PARASITOLOGY

Editorial Board Development 40% under 40

We invite young enthusiastic parasitologists, in their 30s and 40s, who might be interested in joining the Editorial Board of *Parasitology* to contact the Editor-in-Chief.

See overleaf for more details.

Publishing original research and review papers on all aspects of parasitology and host-parasite relationships.

journals.cambridge.org/par



PARASITOLOGY

Editorial Board Development 40% under 40 years old

In common with all international journals, the Editors of *Parasitology* have a large editorial board (EB) of distinguished parasitologists, who advise on a number of aspects of running the journal.

Parasitology has a policy of replacing members of the EB over time to keep the Board up to date and refreshed. The Editors now wish to give younger scientists, who have established themselves in their field and are working at the forefront of research, an opportunity to join the Board.

Although *Parasitology* is over 100 years old, we do not want this longevity reflected in the make-up of the EB; so as a long-term aim we would like up to 40% of the Editorial Board to be under the age of 40.

We invite young enthusiastic parasitologists, in their 30s and 40s, who might be interested in joining the EB of *Parasitology* to contact the Editorin-Chief, Professor Stephen Phillips at Stephen.Phillips@glasgow.ac.uk. Members of the EB serve for 3 years and terms can be renewed. Please supply the name of one referee. Details of what is expected of an EB member will be sent to you on application.

Keep Up-to-Date

Sign up to receive free email alerts to keep up to date with the latest research in your field **journals.cambridge.org/par-alerts**

Sample Content

Read the papers in the sample issue for free **journals.cambridge.org/parsample**

Instructions for contributors

Read the instructions for contributors **journals.cambridge.org/par/ifc**

Publishing in Parasitology:

- Average time from submission to first decision just 26 days
- Online submission system
- Rapid online publication via FirstView and Parasitology Express
- Rigorous peer-review process
- An Open Access option is available to authors of articles at the rate of £1500/\$2700 per article

题题 **CAMBRIDGE** States UNIVERSITY PRESS

Animal Health Research Reviews

Published in collaboration with the Conference of Research Workers in Animal Diseases

Editor-in-Chief

C. Gyles, University of Guelph, Canada

Animal Health Research Reviews provides an international forum for the publication of reviews and commentaries on all aspects of animal health. Papers include in-depth analyses and broader overviews of all facets of health and science in both domestic and wild animals. Major subject areas include physiology and pharmacology, parasitology, bacteriology, food and environmental safety, epidemiology and virology. The journal will be of interest to researchers involved in animal health, parasitologists, food safety experts and academics interested in all aspects of animal production and welfare.

For free online content visit: http://journals.cambridge.org/ahrsample

Free email alerts Keep up-to-date with new content http://journals.cambridge.org/ahr-alerts



Animal Health Research Reviews is available online at: http://journals.cambridge.org/ahr

To subscribe contact Customer Services

Americas: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org

Rest of world: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

Price Information is available at: http://journals.cambridge.org/ahr



Journal of Helminthology

Editor

John Lewis, Royal Holloway, University of London, UK

Journal of Helminthology publishes original papers and review articles on all aspects of pure and applied helminthology, particularly those helminth parasites of environmental health, medical or veterinary importance. Research papers on helminths in wildlife hosts, including plant and insect parasites, are also published along with taxonomic papers contributing to the systematics of a group. The journal will be of interest to academics and researchers involved in the fields of human and veterinary parasitology, public health, microbiology, ecology, epidemiology and biochemistry.

Price information is available at: http://journals.cambridge.org/jhl

Free email alerts

Keep up-to-date with new material – sign up at **http://journals.cambridge.org/jhl-alerts**

For free online content visit: http://journals.cambridge.org/jhl



Journal of Helminthology is available online at: http://journals.cambridge.org/jhl

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org



The Lichenologist

Published on behalf of The British Lichen Society

Senior Editor Peter D. Crittenden, University of Nottingham, UK

The Lichenologist is the premier scientific journal devoted exclusively to the study of lichens worldwide. As the leading forum for the dissemination of new concepts and topical reviews, *The Lichenologist* reaches more scientists concerned with the study of lichens and lichen symbionts than any other single journal. All aspects of lichenology are considered including systematics and phylogenetics; molecular biology; ultrastructure, anatomy and morphology; secondary chemistry, effects of pollutants and use as bioindicators; biogeography.

Price information is available at: http://journals.cambridge.org/lic

Free email alerts

Keep up-to-date with new material – sign up at http://journals.cambridge.org/lic-alerts

For free online content visit: http://journals.cambridge.org/lic



The Lichenologist is available online at: http://journals.cambridge.org/lic

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org

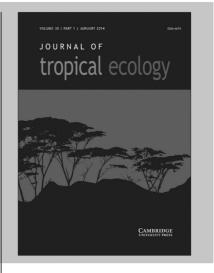


Journal of Tropical Ecology

Editor

lan Turner, Winchelsea, UK

Journal of Tropical Ecology publishes papers in the important and now established field of the ecology of tropical regions, either arising from original research (experimental or descriptive) or forming significant reviews. First published in 1985, Journal of Tropical Ecology has become a major international ecological journal. With clear, stimulating and readable reports of recent research findings, the journal provides a platform for the dissemination of information on all aspects of tropical communities and ecosystems



Journal of Tropical Ecology is available online at: http://journals.cambridge.org/tro

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org

Price information is available at: http://journals.cambridge.org/tro

Free email alerts

Keep up-to-date with new material – sign up at **http://journals.cambridge.org/tro-alerts**

For free online content visit: http://journals.cambridge.org/tro



Parasitology

Back volumes. Vols. 1–71: Inquiries should be addressed to Wm. Dawson & Sons Ltd, Cannon House, Folkestone, Kent. Vols. 72 onwards: quotations for parts still in print may be obtained from Cambridge or the American Branch of Cambridge University Press.

Copying. This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Organizations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to C.C.C. of the per-copy fee of \$16.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0031–1820/2013 \$16.00.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

ISI Tear Sheet Service. 3501 Market Street, Philadelphia, Pennsylvania 19104, USA, is authorized to supply single copies of separate articles for private use only.

For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

Claims for missing issues can only be considered if made immediately after receipt of the subsequent issue.

Advertising. Details of advertising in Parasitology may be obtained from the publisher.

Online submission. Authors are encouraged to submit their manuscripts online. Go to http:// mc.manuscriptcentral.com/par/ to open an author's account for Parasitology. Manuscript Central is helping to improve the speed of the publication process for the journal.

Front Cover illustration: *Eimeria tenella*: early-stage immature schizonts at 72 h (A) and 2nd generation large immature and mature schizonts at 84 h (B) in the lamina propria; 3rd generation schizonts in the epithelium of the crypts at 96 h (E). From Matsubayashi *et al.* Vol.139(12) pp. 1553–1561.

© Cambridge University Press 2014

The Edinburgh Building, Cambridge CB2 8RU, United Kingdom 32 Avenue of The Americas, New York, NY 10013-2473, USA 477 Williamstown Road, Port Melbourne, VIC 3207, Australia C/ Orense, 4, Planta 13 28020 Madrid, Spain Lower Ground Floor, Nautica Building, The Water Club, Beach Road, Granger Bay, 8005 Cape Town, South Africa

Printed in the UK by Bell & Bain

PARASITOLOGY

CONTENTS

REVIEW ARTICLES <i>Cryptosporidium</i> species in humans and animals: current understanding and research needs Use Durp. Depend Four er and Libury Yise	1007
Una Ryan, Ronald Fayer and Lihua Xiao Monepantel: the most studied new anthelmintic drug of	1667
recent years L. Lecová, L. Stuchlíková, L. Prchal and L. Skálová	1686
Epidemiological review of <i>Toxoplasma gondii</i> infection in humans and animals in Portugal A. P. Lopes, J. P. Dubey, ML. Dardé and L. Cardoso	1699
Myxosporean parasites of marine fishes: their distribution	
in the world's oceans K. Mackenzie and C. Kalavati	1709
RESEARCH ARTICLES	
Development of Acanthocheilonema reconditum (Spirurida, Onchocercidae) in the cat flea Ctenocephalides felis (Siphonaptera, Pulicidae) Ettore Napoli, Emanuele Brianti, Luigi Falsone, Gabriella Gaglio, Sabrina Foit, Francesca Abramo, Giada Annoscia, Filipe Dantas-Torres, Salvatore Giannetto and Domenico Otranto	1718
In vivo localization of antibodies raised against Eimeria maxima wall forming bodies during sexual intracellular development Sonja Frölich, Annisha Shahparee, Valerie C. Wasinger and Michael Wallach	1726
Karyotype and reproduction mode of the rodent parasite	1720
Strongyloides venezuelensis Akina Hino, Teruhisa Tanaka, Maho Takaishi, Yumiko Fujii, Juan E. Palomares-Rius, Koichi Hasegawa, Haruhiko Maruyama and Taisei Kikuchi	1736

Functional characterization of *SjB10*, an intracellular serpin from *Schistosoma japonicum*

Adebayo J. Molehin, Geoffrey N. Gobert, Patrick Driguez and Donald P. Mcmanus

Diphenyl diselenide and sodium selenite associated with chemotherapy in experimental toxoplasmosis: influence on oxidant/antioxidant biomarkers and cytokine modulation Cleber F. Barbosa, Alexandre A. Tonin, Aleksandro S. Da Silva, Maria I. De Azevedo, Danieli U. Monteiro, Emily P. Waczuk, Thiago Duarte, Carine Hermes, Giovana Camillo, Fernanda F. Vogel, Luciana Faccio, Paula T. Tonin, Patricia Wolkmer, Marta R. Leal, Marta M. M. F. Duarte, Rafael N. Moresco, Sonia T. A. Lopes and Mario L. De La Rue	1761
Levels of circulating anti-muscarinic and anti-adrenergic antibodies and their effect on cardiac arrhythmias and dysautonomia in murine models of Chagas disease Anissa Daliry, Isabela Resende Pereira, Pedro Paulo Pereira-Junior, Isalira Peroba Ramos, Glaucia Vilar-Pereira, Raquel Rangel Silvares, Joseli Lannes-Vieira and Antônio Carlos Campos De Carvalho	1769
ERRATUM Reassignment of the land tortoise haemogregarine <i>Haemogregarina fitzsimonsi</i> Dias 1953 (Adeleorina: Haemogregarinidae) to the genus <i>Hepatozoon</i> Miller 1908 (Adeleorina: Hepatozoidae) based on parasite morphology, life cycle and phylogenetic analysis of 18S rDNA sequence	

fragments – ERRATUM Courtney A. Cook, Scott P. Lawton, Angela J. Davies and Nico J. Smit

1779

1746

Cambridge Journals Online For further information about this journal please go to the journal website at: journals.cambridge.org/par



MIX Paper from responsible sources FSC[®] C007785

