

INTERNATIONAL JOURNAL OF TROPICAL INSECT SCIENCE

Call for Papers

International Journal of Tropical Insect Science is an international peer-reviewed journal that serves as a forum for original research findings on tropical insects and related arthropods, and their management, conservation and utilization. The Journal is published quarterly both in print and on the Internet. The subject areas encompassed by the Journal include: tropical agricultural pests; stored product pests; forest entomology and wood product pests; disease vectors; social insects; beneficial insects; commercial insects; arthropod–host and vector–parasite relationships; arthropod ecology and biodiversity; arthropod physiology, morphology, pathology, immunology and toxicology; arthropod taxonomy; population dynamics and genetics; arthropod molecular biology, biochemistry and biotechnology; behavioural and chemical ecology; economic entomology; biological control; host plant resistance; integrated pest and vector management; pesticide resistance and residue studies; ethnoentomology; socio-economics and technology transfer; and arthropod mass rearing and containment. *International Journal of Tropical Insect Science* is published by Cambridge University Press, on behalf of *icipe*.

International Journal of Tropical Insect Science offers you:

- Rigorous peer review by international experts;
- High editorial and publication standards;
- Publication without page charges;
- 25 free offprints without covers to the primary author with the option to purchase extra;
- On-line visibility (www.journals.cambridge.org/jti);
- International readership and citation by major indexing and abstracting services, including CAB Abstracts, BIOSIS, Zoological Record, Chemical Abstracts, The African Book Publishing Record, TROPAG & RURAL Abstracts, IBIDS database and the FAO AGRIS database; and
- A short manuscript turnaround time.

In addition to original research articles, short communications and scientific notes, the Journal also publishes mini-review articles, book reviews, new patents, announcements and reports of meetings, and obituaries of prominent scientists. Regular issues of the Journal often contain a review article on a critical or rapidly developing area of tropical insect science and which is normally submitted at the invitation of the Editors. Please see the Journal homepage for detailed Notes for Authors and checklist: www.journals.cambridge.org/jti. Papers (including abstracts) are published in English.

E-mail (ijt@icipe.org) or dispatch (by registered airmail or courier service) your contributions to:

The Editor-in-Chief
International Journal of Tropical Insect Science
PO Box 72913-00200, Nairobi, Kenya
Fax: +254-(20)-8632001/2

Notes for Authors

International Journal of Tropical Insect Science is an international peer-reviewed journal that serves as a forum for original research findings on tropical insects and related arthropods, and their management, conservation and utilization. The Journal is published quarterly both in print and on the Internet. The subject areas encompassed by the Journal include: tropical agricultural pests; stored product pests; forest entomology and wood product pests; disease vectors; social insects; beneficial insects; commercial insects; arthropod–host and vector–parasite relationships; arthropod ecology and biodiversity; arthropod physiology, morphology, pathology, immunology and toxicology; arthropod taxonomy; population dynamics and genetics; arthropod molecular biology, biochemistry and biotechnology; behavioural and chemical ecology; economic entomology; biological control; host plant resistance; integrated pest and vector management; pesticide resistance and residue studies; ethnoentomology; socio-economics and technology transfer; and arthropod mass rearing and containment. *International Journal of Tropical Insect Science* is published by Cambridge University Press on behalf of *icipe* and is available to subscribers online at journals.cambridge.org/jti.

Styles of Paper

In addition to original research articles, short communications and scientific notes, the Journal also publishes mini-review articles, book reviews, new patents, announcements and reports of meetings, and obituaries of prominent scientists. Regular issues of the Journal often contain a review article on a critical or rapidly developing area of tropical insect science and which is normally submitted at the invitation of the Editors. Please see the Journal homepage for detailed Notes for Authors and checklist: journals.cambridge.org/jti. Papers (including abstracts) are published in English.

Technical and Nomenclature Standards

All measurements must be stated in SI units. All organisms should be identified by their Latin names, with taxonomic affiliation and authority indicated at first mention in the abstract and text. Common names should be stated where appropriate. (Consult the Entomological Society of America's list.) Chemical substances should be described by their generic or common names and defined at least once in the paper by their IUPAC name. For editorial guidelines, consult a recent issue of this journal, or the Council of Biology Editors' *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers*, 6th Edition, 1994.

Manuscript Preparation

Title page. Include the article title and the full name(s) and address(es) of all authors, clearly indicating the author to whom correspondence should be addressed. The fax, telephone and e-mail contact of the corresponding author should also be provided. A running title up to a maximum of 50 characters should be indicated.

Abstract. This should be 250 words or less, in English, and include a brief statement of the objective of the study, the methodology used and the overall results and conclusions.

Keywords. List a maximum of 10 key subjects covered in the paper and including the scientific names of the major organisms studied, and any important chemical compounds.

References. The Harvard (author, date) referencing format must be followed. Referencing in text is in chronological order. The reference list should be in alphabetical order with full journal titles. Only articles that have been published or are 'in press' (accepted for publication) should be included.

Examples:

Delobel A. G. L. (1983) Influence of temperature and host plant condition on preimaginal development and survival in the sorghum shootfly, *Atherigona soccata*. *Insect Science and Its Application* 4, 327–335.

Omoogun G. A. (1994) Design and construction of the Nitse trap. *Insect Science and Its Application* (In press). (The title of the journal/book must be stated in the reference list as well as the expected year of publication).

Mengech A. N., Saxena K. N. and Gopalan H. N. B. (Eds) (1995) *Integrated Pest Management in the Tropics: Current Status and Future Prospects*. John Wiley & Sons, Chichester, New York, Brisbane, Toronto, Singapore. 172 pp. (Include the publisher's name, city of publication and page numbers).

Feldmann U. (1994) Some quality control parameters used in the rearing of tsetse flies, pp. 13–29. In *Techniques of Insect Rearing for the Development of Integrated Pest and Vector Management Strategies* Vol. 1. Proceedings of an International Group Training Course on Development of Integrated Pest and Vector Management Strategies. 16 March–3 April 1992, *icipe*, Nairobi, Kenya (Edited by J. P. R. Ochieng'-Odero). *icipe* Science Press, Nairobi. (Include the sponsor of the conference, dates, city and publisher of the proceedings).

Short Communications

Authors are advised that a short communication reports on a significant piece of completed research that may be either a coherent component of an on-going research project that merits a special mention, or a publication of choice that is conveniently published in a short format. (It is not simply a note of preliminary results or a condensed version of a paper that is intended for an additional publication as a full paper.) Short communications are limited to about 5 journal pages including a maximum of 2 tables and/or figures and limited number of references (maximum 15). The text of the paper should not exceed 2000 words and the abstract not more than 200 words. The basic style and submission should follow the same guidelines as for a full publication.

Scientific Notes

Authors are informed that a new category of submission is now possible, the Scientific Note. The Note can be used to announce an important observation or result in a minimal space, of maximum 2 printed journal pages (800 words maximum), which may include one figure or table. The Note should emphasize the method or results with very limited introduction and discussion. For further information, contact the Editors.

Manuscript Submission

Manuscript. Papers submitted for publication should be typed (preferably in Microsoft Word) and double spaced (including abstracts, tables and figure legends) with 3 cm margins on right and left sides and printed in a legible font, e.g. Times. Tables and figures should be on separate sheets of paper to follow the references and not interspersed (embedded) in the text.

All pages of the manuscript should be numbered including the tables and figures.

Figures. Authors are encouraged to prepare and submit their graphics in desktop publishing software such as Adobe Illustrator (.eps), Adobe Photoshop (.tiff or .jpg), Excel (.xls), Powerpoint (.ppt) or PDF (.pdf).

Mailing. Authors without e-mail access can mail one hard copy of their manuscript and artwork by registered airmail or courier service, plus a CD containing their paper to the Secretariat.

The Editor-in-Chief, *International Journal of Tropical Insect Science*, PO Box 72913-00200, Nairobi, Kenya
Fax: +254-(20)-8632001/2

Copyright

Papers are accepted on the understanding that the work has been submitted exclusively to the journal and has not been previously published. Authors will be supplied with a copyright form, which must be completed and returned to the publisher. Papers will not be published until the signed copyright disclaimer has been received.

Offprints

The corresponding author will receive a PDF of their paper. Authors will also have the opportunity to purchase paper offprints at proof stage.

For a more detailed 'Notes for Authors' please visit journals.cambridge.org/jti.

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.

INTERNATIONAL JOURNAL OF TROPICAL INSECT SCIENCE

Volume 32 Number 1 March 2012

Foreword

C. Borgemeister

1

Research Papers

Pollination efficiency of *Apis mellifera adansonii* (Hymenoptera: Apidae) on *Callistemon rigidus* (Myrtaceae) flowers at Dang (Ngaoundéré, Cameroon)

S. Fameni Tope, F.-N.T. Fohouo and D. Brückner

2

Species composition of fruit flies (Diptera: Tephritidae) in the Citrus Museum at the Agricultural Research Centre (ARC), Kade, Ghana

C.N. Foba, K. Afreh-Nuamah, M.K. Billah and D. Obeng-Ofori

12

Establishment of exotic parasitoids of the coffee berry borer *Hypothenemus hampei* (Coleoptera: Curculionidae: Scolytinae) in Colombia through farmer participatory research

L.F. Aristizábal, H.M. Salazar, C.G. Mejía, M. Jiménez, A.E. Bustillo and S.P. Arthurs

24

A study on phlebotomine sandflies (Diptera: Phlebotomidae) in Dickwella, southern Sri Lanka, an endemic focus for cutaneous leishmaniasis

W.T.S. Dammini Premachandra, D.P.C. Senarath, M.P.K.S.K. de Silva and B.S. Lalanthika Peiris

32

Use of the entomopathogenic fungi *Metarhizium anisopliae*, *Cordyceps bassiana* and *Isaria fumosorosea* to control *Diaphorina citri* (Hemiptera: Psyllidae) in Persian lime under field conditions

R. Lezama-Gutiérrez, J. Molina-Ochoa, O. Chávez-Flores, C.A. Ángel-Sahagún, S.R. Skoda,

G. Reyes-Martínez, M. Barba-Reynoso, O. Rebollo-Domínguez, G.M.L. Ruíz-Aguilar and J.E. Foster

39

Interaction between the aphid parasitoid *Lysiphlebus testaceipes* (Hymenoptera: Aphidiidae) and its hyperparasitoid *Syrphophagus africanus* (Hymenoptera: Encyrtidae)

K.K. Ganyo, A. Kodjo Tounou, C. Agboton, E.A. Dannon, B.R. Pittendrigh and M. Tamò

45

Life history of *Oplostomus haroldi* (Coleoptera: Scarabaeidae) under laboratory conditions and a description of its third instar larva

A.T. Fombong, F. Haas, P.N. Ndegwa and L.W. Irungu

56

Influence of crowding and diet on the development and survival of the ladybird *Brumoides suturalis* (Coleoptera: Coccinellidae) reared on two aphid species

M. Bista, G. Mishra and Omkar

64

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has made available a grant for gratis subscriptions of this issue to 7 African university libraries: University of Nairobi (Kenya), Makerere University (Uganda), University of Ibadan (Nigeria), University of Malawi (Malawi), National University of Rwanda (Rwanda), Sokoine University of Agriculture (Tanzania) and University of Namibia (Namibia).



icipe

African Insect Science for Food and Health

Cambridge Journals Online

For further information about this journal please go to the journal web site at:

journals.cambridge.org/jti



MIX
Paper from
responsible sources
FSC® C013436

CAMBRIDGE
UNIVERSITY PRESS