#### CASSELL MEDICAL BOOKS

## MANUAL OF MEDICAL HELMINTHOLOGY

By C. J. HACKETT, M.D., F.R.C.P., with the co-operation of Professor J. J. C. BUCKLEY, D.Sc., and the late Professor J. MURGATROYD, M.D., F.R.C.P.

This practical new book, which is based on the helminth exhibits of the Wellcome Museum of Medical Science, is designed especially for doctors in the tropics. It contains detailed descriptions of the important helminths—Trematoda, Cestoda and Nematoda. Some thirty parasites are described in full together with the illnesses they cause in man. Each is discussed under the headings: morphology, life-cycle, epidemiology, pathology, clinical manifestations, diagnosis, treatment, prognosis and prevention.

This forms the main body of the text, but there is in addition a general introduction to helminthic diseases and general sections on the Trematoda, Cestoda and Nematoda are followed by a discussion of the clinical manifestations of helminthiasis, clinical and laboratory diagnosis, and general remarks on treatment, prognosis and prevention.

Special attention has been paid to the preparation of the illustrations, which aim at simplifying the problems of identification which confront the worker in this field.

Illustrated, 18s. net

37-38 St Andrew's Hill, London, E.C. 4

# British Commonwealth Collections of Micro-Organisms

Directory of Collections and List of Species maintained in Canada (just published) 6s. 6d. (post 2\frac{1}{2}d.)

Directory of Collections and List of Species maintained in New Zealand (January 1951) 1s. 6d. (post 1½d.)

A Discussion on the Maintenance of Cultures by Freeze Drying (January 1954) 5s. (post  $1\frac{1}{2}d$ .)

# List of Species maintained in the National Collection of Type Cultures

(Medical Research Council Memorandum No. 21) 1s. (post  $1\frac{1}{2}d$ .)

from the Government Bookshops | | M | S | O or through any bookseller

### The Journal of General Microbiology

Editors: B. C. J. G. KNIGHT and A. F. B. STANDFAST

Contents Volume 14, No. 3, June 1956

Bedson, S. P. Obituary Notice—Sir Charles Martin. Strauss, B. S. The nature of the lesion in the succinate-requiring mutants of *Neurospora* crassa: interaction between carbohydrate and nitrogen metabolism.

Staten Wynne, E. and Gott, C. L. A proposed revision of the genus Pullularia.

Macpherson, C. R. Some observations on the antigenic structure of trichloroacetic acid extracts in Escherichia and the paracolon group.

Davis, J. C. and Mudd, S. Cytological effects of ultraviolet radiation and azaserine on Corynebacterium diphtheriae.

Wainwright, L. K. Spontaneous mutation in stored spores of a Streptomyces sp.

Postgate, J. R. Cytochrome 3 and desulphoviridin; pigments of the anaerobe Desulphovibrio desulphuricans.

Appleyard, R. K. The transfer of defective lambda lysogeny between strains of Escherichia coli.

Cummins, C. S. and Harris, H. The chemical composition of the cell wall in some Gram-positive bacteria and its possible value as a taxonomic character.

Herbert, D., Elsworth, R. and Telling, R. C. The continuous culture of bacteria; a theoretical and experimental study.

Ada, G. L. and Perry, B. T. Influenza virus nucleic acid: relationship between biological characteristics of the virus particle and properties of the nucleic acid.

Pye, J., Holden, H. F. and Donald, H. B. Sedimentation behaviour and electron miscroscopic examination of purified influenza virus.

Williamson, G. M. and White, F. Dihydrostreptomycin and anaerobiosis—Comparison with other antibiotics and its selectivity with regard to obligate anaerobes.

Carlile, M. J. A study of the factors influencing non-genetic variation in a strain of Fusarium oxysporum.

Buston, H. W. and Khan, A. H. The influence of certain micro-organisms on the formation of perithecia by Chaetomium globosum.

Callow, D. S. and Pirt, S. J. Automatic control of pH value in cultures of microorganisms.

Pease, P. The gonidial stages in Spirillum spp. and Vibrio spp.

Anderson, E. S. A new Vi-phage type of Salmonella typhi; with a discussion of methods of preparation of typing phages for new Vi-types.

Henderson, M. E. K. A study of the metabolism of phenolic compounds by soil fungi using spore suspensions.

Albericci, J. P. and Fletcher, J. A. A modified method for preparing and counting viable suspensions of tubercle bacilli.

Griffiths, M. and Stanier, R. Y. Some mutational changes in the photosynthetic pigment system of Rhodopseudomonas spheroides.

Raper, K. B. Dictyostelium polycephalum n.sp.: a new cellular slime mould with coremiform fructifications.

Warner, A. C. I. Criteria for establishing the validity of in vitro studies with rumen micro-organisms in so-called artificial rumen systems.

Warner, A. C. I. Proteolysis by rumen micro-organisms.

Wittler, R. G., Cary, S. G. and Lindberg, R. B. Reversion of a pleuropneumonialike organism to a Corynebacterium during tissue culture passage.

The subscription rate is 90s. net per volume of 3 parts. Single parts 35s. each, plus postage. Two volumes will be issued each year. Orders should be sent to

CAMBRIDGE UNIVERSITY PRESS BENTLEY HOUSE, 200 EUSTON ROAD, LONDON, N.W. 1

PARASITOLOGY is published in double issues twice a year. The numbers afterwards are issued in volumes each containing four numbers.

Papers for publication should be sent to Professor D. Kellin, Molteno Institute, Downing Street, Cambridge. Other communications should be addressed to the University Press, Cambridge.

Papers forwarded to the Editors for publication are understood to be offered

to PARASITOLOGY alone, unless the contrary is stated.

Contributors receive fifty copies of their papers free. Additional copies, not exceeding one hundred (except in special cases), may be had at cost price: these should be ordered when the final proof is returned.

The subscription price, payable in advance, is £4. 10s. net per volume, post-free (U.S.A. \$15.00), double numbers 45s. net, postage extra (U.S.A. \$8.50). Subscriptions may be sent to any Bookseller, or to The Cambridge University Press, Bentley House, 200 Euston Road, N.W. 1.

Enquiries from the U.S.A. should be addressed to the American Branch of the Press at 32 East 57th Street, New York, 22.

SYMPOSIA OF THE SOCIETY FOR GENERAL MICROBIOLOGY

The Nature of Virus Multiplication 35s. net

3

Adaptation in Micro-Organisms 30s. net

Autotrophic Micro-Organisms 25s. net

Mechanisms of Microbial Pathogenicity 25s. net

Symposium No. 1 is published by Blackwell's Scientific Publications, Ltd.

CAMBRIDGE UNIVERSITY PRESS

#### MICHROME STAINS

and Reagents for Microscopy & Biology

Azocarmine Lipase Brilliant Cresvl Blue Luxol Fast Blue

Cedarwood Oil Methyl Green Cresyl Fast Violet CNS Pyronin

Cytase Ribonucleic Acid Giemsa Stain Sodium Desoxycholate Janus Green, B Sudan Black

Trypan Red Lacmoid Leishman Stain Urease, etc. Diazonium & Tetrazolium Salts

OPTOIL: synthetic, colourless, non-sticky immersion oil

CLEARMOUNT & CRISTALITE: colourless, synthetic, neutral mountants, xylol miscible Water Analysis Outfits and Tablets for Field Work

**Biological Laboratory Apparatus** 

EDWARD GURR, LTD.

42 Upper Richmond Road West, East Sheen, London, S.W.14

> Telephone: Prospect 7606 & 8051 Cables: Micromlabs London

SERVICE, UNIFORM HIGH QUALITY, RELIABILITY, IMMEDIATE DELIVERY

#### CONTENTS

(All rights reserved)

	PAGE
Cable, R. M. Opistholebes diodontis n.sp., its development in the final host, the affinities of some amphistomatous trematodes from marine fishes and the allocreadioid problem. (With 8 Figures in the Text)	1
Kirtisinghe, P. Parasitic copepods of fish from Ceylon. IV. (With 14 Figures in the Text)	14
MEGAHED, M. M. Anatomy and histology of the alimentary tract of the female of the biting midge <i>Culicoides nubeculosus</i> Meigen (Diptera: Heleidae=Ceratopogonidae). (With 18 Figures in the Text)	22
GIBBS, ALFRED J. Perezia sp. (fam. Nosematidae) parasitic in the fat-body of Gonocephalum arenarium (Coleoptera: Tenebrionidae). (With 15 Figures in the Text)	48
Sprent, J. F. A. The life history and development of <i>Toxocara cati</i> (Schrank 1788) in the domestic cat. (With Plate I and 29 Figures in the Text)	54
HORTON-SMITH, C. and Long, P. L. Studies in histomoniasis. I. The infection of chickens (Gallus gallus) with histomonad suspensions	79
Sinha, P. K. and Srivastava, H. D. Studies on Schistosoma incognitum Chandler, 1926. I. On the synonymy and morphology of the blood-fluke. (With 5 Figures in the Text)	91
HARVEY, L. A. and CHARNON, C. E. On Corrigia (Orthorchis) vitta (Duj, 1845). (With 1 Figure in the Text)	101
Johri, L. N. and Smyth, J. D. A histochemical approach to the study of helminth morphology. (With Plate II and 1 Figure in the Text)	107
McConnachie, Elspeth W. Modification and elimination of the bacterial flora in cultures of <i>Entamoeba invadens</i> Rodhain, 1934	117
HOARE, CECIL A. Morphological and taxonomic studies on mammalian trypanosomes. VIII. Revision of <i>Trypanosoma evansi</i> . With a statistical analysis by J. W. TREVAN. (With 10 Figures in the Text)	130
Neal, R. A. and Vincent, Patricia. Strain variation in $Entamoeba\ histolytica$ . II. The effect of serial liver passage on the virulence	173
NEAL, R. A. Strain variation in <i>Entamoeba histolytica</i> . III. The influence of the bacterial flora on virulence to rats	183
BISHOP, ANN and McConnachie, Elspeth W. A study of the factors affecting the emergence of the gametocytes of <i>Plasmodium gallinaceum</i> from the erythrocytes and the exflagellation of the male gametocytes	192
BISHOP, ANN, HARTREE, E. F. and McConnachie, Elspeth W. A method for determining the pH of small quantities of fluid. (With 1 Figure in the Text) .	216
BISHOP, ANN. Absence of potentiation between quinine and pyrimethamine in infections of <i>Plasmodium gallinaceum</i> in chicks	220
HOYTE, H. M. D. Grahamella (Rickettsiales) in the common shrew Sorex araneus. (With 1 Figure in the Text)	224
SMITH, KENNETH M. and RIVERS, C. F. Some viruses affecting insects of economic importance. (With Plates III. VI)	00=