

# **Journal of Tropical Ecology**

**Volume 9  
1993**

Reprinted with the permission of the original publisher  
by  
**Periodicals Service Company**  
Germantown, NY  
2009

**Printed on acid-free paper.**

**This reprint was reproduced from the  
best original edition copy available.**

**NOTE TO THE REPRINT EDITION:  
In some cases full page advertisements which do not add to  
the scholarly value of this volume have been omitted.  
As a result, some reprinted volumes may have irregular pagination.**

# Journal of Tropical Ecology

VOLUME 9 1993

*Editor*

DR ADRIAN G. MARSHALL

*Deputy Editors*

DR M. D. SWAINE

DR D. M. NEWBERY

*Editorial Assistant*

HEATHER M. SABNIS

*Editorial Board*

PROFESSOR J. KIKKAWA

PROFESSOR D. U. U. OKALI

DR D. LIEBERMAN

PROFESSOR P. S. RAMAKRISHNAN

DR F. P. MALAISSE

DR. M. J. A. WERGER

DR E. MEDINA

DR GONG WOUI-KHOON

Published for INTECOL and the ICSU Press by Cambridge University Press



**CAMBRIDGE**  
**UNIVERSITY PRESS**

PUBLISHED BY  
THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE  
The Pitt Building, Trumpington Street, Cambridge CB2 1RP  
40 West 20th Street, New York, N.Y. 10011-4211, USA  
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© International Association for Ecology (INTECOL) 1993  
Published for INTECOL AND THE ICSU Press by Cambridge University Press



*Printed in Great Britain at the University Press, Cambridge*

N. BROWN: The implications of climate and gap microclimate for seedling growth conditions in a Bornean lowland rain forest . . . . .	153
N. ISHWARAN: Ecology of the Asian Elephant in lowland dry zone habitats of the Mahaweli River Basin, Sri Lanka . . . . .	169
E. BRAKER and R. L. CHAZDON: Ecological, behavioural and nutritional factors influencing use of palms as host plants by a Neotropical grasshopper . . . . .	183
R. GRIBEL and J. D. HAY: Pollination ecology of <i>Caryocar brasiliense</i> (Caryocaraceae) in Central Brazil cerrado vegetation . . . . .	199
E. M. VEENENDAAL, D. D. SHUSHU and J. M. O. SCURLOCK: Responses to shading of seedlings of savanna grasses (with different C4 photosynthetic pathways) in Botswana . . . . .	213
<b>ANNOUNCEMENT</b>	
L. E. MIGENIS and J. D. ACKERMAN: Orchid-epiphyte relationships in a forest watershed in Puerto Rico . . . . .	231
<b>SHORT COMMUNICATIONS</b>	
C. E. G. TUTIN and M. FERNANDEZ: Relationships between minimum temperature and fruit production in some tropical trees in Gabon . . . . .	241
R. BEN-SHAHAR: Does fencing reduce the carrying capacity for populations of large herbivores? . . . . .	249
F. OLMOS: Diet of sympatric Brazilian caatinga peccaries <i>Tayassu tajacu</i> and <i>T. pecari</i> . . . . .	255
<b>BOOK RECEIVED</b>	230
<b>BOOK REVIEWS:</b>	
Robison, D. M. and McKean, S. J. <i>Shifting cultivation and alternatives</i> . . . . .	152
Orians, G. H., Brown, G. M. Jr., Kunin, W. E. and Swierzbinsky, J. E. (eds). <i>Preservation and valuation of biological resources: an impossible dream?</i> . . . . .	197
Marshall, A. G. and Swaine, M. D. (eds). <i>Tropical rain forest: disturbance and recovery</i> . . . . .	211
Roubick, D. W. <i>Ecology and natural history of tropical bees</i> . . . . .	248
Grabert, H. <i>Der Amazonas. Geschichte und Probleme eines Stromgebietes Pazifik und Atlantik</i> . . . . .	254
 <b>Volume 9 Part 3 August 1993</b>	
C. A. PERES: Structure and spatial organization of an Amazonian terra firme forest primate community . . . . .	259
J. M. FELFILI and M. C. DA SILVA Jr: A comparative study of cerrado ( <i>sensu stricto</i> ) vegetation in Central Brazil . . . . .	277
E. V. S. B. SAMPAIO <i>et al</i> : A model of litterfall, litter layer losses and mass transfer in a humid tropical forest at Pernambuco, Brazil . . . . .	291
M. LEPAGE, L. ABBADIE and A. MARIOTTI: Food habits of sympatric termite species (Isoptera, Macrotermitinae) as determined by stable carbon isotope analysis in a Guinean savanna (Lamto, Côte d'Ivoire) . . . . .	303
A. C. MIRANDA, H. S. MIRANDA, I. F. O. DIAS and B. F. S. DIAS: Soil and air temperatures during prescribed cerrado fires in Central Brazil . . . . .	313
G. WILLIAMS-LINERA: Soil seed banks in four lower montane forests of Mexico . . . . .	321
M. FISHER: Fine scale distributions of tropical animal mounds: a revised statistical analysis . . . . .	339
R. A. CONGDON and J. L. HERBOHN: Ecosystem dynamics of disturbed and undisturbed sites in north Queensland wet tropical rain forest. I. Floristic composition, climate and soil chemistry . . . . .	349
J. L. HERBOHN and R. A. CONGDON: Ecosystem dynamics at disturbed and undisturbed sites in north Queensland wet tropical rain forest. II. Litterfall . . . . .	365
<b>SHORT COMMUNICATIONS</b>	
K. OYAMA: Are age and height correlated in <i>Chamaedorea tepejilote</i> (Palmae)? . . . . .	381
<b>BOOK REVIEWS:</b>	
Ridgely, R. S. and Gwynne, J. A. <i>A guide to the birds of Panama with Costa Rica, Nicaragua and Honduras</i> . . . . .	290
Calder, I. R., Hall, R. L. and Adlard, P. G. <i>Growth and water use of forest plantations</i> . . . . .	312
Corbett, G. B. and Hill, J. E. <i>The mammals of the Indomalay region: a systematic review</i> . . . . .	338

Goudberg, N. Bonell, M. and Benzaken, D. <i>Tropical rainforest research in Australia: present status and future directions for the Institute of Tropical Rainforest Studies</i> . . . . .	364
Cubitt, G., Whitten, T. and Whitton, J. <i>Wild Indonesia</i> . . . . .	380

**BIODIVERSITY: SOME DIVERSE BOOKS REVIEWED**

Terborgh, J. <i>Diversity and the tropical rain forest</i>	
Solbrig, O. T., Van Emden, H. M. and Van Oordt, P. G. W. J. <i>Biodiversity and global change</i>	
Shiva, V. <i>et al. Biodiversity: social and ecological perspectives</i> . . . . .	385

**Volume 9 Part 4 November 1993**

A. ROUW: Regeneration by sprouting in slash and burn rice cultivation, Tai rain forest, Côte d'Ivoire . . . . .	387
R. F. INGER and H. K. VORIS: A comparison of amphibian communities through time and from place to place in Bornean forests . . . . .	409
E. J. FARNSWORTH and A. M. ELLISON: Dynamics of herbivory in Belizean mangal . . . . .	435
U. M. CHANDRASHEKARA and P. S. RAMAKRISHNAN: Germinable soil seed bank dynamics during the gap phase of a humid tropical forest in the Western Ghats of Kerala, India . . . . .	455
E. J. F. CAMPBELL and D. McC. NEWBERY: Ecological relationships between lianas and trees in lowland rain forests in Sabah, East Malaysia . . . . .	467
K. J. GASTON and I. D. GAULD: How many species of pimplines (Hymenoptera: Ichneumonidae) are there in Costa Rica? . . . . .	491
R. T. CORLETT: Reproductive phenology of Hong Kong shrubland . . . . .	501
S. F. OBERBAUER, D. B. CLARK, D. A. CLARK, P. M. RICH and G. VEGA: Light environment, gas exchange, and annual growth of saplings of three species of rain forest trees in Costa Rica . . . . .	511

**BOOKS RECEIVED:**

D. A. KING: Growth history of a Neotropical tree inferred from the spacing of leaf scars . . . . .	524
M. A. GOMPPER and A. M. HOYLMAN: Grooming with <i>Trattinnickia</i> resin: a possible pharmaceutical plant use by coatis in Panama . . . . .	523
R. A. de FIGUEIREDO: Ingestion of <i>Ficus enormis</i> seeds by howler monkeys ( <i>Alouatta fusca</i> ) in Brazil: effect on seed germination . . . . .	541

**BOOK REVIEWS:**

Symposium volumes from Malaya	
Yap, S. K. and Lee, S. W. <i>In Harmony with nature</i> . . . . .	434
Ismail, G. Mohamed, M. and Omar S. <i>Forest biology and conservation in Borneo</i> . . . . .	434
Furtado, J. I., Morgan, W. B., Pfaffin, J. R. and Ruddle, K. <i>Tropical resources: ecology and development</i> . . . . .	454
Kahn, F. and de Granville, J.-J. <i>Palms in forest ecosystems of Amazonia (Ecological Studies 98)</i> . . . . .	468
Holttum, R. E. <i>Flora Malesiana: Series II – Pteridophyta: Ferns and Allies. Volume 2, part 1: Tectaria Group</i> . . . . .	500
Sayer, A. J., Harcourt, C. Z. and Collins, N. M. <i>The conservation atlas of tropical forests – Africa</i> . . . . .	543

<b>INDEX OF SUBJECTS</b> . . . . .	545
------------------------------------	-----

<b>INDEX OF AUTHORS</b> . . . . .	549
-----------------------------------	-----