# Parasitology



## PARASITOLOGY

(FOUNDED BY G. H. F. NUTTALL)

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### EDITORIAL POLICY

Parasitology publishes original results from pure and applied studies of parasites and host-parasite relationships. In addition to papers describing the taxonomy, life-cycles and ecology of parasites, the editors will be pleased to consider reports of experimental work on biochemical, immunological and physiological aspects of parasitism and the chemotherapy of parasitic diseases. Contributors are strongly advised to prepare their typescripts in the manner set out in the *Instructions to Authors* included in each part of the journal. The editors assume that papers submitted to *Parasitology* are not being considered for publication in other journals and do not contain material which has already been published.

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# **David Crompton and Bruce Newton**

A decade of Editorship 1972-1982

Ten years is a long time in parasitology and it is now ten years since the sudden and unexpected death of Harry Crofton brought David Crompton and Bruce Newton together as Editors of *Parasitology*. The news that they have now decided to retire from the editorship will be greeted with both disappointment that they will not be continuing and also gratitude for all that they have done. They took over a thriving journal under the most trying circumstances and immediately witnessed the most active and important decade in the history of parasitology. Fuelled largely by the activities of the World Health Organization Special Programme, parasitological research embarked on new ventures and the techniques and ideas of cell and molecular biology, biochemistry and immunology, coupled with increasing concern for human and animal health, became integral parts of parasitology. Similarly, the techniques of physiology and the mathematical concepts of ecology spilled over into parasitology. The editors coped magnificently with these changes making fine judgements between what was ephemeral and what was ahead of its time, what was good science and what was simply the unthinking application of one branch of science to another. At the same time they did not allow the kinds of descriptive and taxonomic parasitology that have for so long been the basis of the subject to become overwhelmed and indeed they encouraged the marriage of newer areas with the more classical ones. To pick up a recent number of Parasitology is to have available a representative sample of what is presently being done across the whole range of the subject and no other journal can claim to combine so much breadth with so much detail.

Keeping up with changes has only been one part of the editors' activities and they have also been innovators. The proceedings of the Spring meetings of the British Society for Parasitology have been published annually since 1973, the Trends and Perspectives in Parasitology (TRAPS) began in 1980 and have flourished, the proceedings of the Third European Multicolloquium of Parasitology were published as a separate number in 1981 and the annual publication of the Autumn Symposia of the British Society for Parasitology began this year. As well as these additional activities, there has been a subtle trend towards crisper and more succinct papers without somehow detracting from the value of in depth discussion. This has produced a more readable journal with more papers and although these changes have been gradual they have not gone unnoticed and have been brought about without upsetting people, and the ability of the editors to keep authors, referees and the publishers happy has been remarkable. In particular, the helpful and courteous comments passed on to both successful and unsuccessful authors have led to vast improvements in many papers as the authors themselves frequently admit.

During the past ten years there has been an information explosion and there are now many journals that accept papers on parasitology, particularly the more specialized aspects. *Parasitology* has still retained its share of such specialized papers and still attracts authors from all over the world. The retiring editors have handed over one of the most prestigious parasitological journals to the new editors and its prestige is in no small way due to the custodianship of David and Bruce. On behalf of all parasitologists, thank you both.

F.E.G.C AND P.J.W.

### PARASITOLOGY

### INSTRUCTIONS TO AUTHORS

Manuscripts must be written in English and sent to the Editors, *Parasitology*, King's College, Strand, London WC2R 2LS, U.K. The original manuscript and **one copy** should be submitted.

Submission of a manuscript implies that it has been approved by the named authors, that it reports their unpublished work and that it is not being considered for publication elsewhere.

- 1 Style. Manuscripts must be typewritten in double spacing and all pages should be numbered consecutively. Although 'short communications' in the form of preliminary notes are not accepted there is no lower limit on manuscript size, provided that sufficient experimental details are given. Authors should, as far as possible, adhere to the following format:
  - (a) Title-page, headed by a concise but informative full title (a running title of not more than 44 letters should also be supplied), name(s) of author(s) and address of the institute where the work was carried out. (Footnotes indicating present address may be included on the title-page.)
  - (b) Summary, containing brief but informative details of the contents and conclusions of the paper. It should normally constitute about 3-4% of the extent of the paper and preferably not exceed 200 words.
  - (c) Introduction, stating the reasons for doing the work.
  - (d) Materials and Methods. Particular care must be taken to ensure that sufficient experimental details are given so that methods can be reproduced by readers.
  - (e) Results should be described as concisely as possible and the use of both tables and figures to present the same data is to be avoided.
  - (f) Discussion should not recapitulate results in detail or contain new information but should emphasize the relevance and significance of the findings reported.
  - (g) Acknowledgements.
  - (h) References. Correct references are the responsibility of the author. The Harvard System must be used for the citation of references in the text as follows: Brown & Green (1960) or (Brown & Green, 1960). Where there are more than two authors the first citation should include all the names and subsequent citations should be in the form Brown et al. (1960) or (Brown et al. 1960). Where several papers by the same author(s) have been published in the same year they should be cited as Brown (1960a, b). Sometimes an author may wish to refer to his unpublished work or to information supplied by colleagues. In such cases the terms 'unpublished observations' and 'personal communication' may be used. References to papers 'in preparation' should be avoided and only cited in exceptional circumstances. Citation of papers 'in press' is acceptable. At the end of the paper references must be listed in alphabetical order of authors' names. Both the title of the paper and of the journal should be given in full according to the following style:
    - EVELAND, L. K. & RITCHIE, L. A. (1972). Infectivity of cercariae of Schistosoma mansoni from snails on inadequate diets. Parasitology 64, 441-4.
    - Rogers, W. P. (1962). The Nature of Parasitism. New York and London: Academic Press.
    - Honigherg, B. M. (1967). Chemistry of parasitism among some protozoa. In Chemical Zoology, vol. 1 (ed. M. Florkin, B. T. Scheer and G. W. Kidder), pp. 695–814.
       New York and London: Academic Press.
- 2 Animals and organisms. The full binomial Latin name (underlined) should be given for all experimental animals except common laboratory animals and where possible the strain and source should be stated. Authors should follow the International Rules of Nomenclature for organisms and when new names are introduced the recommendations of the International Code of Zoological Nomenclature should be followed.

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- 3 Solutions. Concentrations should be expressed in terms of molarity (M) not normality (N) and fractional concentrations should be given as 0.1 mHCl not as M/10 HCl. Concentrations given as % must be defined as w/w, w/v or v/v. The complete composition of buffer systems should be given at the first mention. The names and addresses of manufacturers of special apparatus or materials should be stated. The EC numbers of enzymes should be given and nomenclature should follow the system published in the Report on the Commission on Enzymes of the International Union of Biochemistry.
- 4 Symbols for physical units. Recommended SI symbols for units should be used; for example, see the list of commonly used preferred units below. For precise definitions of SI units authors should refer to Units, Symbols and Abbreviations: A Guide of Biological and Medical Editors and Authors; obtainable from the Royal Society of Medicine, 1 Wimpole Street, London W1M 8AE.

Basic~SI	units	Prefixes for SI units					
Metre Kilogram Second Ampere Mole	m kg sec A mole	Factor 10 <sup>-1</sup> 10 <sup>-2</sup> 10 <sup>-3</sup> 10 <sup>-6</sup> 10 <sup>-9</sup> 10 <sup>-12</sup>	Prefix deci centi milli micro nano pico	Symbol d c m $\mu$ n	Factor 10 <sup>1</sup> 10 <sup>2</sup> 10 <sup>3</sup> 10 <sup>6</sup> 10 <sup>9</sup> 10 <sup>12</sup>	Prefix deca hecto kilo mega giga tera	Symbol da h k M G
		Length (metre)		$p = 10^{12}$ $Weight (kg)$		tera	
		$\mu\mathrm{m}$	•				
•	mm			mg			
		cm		g			
		millimiero	millimicron ( $10^{-9}$ m) = nm not m $\mu$				
		Volume (	Volume (litre)		Temperature		
1 ml			$x$ $^{\circ}\mathrm{C}$				
		1 litre	•				
	$Not\ allowed$			SI unit	equivalent		
1 inch 1 angstrom 1 atmosphere			2.54 cm	1 _			
		1 angstrom	1 angstrom		10 <sup>-10</sup> m or 0·1 nm		
		_		$760 \times 13$	33·1 N/m <sup>2</sup>		
		-		= 10	1·3 kPa		

5 Abbreviations. These should be used sparingly and should be spelled out in full on first use. The following list provides a guide to some of the commonly used abbreviations.

```
acceleration due to gravity for centrifugal conditions g
                                                        cf.
compare
counts per minute
                                                        c.p.m.
Curie
                                                        Ci
                                                        D.F.
degrees of freedom
disintegrations per minute
                                                        d.p.m.
                                                        \mathrm{ED}_{50}
effective dose (median)
                                                        Exp., Exp. 2 and Exps 3-11
experiment(s) (with reference number)
gas-liquid chromatography
                                                        g.l.c.
haematoxylin and eosin
                                                        H and E
                                                        Hb
haemoglobin
immunoglobulins
                                                        IgG, etc.
international unit
                                                        i.u.
                                                        i.m.
intramuscular
intraperitoneal
                                                        i.p.
                                                        i.v.
intravenous
                                                       [32P]creatinine, [1-3H]ethanol,
isotopes
                                                          L-[2-14C]leucine
```

```
lethal dose, median
                                                         LD_{50}
logarithm (base 10)
                                                         log
logarithm (base e)
                                                         ln
minute (time)
                                                         min
molar (concentration)
                                                         м; millimolar, mм
                                                         mole, millimole, mmole
mole
molecular weight
                                                         mol. wt
number
                                                         no.
parts per million
                                                         p.p.m.
per
per cent
periodic acid-Schiff
                                                         PAS
post-infection
                                                         p.i.
radiation absorbed dose
                                                         rad.
red blood corpuscle
                                                         r.b.c.
relative humidity
                                                         rel. hum.
revolutions per minute
                                                         r.p.m.
second (time)
                                                         sec
sedimentation coefficient
                                                         S<sub>20. w</sub>
species
                                                         sp., spp. (plural)
species, new
                                                         sp.nov.
specific gravity
                                                         sp.gr.
standard deviation
                                                         S.D.
standard error
                                                         S.E.
subcutaneous
                                                         s.c.
thin-layer chromatography
                                                         t.l.c.
trichloroacetic acid is not abbreviated to TCA
ultraviolet
                                                         u.v.
versus
                                                         vs (in tables only)
volume
                                                         vol.
weight
                                                         wt
```

- 6 Statistical treatment. Where possible, data from sufficient numbers of separate experiments should be reported to permit assessment of the reproducibility and significance of the results. Where a significant difference is claimed between the means of two groups of results, the kind of test of significance used should be stated. It should be made clear whether the standard deviation or standard error has been used, and the number of separate experiments should be given.
- 7 Powers in tables and figures. Where powers are used to avoid writing out large numbers, care must be taken to express these correctly, e.g.  $2 \cdot 3$  under the heading  $10^3 k$  means that the value of k is  $0 \cdot 0023$ ;  $2 \cdot 3$  under the heading  $10^{-3}k$  means that the value of k is 2300. Similarly, a concentration of  $0 \cdot 0015$  m should be expressed as  $1 \cdot 5$  under the heading  $10^3 \times$  conc. (M) not as  $10^{-3} \times$  conc. (M). The unit may be changed by the use of prefixes, e.g. m,  $\mu$ , n or p, etc.
- 8 *Illustrations*. Each illustration should be supplied on a separate sheet and be labelled with the author's name and the figure or table number. The approximate position of figures and tables should be indicated in the text.
  - (i) Headings and legends. Each table, figure or plate should be supplied with an informative heading which together with an explanatory legend should provide enough details to make reference to the text unnecessary.
  - (ii) Figures. These should be drawn about twice the size of the finished block. The maximum printed size of any drawing or group of drawings is 200×125 mm. Explanatory lettering will be inserted by the printers and should be indicated in soft pencil or on a tracing-paper overlay. Excessive lettering should be avoided on the figure and should be inserted in the legend. The preferred symbols for use in figures

- are  $\bigcirc$ ,  $\triangle$ ,  $\square$ ,  $\bullet$ ,  $\bullet$ ,  $\bullet$ , and for consistency, the same symbols should be used to represent the same entity throughout the paper. Figures should be referred to in the text as Fig. 1; Figs 1-3.
- (iii) Plates. Photographs for plates should be mounted on card and should be approximately the same size as they are to appear in the journal, i.e. they should not exceed 200 × 125 mm. Lettering on plates will be inserted by the printers and should be indicated on a tracing-paper overlay. Explanations of abbreviated lettering should be given as a separate list or included in the legend. Each plate should be supplied with a scale bar with the appropriate units; magnification factors must not be given as an alternative. Mounting photographs is the responsibility of the author(s). Where several photographs make up a plate, they should be accurately mounted on card and labelled. Plates will be referred to in the text as Pl. 1 A; Pls 1 and 3.

Plates of electrophoresis patterns should always be submitted together with line drawings. Electrophoresis conditions should be stated in the legend. Authors may be asked to contribute to the cost of plates in excess of four.

- 9 Proofs. Page proofs will be sent to the author by the Press. They will already have been proof-read by the Press for printer's errors but it is the responsibility of the author to ensure that the proof contains no errors. Only essential corrections should be made and authors may be charged for excessive alteration in proof.
- 10 Offprints. Authors will receive 50 offprints free of charge and may order additional copies from the Press.

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