

A list of the
JOURNALS

*Published by the
Cambridge University
Press, may be had
from*

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

Over 3000 available
MICHROME STAINS

and Reagents for Microscopy, etc.

Aquamount	Giemsa Stain	Nile Blue
Asirazole Pink	Laktoseal	Ribonuclease
Celloidin	Lipid Crimson	Sudan Black
Fluormount	Luxol Fast Blue	Thiofluorescein
Fluoroil	Methyl Green	Urease

OPTOIL: synthetic, non-sticky immersion oil.

TRIFALGIC ACID, for electrophoresis, etc. (Ref. Bodman (1960), Ivor Smith's Chromat. & Electroph. Tech.)

Service, uniform high quality, reliability, and immediate delivery

104-page catalogue on request

NOW READY: Books by Edward Gurr:

STAINING ANIMAL TISSUES
about 637 pages, about 84/-

ENCYCLOPAEDIA OF MICROSCOPIC STAINS
500 pages, Royal 8vo, price 95/-

**METHODS OF ANALYTICAL HISTOLOGY
& HISTOCHEMISTRY**
342 pages, Royal 8vo, price 70/-

EDWARD GURR, LTD.

42 Upper Richmond Road West
LONDON, S.W. 14

Publications issued by

COMMONWEALTH INSTITUTE OF ENTOMOLOGY
56 Queen's Gate, London, S.W. 7

BULLETIN OF ENTOMOLOGICAL RESEARCH

Published quarterly and containing original articles on Economic Entomology. *Post Free.*
Annual Subscription (payable in advance), beginning with vol. 55, 1964, 150s. od.
Prices of back parts and volumes on application.

REVIEW OF APPLIED ENTOMOLOGY

Consisting of abstracts or reviews of current literature on Economic Entomology throughout the world. Published monthly in two series:

Series "A" dealing with insect and other Arthropod pests of cultivated plants, forest trees and stored products of animal and vegetable origin.

Series "B" dealing with insects, ticks, etc. conveying disease or otherwise injurious to man and animals. *Post Free.*

Annual Subscription (payable in advance), beginning with vol. 52, 1964 *Series "A"* 120s. od. *Series "B"* 60s. od.
Prices of back parts and volumes on application.

ZOOLOGICAL RECORD, part INSECTA

Published annually and containing as complete a record as possible of the literature of the previous year, chiefly from the systematic standpoint.

Annual Subscription, beginning with vol. 99, 130s. od. *Post Free*
Prices of back volumes on application.

The Journal of General Microbiology

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

Contents of Vol. 34, No. 1 (January 1964)

- R. A. BOBO and J. W. FOSTER. The effect of enzyme treatments on *Brucella abortus* cell walls.
- G. MARZULLO and W. F. DANFORTH. Kinetic studies of the oxidative assimilation of acetate by a non-photosynthetic strain of *Euglena gracilis*.
- G. MARZULLO and W. F. DANFORTH. Composition of ethanol-insoluble assimilatory products of oxidative assimilation of acetate by *Euglena gracilis*.
- H. E. BROCKMAN. Effects of amino acids on the utilization of tryptophan and indole for growth by a mutant of *Neurospora crassa*.
- D. E. S. STEWART-TULL and R. G. WHITE. The occurrence of muramic acid in wax D preparations of Mycobacteria.
- R. CROSSE, R. MCWILLIAM and A. RHODES. Some relations between chemical structure and antifungal effects on griseofulvin analogues.
- J. C. N. WESTWOOD, W. J. HARRIS, H. T. ZWARTOUW, D. H. J. TITMUSS and G. APPELYARD. Studies on the structure of vaccinia virus.
- A. CSILLAG. Growth of a form 2 Mycobacterium and various Bacillus species on Lowenstein-Jensen medium.
- R. SUTHERLAND. The nature of the insensitivity of Gram-negative bacteria towards penicillins.
- R. E. STRANGE and M. SHON. Effects of thermal stress on viability and ribonucleic acid of *Aerobacter aerogenes* in aqueous suspension.
- H. T. ZWARTOUW. The chemical composition of vaccinia virus.
- D. T. KLEIN. Time-temperature interaction in the induction of pleomorphism in *Trichophyton mentagrophytes*.
- H. P. CHARLES. Relationships between certain pyrimidine and arginine mutants of *Neurospora*, as revealed by their response to carbon dioxide.
- J. G. FRANKLIN and M. E. SHARPE. Physiological characteristics and vitamin requirements of lactobacilli isolated from milk and cheese.
- E. MEYNELL and G. G. MEYNELL. The roles of serum and carbon dioxide in capsule formation by *Bacillus anthracis*.
- D. G. SMITH and the late P. M. F. SHATTOCK. The cellular location of antigens in streptococci of Groups D, N and Q.

The subscription rate is 80s. net per volume of 3 parts. Single parts 35s. each, plus postage. Four volumes will be issued each year. Orders should be sent to

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

NOTES FOR CONTRIBUTORS

CONTRIBUTIONS will be welcomed from scientists of all nationalities, but must be written in English. Papers should be sent to the Editor, Dr P. Tate, The Molteno Institute, Downing Street, Cambridge.

GENERAL. Submission of a paper will be taken to imply that it is unpublished and is not being considered for publication elsewhere. Papers published in *Parasitology* may not be reprinted or published in translation without permission from the Editorial Board. Papers should be as concise as clarity permits, and illustrations kept as few as possible. Attention to the following instructions will assist rapid publication:

TYPESCRIPTS. Papers should be typewritten with double spacing, on one side only of quarto paper, leaving a margin of about 1½ inches on the left-hand side of each sheet. Sheets should be numbered consecutively. Heavily corrected typescripts may have to be returned to the author for retyping. Papers should state the name of the author and the address to which proofs are to be sent. The address of the laboratory at which the work was carried out will be printed with the authors' names at the head of the paper. A short title, not exceeding 44 letters, should be supplied for running headlines.

The general arrangement of the paper should be as follows: Introduction; Methods; Results; Discussion; Summary of results; References. Tables, explanations of text-figures or plates, and keys to the abbreviations used on figures should be on separate sheets (see below).

PLATES should only be included where they are absolutely essential, as in the reproduction of photomicrographs and similar illustrations demanding very fine detail. Plates are expensive and authors may be required to bear part of the cost if an unduly large number is required. Photographs should be sharp glossy prints, trimmed and mounted on white card and grouped and numbered as they are required to appear in print (overseas contributors may prefer to submit unmounted prints with a sketch to indicate the proposed grouping, in order to reduce postage costs). Please remember that the area of a group cannot exceed 17 by 12.5 cm., after reduction (if any). Lettering is best indicated on an overlay or separate sketch.

TEXT FIGURES should not be more than about twice the size of the finished block, and the thickness of lines and size of points, stipples, etc. determined accordingly. The maximum size of any one group of figures, after reduction, is 17 by 12.5 cm. They must be drawn in Indian ink on white Bristol Board, heavy drawing paper, tracing paper or tracing linen; graph paper ruled in pale blue (but not other colours) is also acceptable. Explanatory lettering should be lightly inserted in blue pencil, with tally lines showing the position of the feature to which it refers, so that the printer may put in the finished lettering. Properly prepared scraperboard drawings may be suitable for reproduction as line drawings, but drawings with gradations of shading (e.g. washdrawings) are not. Please try to avoid creasing or folding illustrations. Legends to illustrations must be given on a separate sheet of paper, but scales of magnification are preferably given alongside the illustrations. Each illustration must have the name of the author and figure number pencilled on the back. Plates and

diagrams should be numbered separately and their approximate positions indicated in the margin of the typescript. It is very convenient if photographs of illustrations are sent with the papers in addition to the original figures; they are essential when the originals are very large, so that they may be sent through the post to referees.

TABLES should be kept to a minimum and the duplication of information in tables and graphs avoided. They should be typed on separate sheets of paper and their approximate positions indicated in the margin of the typescript. Each table should be numbered and be designed to be printed in the normal orientation of the text with the data so grouped as to make the use of rules unnecessary, whenever possible.

NOMENCLATURE. Authors should follow the *International Rules of Nomenclature* in the names of organisms. When new names are introduced the recommendations of the *International Code of Zoological Nomenclature*, 1961, should be strictly adhered to, especially with regard to the designation of types and statements as to where such types are deposited.

REFERENCES should be given only when cited in the text and should be listed in alphabetical order at the end of the paper, in the following form:

Surname of author(s), initials; year of publication; title of paper; title of journal (abbreviated according to the *World List of Scientific Periodicals* and underlined); volume number; first and last page numbers of the work cited. When books are listed, the title of the book should be underlined and it should be followed by the town of publication and the name of the publisher.

Where there is more than one reference to a particular author or group of authors with the same date, references should be distinguished by letters placed after the date, the letter A being used for the first reference cited and so on.

PROOFS sent to authors are already in page form and only essential corrections should be made on them. Excessive alterations, other than corrections of printers' errors, may be disallowed or charged to the author; they are in any case liable to delay publication. Correction should be made using the symbols in British Standard 1219: 1958, or its shortened version B.S. 1219C: 1958 (British Standards Institution, 2 Park Street, London, W. 1). After correction, the printers' marked proof should be returned to the Editor.

OFFPRINTS. Fifty offprints of each paper are provided free of charge. Additional offprints may be ordered on the form sent out with proofs, provided this is returned within seven days of receipt.

MORE DETAILED INFORMATION on the preparation of manuscripts for publication is to be found in the following:

NUTTALL, G. H. F. (1940). Notes on the Preparation of Papers for Publication in the *Journal of Hygiene* and in *Parasitology*, *Parasitology*, 32, 1-62 and *J. Hyg.* 40, 1-62. (Now out of print and also out of date in some respects.)

The Journal of Physiology (1960) Suggestions to Authors 150, 1-33. Cambridge University Press.

THE ROYAL SOCIETY (1950) General Notes on the Preparation of Scientific Papers. The Royal Society, London, W.1

CONTENTS

	PAGE
JAMES, B. L. The life cycle of <i>Parvatrema homoeotectum</i> sp.nov. (Trematoda: Digenea) and a review of the family Gymnophallidae Morozov, 1955. (With 1 Plate and 31 Figures in the Text)	1
RAI, S. L., M.Sc. Observations on the life-history of <i>Phyllodistomum srivastavai</i> sp.nov. (Trematoda: Gorgoderidae). (With 7 Figures in the Text)	43
RAI, S. L., M.Sc. <i>Azygia stunkardi</i> sp.nov. (Trematoda: Azygiidae). (With 2 Figures in the Text)	53
DINNIK, J. A. and DINNIK, N. N. The influence of temperature on the succession of redial and cercarial generations of <i>Fasciola gigantica</i> in a snail host	59
THURSTON, JUNE P. Schistosomes from <i>Hippopotamus amphibius</i> L. II. The morphology of <i>Schistosoma edwardiense</i> sp.nov. (With 7 Figures in the Text)	67
CHENG, THOMAS C. Studies on Phosphatase Systems in Hepatopancreatic Cells of the Molluscan Host of <i>Echinoparyphium</i> sp. and in the Rediae and Cercariae of this Trematode. (With 3 Plates)	73
GOIL, MADAN M. Physiological Studies on Trematodes—Lipid Fractions in <i>Gastrothylax crumenifer</i>	81
JACKSON, A. R. B. The isolation of viable coccidial sporozoites. (With 2 Plates and 2 Figures in the Text)	87
NARASIMHAMURTI, C. C. Nuclear division in <i>Entamoeba invadens</i> Rodhain, 1934. (With 29 Figures in the Text)	95
MYKYTOWYCZ, R. Coccidia in wild populations of the red kangaroo, <i>Megaleia rufa</i> (Desmarest), and the grey kangaroo, <i>Macropus kanguru</i> (Müller). (With 1 Plate and 4 Figures in the Text).	105
LEHMANN, D. L. Oxygen Consumption in the Presence of Glucose and Cytochemical Localization of Enzymes in <i>Haemogregarina boyli</i>	117
LEHMANN, D. L. Cytological and Cytochemical Studies on <i>Cytamoeba bacterifera</i> Labbé, 1894	121
MATSUDO, HITOSHI and MOHR, JOHN LUTHER. A New Species of <i>Lobochona</i> , <i>L. insularum</i> sp.nov. (Ciliata: Chonotrichida) on a gribble from Hawaii. (With 3 Figures in the Text)	125
WALLACE, H. R. and GREET, D. N. Observations on the taxonomy and biology of <i>Tylenchorhynchus macrurus</i> (Goodey, 1932), Filipjev, 1936 and <i>Tylenchorhynchus icarus</i> sp.nov. (With 13 Figures in the Text)	129
SHARPE, G. I. The Helminth Parasites of Some Small Mammal Communities. I. The Parasites and their Hosts.	145
WILLIAMS, H. HARFORD. Some observations on the mass mortality of the freshwater fish <i>Rutilus rutilus</i> (L.). (With 1 Plate and 38 Figures in the Text)	155
WALKER, JANE B. and PARSONS, B. T. The Laboratory Rearing of <i>Amblyomma sparsum</i> Neumann, 1899	173
SINGH, KUNWAR SURESH. On six new avian cestodes from India. (With 22 Figures in the Text)	177
NARASIMHAMURTI, C. C. Observations on the gregarine <i>Rotundula gammari</i> (Diesing, 1859), Goodrich, 1949. (With 3 Figures in the Text)	195