

Online submission at: www.editorialmanager.com/ber

Volume 111
Issue 5
October 2021

Bulletin of
Entomological
Research



CAMBRIDGE
UNIVERSITY PRESS

ISSN 0007-4853

Bulletin of *Entomological Research*

journals.cambridge.org/ber

Aims and Scope

Established in 1910, the internationally recognised *Bulletin of Entomological Research* aims to further global knowledge of entomology through the generalisation of research findings rather than providing more entomological exceptions. The *Bulletin* publishes high quality and original research papers, 'critiques' and review articles concerning insects or other arthropods of economic importance in agriculture, forestry, stored products, biological control, medicine, animal health and natural resource management. The scope of papers addresses the biology, ecology, behaviour, physiology and systematics of individuals and populations, with a particular emphasis upon the major current and emerging pests of agriculture, horticulture and forestry, and vectors of human and animal diseases. This includes the interactions between species (plants, hosts for parasites, natural enemies and whole communities), novel methodological developments, including molecular biology, in an applied context. The *Bulletin* does not publish the results of pesticide testing or traditional taxonomic revisions.

Bulletin of Entomological Research is published bimonthly by
Cambridge University Press

Editor-in-Chief

Dr Paul De Barro

CSIRO Health & Biosecurity, Brisbane,
Queensland 4001, Australia
Email: entomology@cambridge.org

Subject Editors

- | | |
|--|--|
| Dr Jonas Arnemann, <i>Universidade Federal de Santa Maria, Brazil</i> | Dr D. Perez-Staples, <i>INBIOTECA, Universidad Veracruzana, Mexico</i> |
| Dr T. Backeljau, <i>Royal Belgian Institute of Natural Sciences, Belgium</i> | Dr C. Phillips, <i>AGResearch, New Zealand</i> |
| Dr L. Boykin, <i>University of Western Australia, Australia</i> | Dr E. Roidtakis, <i>National Agricultural Research Foundation, Greece</i> |
| Dr D. Bray, <i>University of Greenwich, UK</i> | Dr D. Segura, <i>National Institute of Agricultural Technology (INTA), Argentina</i> |
| Professor M. Chen, <i>Northwest A&F University, China</i> | Dr Z. Sheng, <i>University of Chicago, USA</i> |
| Professor X-X. Chen, <i>Zhejiang University, China</i> | Professor P. Stevenson, <i>Royal Botanic Gardens, Kew, UK</i> |
| Dr S. Downes, <i>CSIRO, Ecosystem Sciences, Australia</i> | Professor J-H. Sun, <i>Institute of Zoology, Chinese Academy of Sciences, China</i> |
| Dr A. K-W. Hee, <i>Universiti Putra Malaysia, Malaysia</i> | Dr W.T. Tay, <i>CSIRO Black Mountain Labs, Australia</i> |
| Dr H. Hesketh, <i>Centre for Ecology and Hydrology, UK</i> | Professor A. Tena, <i>Valencian Institute for Agricultural Research, IVIA, Spain</i> |
| Dr B. Hoffmann, <i>CSIRO, Australia</i> | Dr L. Thomson, <i>University of Melbourne, Australia</i> |
| Professor X-Y Hong, <i>Nanjing Agricultural University, China</i> | Professor P. Trematerra, <i>University of Molise, Italy</i> |
| Dr T.H. Jones, <i>Cardiff University, UK</i> | Dr B. Trewin, <i>CSIRO, Australia</i> |
| Dr A. Kapranas, <i>Benaki Phytopathological Institute, Greece</i> | Dr M. Virgilio, <i>Royal Museum for Central Africa, Belgium</i> |
| Dr E. Kistner-Thomas, <i>USDA Midwest Climate Hub, USA</i> | Professor X.-W. Wang, <i>Zhejiang University, China</i> |
| Dr D. Kriticos, <i>CSIRO Black Mountain Labs, Australia</i> | Dr S. L. Wee, <i>Universiti Kebangsaan Malaysia, Malaysia</i> |
| Dr O. Kwon, <i>Kyungpook National University, South Korea</i> | Dr C. Weldon, <i>University of Pretoria, South Africa</i> |
| Dr S. Lawson, <i>University of the Sunshine Coast, Australia</i> | Dr S. Yang, <i>Research Institute for Sustainable Humanosphere (RISH), Kyoto University, Japan</i> |
| Professor C-Y. Lee, <i>Universiti Sains Malaysia, Malaysia</i> | Dr M. Yazdani, <i>University of Adelaide, Australia</i> |
| Dr N. V. Meyling, <i>University of Copenhagen, Denmark</i> | Professor W. Zhang, <i>Sun Yat-sen University, China</i> |
| Professor B. Nault, <i>Cornell University, USA</i> | Dr Fang Zhu, <i>Penn State University, USA</i> |
| Dr Michael Otim, <i>National Crops Resources Research Institute, Uganda</i> | |
| Dr M. Pappas, <i>Democritus University of Thrace, Greece</i> | |

© Cambridge University Press 2021.

This journal issue has been printed on FSC™-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

Cover image: An adult male of *Melolontha melolontha* preparing to fly.

Photo taken by: Christian Schweizer, Agroscope, Switzerland.