first appearance of rheumatism in a training centre. (With 1 Figure in the Text)	365
GREEN, C. A. Epidemiology of haemolytic streptococcal infection in relation to acute rheumatism. II. Epidemic rheumatism. (With 1 Figure in the Text)	371
GREEN, C. A. Epidemiology of haemolytic streptococcal infection in relation to acute rheumatism. III. Comparative incidence of various infections and acute rheumatism in certain training centres. (With 9 Figures in the Text)	380

Contents

	vii
	PAGE
SAVAGE, SIR WILLIAM. Paratyphoid fever: an epidemiological study	393
CLIMIE, HUGH. Immunization against typhoid and paratyphoid with alcohol-killed, alcohol-preserved and heat-killed, phenol-preserved, vaccine	411
HOYLE, L. The lipid antigens of <i>C. diphtheriae</i> and <i>C. hofmannii</i> . (With 1 Figure in the Text)	416
MACRAE, T. F., HUTCHINSON, J. C. D., IRWIN, J. O., BACON, J. S. D. and MCDUGALL, E. I. Comparative digestibility of wholemeal and white breads and the effect of the degree of fineness of grinding on the former	423
HOBBS, BETTY C. and WILSON, G. S. The disinfectant activity of caustic soda. (With 2 Figures in the Text)	436
No. 5 (OCTOBER 1942)	
WRIGHT, G. PAYLING and WRIGHT, HELEN PAYLING. The influence of social conditions upon diphtheria, measles, tuberculosis and whooping cough in early childhood in London. (With 1 Figure in the Text)	451
DUNCAN, J. T. and WALKER, JACQUELINE. <i>Staphylococcus aureus</i> in the milk of nursing mothers and the alimentary canal of their infants. A report to the Medical Research Council	474
KLIENEBERGER, EMMY. Some new observations bearing on the nature of the pleuropneumonia-like organism known as L 1 associated with <i>Streptobacillus moniliformis</i> . (With Plates 10-13, containing Figs. 1-45)	485
BRODIE, JAMES and STIVEN, DAVID. Reclamation of used agar	498
SPIRA, LEO. Fluorosis and the parathyroid glands	500
WILLS, LUCY, MACKAY, HELEN M. M., BINGHAM, KAITILIN and DOBBS, R. H. Anaemia in women and children on war-time diets. (With 2 Figures in the Text)	505
GRIFFITH, THE LATE A. STANLEY. The cultural characters and pathogenicity for some laboratory animals of the vole strain of acid-fast bacillus	527
DAY, H. B. Studies in immunization by a species antigen. I. Preparation of species antigen from pneumococci	532
OLITZKI, L. Comparative studies on <i>Salmonella</i> strains isolated in Palestine from camels and a human being	547
TUXFORD, A. W. Indices of physical development in children	549
LESLIE, P. H. The bacteriological classification of the principal cultures used in rat and mouse control in Great Britain	552
INDEX OF AUTHORS	563
INDEX OF SUBJECTS	567