

May 2014



Volume 95 No. 5

ECOLOGY

A PUBLICATION OF THE ECOLOGICAL SOCIETY OF AMERICA



Reports

Tail probabilities of extinction time in a large number of experimental populations

Concepts and Synthesis

The landscape of fear: the missing link to understand top-down and bottom-up control of prey abundance?

Articles

Terrestrial carbon is a resource, but not a subsidy, for lake zooplankton
Plant-animal diversity relationships in a rocky intertidal system depend on invertebrate body size and algal cover

CONTENTS

Reports**1119**

Tail probabilities of extinction time in a large number of experimental populations • JOHN M. DRAKE

1127

Tree species partition N uptake by soil depth in boreal forests • D. HOULE, J.-D. MOORE, R. OUIMET, AND C. MARTY

1134

The spatial structure of bacterial communities is influenced by historical environmental conditions • MARTIN G. I. ANDERSSON, MERCÈ BERGA, EVA S. LINDSTRÖM, AND SILKE LANGENHEDER

Concepts and Synthesis**1141**

The landscape of fear: the missing link to understand top-down and bottom-up controls of prey abundance? • JOHN WILLIAM LAUNDRÉ, LUCINA HERNÁNDEZ PERLA LÓPEZ MEDINA, ANDREA CAMPANELLA, JORGE LÓPEZ-PORTILLO, ALBERTO GONZÁLEZ-ROMERO, KARINA M. GRAJALES-TAM, ANNA M. BURKE, PEG GRONEMEYER, AND DAWN M. BROWNING

Articles**1153**

Climatic amplification of the numerical response of a predator population to its prey • BERLINDA BOWLER, CHARLES KREBS, MARK O'DONOGHUE, AND JIM HONE

1162

Growth and death of bacteria and fungi underlie rainfall-induced carbon dioxide pulses from seasonally dried soil • STEVEN J. BLAZEWICZ, EGBERT SCHWARTZ, AND MARY K. FIRESTONE

1173

Multiple effects of host-species diversity on coexisting host-specific and host-opportunistic microbes • HADAR KEDEM, CARMIT COHEN, IRIT MESSIKA, MONICA EINAU, SHAI PILOSOF, AND HADAS HAWLENA

1184

Biodiversity and species identity shape the anti-fungal activity of bacterial communities • ALEXANDRE JOUSSET, JOACHIM BECKER, SUBHANKAR CHATTERJEE, PETR KARLOVSKY, STEFAN SCHEU, AND NICOLE EISENHAUER

1191

Functional and phylogenetic similarity of alien plants to co-occurring natives • ALEJANDRO ORDOÑEZ

1203

Ecosystem properties self-organize in response to a directional fog-vegetation interaction • DANIEL E. STANTON, JUAN J. ARMESTO, AND LARS O. HEDIN

1213

Drivers of carabid functional diversity: abiotic environment, plant functional traits, or plant functional diversity? • ROBIN J. PAKEMAN AND JENNIFER A. STOCKAN

1225

Lack of eutrophication in a tallgrass prairie ecosystem over 27 years • KENDRA K. MCLAUCHLAN, JOSEPH M. CRAINE, JESSE B. NIPPERT, AND TROY W. OCHELTREE

1236

Terrestrial carbon is a resource, but not a subsidy, for lake zooplankton • PATRICK T. KELLY, CHRISTOPHER T. SOLOMON, BRIAN C. WEIDEL, AND STUART E. JONES

1243

Nearshore energy subsidies support Lake Michigan fishes and invertebrates following major changes in food web structure • BENJAMIN A. TURSCHAK, DAVID BUNNELL, SERGIUSZ CZESEN, TOMAS O. HÖÖK, JOHN JANSEN, DAVID WARNER, AND HARVEY A. BOOTSMA

1253

Multi-trophic resilience of boreal lake ecosystems to forest fires • TYLER L. LEWIS, MARK S. LINDBERG, JOEL A. SCHMUTZ, AND MARK R. BERTRAM

1264

Carbon storage reservoirs in watershed support stream food webs via periphyton production • NAOTO F. ISHIKAWA, MASAO UCHIDA, YASUYUKI SHIBATA, AND ICHIRO TAYASU

1272

Shifts in food quality for herbivorous consumer growth: multiple golden means in the life history • FRANCISCO JOSÉ BULLEJOS, PERSPECTACIÓN CARRILLO, ELENA GOROKHOVA, JUAN MANUEL MEDINA-SÁNCHEZ, ESTEBAN GABRIEL BALSEIRO, AND MANUEL VILLAR-ARGAIZ