

April 2013

esa

Volume 94 No. 4

ECOLOGY

A PUBLICATION OF THE ECOLOGICAL SOCIETY OF AMERICA



Reports

Temporal dynamics of a simple community with intraguild predation:
an experimental test

Root depth distribution and the diversity–productivity relationship
in a long-term grassland experiment

Articles

Experimental evidence for an ideal free distribution in a breeding population
of a territorial songbird

Low mortality in tall tropical trees

CONTENTS

Reports

773

Temporal dynamics of a simple community with intraguild predation: an experimental test

• T. HILTUNEN, L. E. JONES, S. P. ELLNER, AND N. G. HAIRSTON, JR.

780

Plant-soil feedback links negative distance dependence and light gradient partitioning during seedling establishment

• SARAH MCCARTHY-NEUMANN AND INÉS IBÁÑEZ

787

Root depth distribution and the diversity-productivity relationship in a long-term grassland experiment

• KEVIN E. MUELLER, DAVID TILMAN, DARIO A. FORNARA, AND SARAH E. HOBBIE

794

Nonparametric forecasting outperforms parametric methods for a simulated multispecies system

• CHARLES T. PERRETTI, GEORGE SUGIHARA, AND STEPHAN B. MUNCH

801

Spatial occupancy models for large data sets

• DEVIN S. JOHNSON, PAUL B. CONN, MEVIN B. HOOTEN, JUSTINA C. RAY, AND BRUCE A. POND

Articles

809

Using auxiliary telemetry information to estimate animal density from capture-recapture data

• JACOB S. IVAN, GARY C. WHITE, AND TANYA M. SHENK

817

Using simulation to compare methods for estimating density from capture-recapture data

• JACOB S. IVAN, GARY C. WHITE, AND TANYA M. SHENK

827

Glade cascades: indirect legacy effects of pastoralism enhance the abundance and spatial structuring of arboreal fauna

• COLIN M. DONIHUE, LAUREN M. PORENSKY, JOHANNES FOUFOPOULOS, CORINNA RIGINOS, AND ROBERT M. PRINGLE

838

Combining individual animal movement and ancillary biotelemetry data to investigate population-level activity budgets

• BRETT T. MCCLINTOCK, DEBORAH J. F. RUSSELL, JASON MATTHIOPOULOS, AND RUTH KING

850

Effects of plastic hatching timing carry over through metamorphosis in red-eyed treefrogs

• JUSTIN C. TOUCHON, MICHAEL W. MCCOY, JAMES R. VONESH, AND KAREN M. WARKENTIN

861

Experimental evidence for an ideal free distribution in a breeding population of a territorial songbird

• SAMUEL HACHÉ, MARC-ANDRÉ VILLARD, AND ERIN M. BAYNE

870

Coaggregation in a microbial predator-prey system affects competition and trophic transfer efficiency

• GIANLUCA CORNO, JÖRG VILLIGER, AND JAKOB PERNTHALER

882

Bayesian inference for bioenergetic models

• LEAH R. JOHNSON, LAURE PECQUERIE, AND ROGER M. NISBET

895

Ecosystem effects of shell aggregations and cycling in coastal waters: an example of Chesapeake Bay oyster reefs

• GEORGE G. WALDBUSSER, ERIC N. POWELL, AND ROGER MANN

904

Decoupled long-term effects of nutrient enrichment on aboveground and belowground properties in subalpine tundra

• DAVID A. WARDLE, MICHAEL J. GUNDALE, ANDERS JÄDERLUND, AND MARIE-CHARLOTTE NILSSON

920

Low mortality in tall tropical trees

• R. Q. THOMAS, J. R. KELLNER, D. B. CLARK, AND D. R. PEART

930

Soil nutrient availability and reproductive effort drive patterns in nutrient resorption in *Pentaclethra macroloba* • KATHERINE L. TULLY, TANA E. WOOD, AMANDA M. SCHWANTES, AND DEBORAH LAWRENCE

941

Beyond shading: Litter production by neighbors contributes to overyielding in tropical trees • JURGIS SAPIJANSKAS, CATHERINE POTVIN, AND MICHEL LOREAU

953

Mechanisms of selection: Phenotypic differences among genotypes explain patterns of selection in a dominant species • MEGHAN L. AVOLIO AND MELINDA D. SMITH

966

Leaf herbivory increases plant fitness via induced resistance to seed predators • SCOTT H. MCART, RAYKO HALITSCHKE, JUHA-PEKKA SALMINEN, AND JENNIFER S. THALER

Data Papers

976

One hundred and six years of population and community dynamics of Sonoran Desert Laboratory perennials • SUSANA RODRIGUEZ-BURITICA, HELEN RAICHLE, ROBERT H. WEBB, RAYMOND M. TURNER, AND LARRY VENABLE

977

Long-term monitoring of mammals in the face of biotic and abiotic influences at a semiarid site in north-central Chile • D. A. KELT, P. L. MESERVE, J. R. GUTIÉRREZ, W. BRYAN MILSTEAD, AND M. A. PREVITALI

978

Nutrient and sediment concentrations in three agriculturally impacted streams over a 15-year period • MICHAEL J. VANNI, WILLIAM H. RENWICK, AND MARÍA J. GONZÁLEZ

979

MARSPEC: ocean climate layers for marine spatial ecology • ELIZABETH J. SBROCCO AND PAUL H. BARBER

980

Book Reviews

AYRES—Shaping ecology: the life of Arthur Tansley
• SARA TJSSEM

DICKINSON AND BONNEY—Citizen science: public participation in environmental research • MEG LOWMAN

EWEN, ARMSTRONG, PARKER, AND SEDDON—Reintroduction biology: integrating science and management
• ANDREW J. GREGORY

984

Books and Monographs Received

Ecological Archives

Appendices and Supplements are available online:
www.esapubs.org/archive

Instructions to Authors

Available online:
www.esapubs.org/esapubs/AuthorInstructions

COVER PHOTO: Skid trail in a northern hardwood forest of New Brunswick, Canada. Haché et al. tested predictions from the ideal free and ideal despotic distributions by monitoring habitat selection and per capita reproductive success in a marked population of Ovenbirds (*Sciurus aurocapilla*) one year prior to forest harvest and five years postharvest. They found strong evidence for an ideal free distribution regulated by food abundance (see pp. 861–869). Photo credit: S.Thériault.