

# Journal of Tropical Ecology

VOLUME 3 PART 1 FEBRUARY 1987

Published for INTECOL and the ICSU Press by Cambridge University Press

## Journal of **Tropical Ecology**



### **Editor**

Dr Adrian G. Marshall, Institute of South-east Asian Biology, c/o Department of Zoology, University of Aberdeen, Aberdeen AB9 2TN, Scotland.

## **Deputy Editor**

Dr M. D. Swaine, Institute of South-east Asian Biology, c/o Department of Plant Science, University of Aberdeen, Aberdeen AB9 2UD, Scotland.

### **Editorial Board**

INTECOL Tropical
Ecology Working Group
Professor J. I. Furtado, Science
Adviser, Commonwealth Secretariat,
Marlborough House, Pall Mall,
London SW1Y 5HX, England.

North America
Dr D. H. Janzen, Department of
Biology, University of Pennsylvania,
Philadelphia, Penn. 19104, USA

South America
Dr E. Medina, IVIC Centro de
Ecologia, Aptdo. 1827, Caracas
1010-A, Venezuela.

Europe

Dr M. J. A. Werger, Department of Plant Ecology, University of Utrecht, Lange Nieuwstraat 106, 3512 PN Utrecht, The Netherlands.

West Africa Professor D. U. U. Okali, Department of Forest Resources Management, University of Ibadan, Ibadan, Nigeria.

South Asia Professor M. Gadgil, Center for Theoretical Studies, Indian Institute of Science, Bangalore – 560012, India.

South-east Asia and the Far East Professor Sanga Sabhasri, Ministry of Science, Technology and Energy, Rama VI Road, Bangkok 10400, Thailand.

Australasia and the Pacific
Professor J. Kikkawa, Department
of Zoology, University of
Queensland, St Lucia,
Brisbane - 4067, Australia.

The Journal of Tropical Ecology publishes papers in the general field of the ecology of tropical regions, devoted either to the results of original research, experimental or descriptive, or forming significant reviews. Short communications are also welcome in the expectation that these will encourage discussion between readers. The Journal aims not only to act as a valued means of communication between established ecologists, but also, by the breadth and quality of papers, its format and price, to stimulate the research activities of young ecologists in tropical nations.

© International Association for Ecology (INTECOL). (Published for INTECOL and the ICSU Press by Cambridge University Press).

Subscriptions: The Journal of Tropical Ecology (ISSN 0266-4674) is published quarterly. The subscription price of Volume 3 is £49 (USA and Canada US \$99) for institutions; £19.50 (USA and Canada US \$39) for individuals; £9.50 for individuals in developing countries; airmail £11 extra; single parts available at £13 (USA and Canada US \$27.50) each plus postage. Four parts form a volume. Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publishers: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU. Orders from the USA and Canada should be sent to the Cambridge University Press, 32 East 57th Street, New York, NY 10022, USA. Copies of the journal for subscribers in the USA and Canada are sent by air to New York to arrive with minimum delay. Second class postage paid at New York, NY, and at additional mailing offices. POSTMASTER: send address changes in USA and Canada to Journal of Tropical Ecology, Cambridge University Press, 32 East 57th Street, New York, NY 10022. Claims for missing issues should be made immediately on receipt of the subsequent issue.

Continued on inside back cover