Journal of Helminthology Volume 89 2015 ISSN: 0022–149X journals.cambridge.org/jhl

Publishing, Production, Marketing, and

Subscription Sales Office: Cambridge University Press Journals Fullfillment Dept University Printing House Shaftesbury Road Cambridge CB2 8BS UK

For Customers in North America:

Cambridge University Press Journals Fullfillment Dept 100 Brook Hill Drive West Nyack New York 10994-2133 USA

Editorial Assistant: Sharon Ryan

Journal of Helminthology is an international journal published by Cambridge University Press in January, March, May, July, September and November.

Special sales and supplements:

This journal accepts advertising and inserts. We also provide bulk reprints of suitable papers to meet teaching or promotional requirements. The journal also publishes abstracts and proceedings on behalf of academic and corporate sponsors. Please contact The Publisher at special_ sales@cambridge.org.

Subscription information:

The subscription rates for Volume 89,2015 (6 issues): Internet only: £660/\$1224 Americas only

Any **supplements** to this journal published in the course of the annual volume are normally supplied to subscribers at no extra charge.

Back volumes are available. Please contact Cambridge University Press for further information.

Claims for non-receipt of journal issues will be considered on their merit and only if the claim is received within six months of publication. Replacement copies supplied after this date will be chargeable.

US POSTMASTERS: please send address corrections to CUP Cambridge.

Information for Authors:

An electronic version, preferably in Microsoft Word, should besubmitted online at http://www.editorialmanager.com/joh

Notes for Authors are available from the journal home page: http://journals.cambridge.org/jhl.

Offprints: Authors will receive a PDF of their article via email.

Copyright: CUP, 2015. All rights reserved: permission for reproduction of any part of the journal (text, figures, tables or other matter) in any form (on paper, microfiche or electronically) should be sought directly from the Publisher, or a licence permitting restricted copying obtained from the CopyrightLicensingAgency, TottenhamCourtRoad, London W1P9HE, UK, or in the USA by the Central Clearance Center, 27 Congress Street, Salem MA 01970.

Disclaimer: The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable, but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk.

CambridgeUniversityPressdoesnotacceptresponsibilityfor any trade advertisement included in this publication.

This journal is printed on acid-free paper from renewable sources. Typeset by the OKS Prepress Services, India and printed by Latimer Trend, Devon, UK.

Journal of Helminthology is covered in Current Contents®/ Agriculture, Biology & Environmental Sciences, SciSearch®, Research Alert®, BIOSIS, CAB ABSTRACTS, Index Medicus® (MEDLINE®), Chemical Abstracts Service Excerpta Medica

JOURNAL OF HELMINTHOLOGY

CONTENTS

Review Articles (presented at ICOPA XIII)

Bassetto, C.C. & Amarante, A.F.T. Vaccination of sheep and cattle against haemonchosis 517

Ortega-Pierres, G., Vaquero-Vera, A., Fonseca-Liñán, R., Bermúdez-Cruz, R.M. & Argüello-García, R. Induction of protection in murine experimental models against *Trichinella spiralis*: an up-to-date review 526

Commentary (presented at ICOPA XIII)

Bottazzi, M.E. The human hookworm vaccine: recent updates and prospects for success 540

Research Articles

Dusitsittipon, S., Thaenkham, U., Watthanakulpanich, D., Adisakwattana, P. & Komalamisra, C. Genetic differences in the rat lungworm, *Angiostrongylus cantonensis* (Nematoda: Angiostrongylidae), in Thailand 545

Wongkamchai, S., Satimai, W., Loymek, S., Nochot, H. & Boitano, J.J. An ELISA kit with two detection modes for the diagnosis of lymphatic filariasis 552

Mkupasi, E.M., Ngowi, H.A., Sikasunge, C.S., Leifsson, P.S. & Johansen, M.V. Distribution and histopathological changes induced by cysts of *Taenia solium* in the brain of pigs from Tanzania 559

Besprozvannykh, V.V., Atopkin, D.M., Ermolenko, A.V. & Nikitenko, A.Yu. Restoration of the genus *Parasaccocoelium* Zhukov, 1971 (Digenea: Haploporidae) and a description of two new species from mugilid fish in the Far East of Russia 565

Bauomi, I.R., El-Amir, A.M., Fahmy, A.M., Zalat, R.S. & Diab, T.M. Evaluation of purified 27.5 kDa protoscolex antigen-based ELISA for the detection of circulating antigens and antibodies in sheep and human hydatidosis 577

Muñoz, G., Valdivia, I. & López, Z. The life cycle of *Prosorhynchoides carvajali* (Trematoda: Bucephalidae) involving species of bivalve and fish hosts in the intertidal zone of central Chile 584

Vegas-Sánchez, M.C., Rollán-Landeras, E.,

García-Rodríguez, J.J. & Bolás-Fernández, F. Induction of ulcerative colitis in mice influences the course of infection with the nematode *Trichuris muris* 593

Mansur, F., Luoga, W., Buttle, D.J., Duce, I.R., Lowe, A. & Behnke, J.M. The anthelmintic efficacy of natural plant cysteine proteinases against *Hymenolepis microstoma in vivo* 601

New Concepts/Case Studies

Tembo, A. & Craig, P.S. *Taenia saginata* taeniosis: copro-antigen time-course in a voluntary self-infection 612

Short Communications

Vericimo, M.A., Figueiredo Jr, I., Teixeira, G.A.P.B. & São Clemente, S.C. Experimental anisakid infections in mice 620

Vieira, L., Silvestre-Ferreira, A.C., Fontes-Sousa, A.P., Balreira, A.C., Morchón, R., Carretón, E., Vilhena, H., Simón, F. & Montoya-Alonso, J.A. Seroprevalence of heartworm (*Dirofilaria immitis*) in feline and canine hosts from central and northern Portugal 625

Mascarenhas, C.S. & Müller, G. Third-stage larvae of the enoplid nematode *Dioctophyme renale* (Goeze, 1782) in the freshwater turtle *Trachemys dorbigni* from southern Brazil 630

Muñoz-Antoli, C., Cortés, A., Torres, D., Esteban, J.G.
& Toledo, R. Haematological changes in the laboratory rat *Rattus norvegicus* infected with *Echinostoma caproni* (Trematoda: Echinostomatidae) 636

Chan-Pérez, J.I., Torres-Acosta, J.F.J., Rodríguez-Vivas, R.I. & Villegas-Pérez, S.L. Reduction of benzimidazole resistance in established *Haemonchus contortus* populations in goats using a single infection with a benzimidazole-susceptible isolate 641

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





https://doi.org/10.1017/S0022149X15000693 Published online by Cambridge University Press