

Ecological Restoration

Volume 31, Number 1



March 2013

Editorial	1
I Want Your Vote: The Real Campaign Continues <i>Steven N. Handel</i>	

RESTORATION NOTES

Should Coral Fragments Collected for Restoration be Subdivided to Create More, Smaller Pieces for Transplanting? <i>Graham Forrester, Russell Dauksis, and Megan Ferguson</i>	4
History and Values in Ecological Restoration Workshop <i>Reggie Anderson and David Havlick</i>	7
Water and Fertilizer Effects on the Germination and Survival of Direct-Seeded Golden Paintbrush (<i>Castilleja levisecta</i>) <i>Peter W. Dunwiddie, R. Adam Martin, and Marion Cady Jarisch</i>	10
Effect of Sea Oats (<i>Uniola paniculata</i>) Plant Size on Survival and Performance at Beaches with Low Dune Profiles <i>Pheonah Nabukalu and Carrie A. Knott</i>	12
Effect of Seed Storage Environment on Sea Oats (<i>Uniola paniculata</i>) Germination <i>Pheonah Nabukalu and Carrie A. Knott</i>	16
Chemical Control of Weeds and Genetic Off-Types in Smooth Cordgrass (<i>Spartina alterniflora</i>) Production Ponds <i>Natalie J. Levy, Carrie A. Knott, Eric P. Webster, Justin B. Hensley, David C. Blouin, and Yanqiu Yang</i>	19

ARTICLES

Landscape Corridors Promote Long-Distance Seed Dispersal by Birds During Winter but Not During Summer at an Experimentally Fragmented Restoration Site <i>Daniel M. Evans, Douglas J. Levey, and Joshua J. Tewksbury</i>	23
Forecasting Avian Responses to Elwha River Restoration <i>Carly J. Gelarden and John F. McLaughlin</i>	31
Engaging Birds in Vegetation Restoration after Elwha Dam Removal <i>John F. McLaughlin</i>	46
A Field Test of Regeneration in an Isolated Population of Violet Collinsia (<i>Collinsia violacea</i>) <i>John B. Taft and Eric L. Smith</i>	57
Optimal Shrub Density for Bird Habitat in the Midwestern United States <i>Catherine Mabry</i>	63
Annual Cover Crops Do Not Inhibit Early Growth of Perennial Grasses on a Disturbed Restoration Soil in the Northern Great Plains, USA <i>Erin K. Espeland and Lora B. Perkins</i>	69
Habitat Selection and Diet Composition of Reintroduced Native Ungulates in a Fire-Managed Tallgrass Prairie Reconstruction <i>Barbara Kagima and W. Sue Fairbanks</i>	79

ABSTRACTS

Grasslands	89	Ecological Design	93
Woodlands	89	Ecological Literacy	94
Wetlands	90	Monitoring & Adaptive Management	95
Lakes, Rivers & Streams	90	Reclamation & Rehabilitation	95
Coastal & Marine Communities	91	Urban Restoration	96
Propagation & Introduction	92	Endangered Species	96
Invasive & Pest Species	92	Economics & Ecosystem Services	97
Wildlife Habitat Restoration	93	Planning & Policy	97

BOOK REVIEWS

Invasive and Introduced Plants and Animals: Human Perceptions and Approaches to Management <i>Ian D. Rotherham and Robert A. Lambert (eds), reviewed by Sylvan Kaufman</i>	98
Saving a Million Species: Extinction Risk from Climate Change <i>Lee Hannah (ed), reviewed by Daniel Botkin</i>	99
Using a Comprehensive Landscape Approach for More Effective Conservation and Restoration <i>Independent Scientific Advisory Board for the Northwest Power and Conservation Council, Columbia River Basin Indian Tribes, and National Marine Fisheries Service, reviewed by James G. Hallett</i>	100

RECENTLY RECEIVED TITLES 102

MEETINGS 103



Myla F.J. Aronson, Ph.D. Appointed New Managing Editor of Ecological Restoration



Myla F.J. Aronson is a plant ecologist whose interests are the conservation, restoration, and maintenance of biodiversity in human dominated landscapes. She received a B.S. in Natural Resources from Cornell University and an M.S. and Ph.D. in Ecology and Evolution from Rutgers, The State University of New Jersey. Her research focuses on the patterns and drivers of biodiversity, and in particular, community assembly and biotic homogenization in cities. Dr. Aronson also studies long-term change in remnant and restored vegetation communities in urban and agricultural landscapes to better understand and manage plant community dynamics over time. Finally, she examines resilience to invasive species and the ecological function of restored communities. Dr. Aronson has used the results from her research to direct decisions regarding the restoration and management of degraded habitats, such as wetlands and woodlands in New York, New Jersey, Minnesota, and Iowa. She has served on the board of directors of the Friends of Hempstead Plains, advising the management and restoration of this endangered prairie ecosystem in New York State, the board of directors of the Long Island Native Plant Initiative, and the Fire Island National Seashore Science Advisory Team. In addition to her applied restoration work, she has taught at the undergraduate and graduate levels at Rutgers University, Luther College, and Hofstra University.

ADVISORY BOARD

James Aronson

Centre for Functional &
Evolutionary Ecology, France, and
Missouri Botanical Garden USA

Peter Bowler

Department of Ecology &
Evolutionary Biology
University of California, Irvine

Tom Chase

The Nature Conservancy
Martha's Vineyard MA

Francisco Comín

Instituto Pirenaico de Ecología-CSIC
Zaragoza, Spain

Paul H. Gobster

USDA Forest Service
Chicago IL

Andrew Light

Director, Center for Global Ethics
Department of Philosophy
George Mason University

Marty Melchior

Inter-Fluve, Inc.
Madison WI

Darrel Morrison

Master of Science in Landscape Design
Columbia University

Steve Packard

National Audubon of Chicago
Chicago Wilderness Program
Northbrook IL

Leslie Sauer

Private consultant
Hunterdon County NJ

Steve Whisenant

Society for Ecological Restoration,
Washington, DC
Texas A&M University, College Station TX

Editorial Staff

Editor: *Steven N. Handel*

Managing Editors: *Myla F.J. Aronson and Brooke Maslo*

Book Review and Abstracts Editor: *Lea R. Johnson*


Copy Editor: *Lea R. Johnson*

Rutgers, The State University of New Jersey,

School of Environmental and Biological Sciences: *Robert M. Goodman, Executive Dean*

Society for Ecological Restoration International: *Steve Whisenant, Chair*

Ecological Restoration is published quarterly by the University of Wisconsin Press. © by the Board of Regents of the University of Wisconsin System. No part of this publication may be reproduced without the written consent of the publisher, University of Wisconsin Press. Requests for permission to reprint an article or illustration should be made directly to UW Press, 1930 Monroe St, 3rd Floor, Madison, WI 53711-2059, permissions@uwpress.wisc.edu, <http://er.uwpress.org>.

 Printed on 30% recycled text paper.

Contributions are welcome. Authors should upload their materials through *Ecological Restoration's* submission website, which can be found at <http://er.uwpress.org>. Submission guidelines can be found at <http://uwpress.wisc.edu/journals/journals/er.html>.

Authorization to reproduce material from this journal, beyond one copy for personal use or that permitted by Sections 107 and 108 of U.S. Copyright Law, is granted for a fee. For fee schedule and payment information, contact www.copyright.com; The Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, 978/750-8400, Fax: 978/750-4470.

Ecological Restoration is indexed in Elsevier BIOBASE, AGRICOLA, and in CSA's Ecology databases.

Ecological Restoration is affiliated with the Society for Ecological Restoration International, 285 W. 18th St. #1, Tucson, AZ 85701, 520/622-5485, <http://ser.org>. Members of the Society for Ecological Restoration International receive *Ecological Restoration* at a discounted rate. Please visit the UW Press Web site at www.wisc.edu/wisconsinpress/journals for more information.

Ecological Restoration was founded at the University of Wisconsin–Madison Arboretum.

Advertising: Call 608/263-0534 for current rates. Advertisements or references to products by brandname or trademark do not imply an endorsement by the editors or publishers of this journal.

Front Cover Feature: The Elwha River restoration program, Washington, USA, is the largest dam removal project to date. McLaughlin and colleagues studied reciprocal relationships between birds and Elwha restoration. They forecast how birds may occupy restored habitats and assessed how birds could enhance restoration by dispersing native seeds to reservoir sediments, including sediments in the photo. Large woody debris is one of the few structural legacies of reservoir forests prior to dam construction, and it will play important restoration functions after dam removal. The photo shows about one third of the larger reservoir site, viewed from the nearly removed Glines Canyon Dam. Photo Credit: John Gussman.

Back Cover: The creation of landscape corridors is one of the most popular management strategies to restore ecosystem processes in fragmented habitats. Evans, Tewksbury and Levey evaluate seasonal differences in the effectiveness of corridors for promoting long-distance seed dispersal by birds in experimentally fragmented landscapes at the Savannah River Site National Environmental Research Park. Photo credits: Aerial view of one experimental landscape at the Savannah River Site—Ellen Damschen; Northern mockingbird (*Mimus polyglottos*) eating a black nightshade (*Solanum americanum*) fruit—Tomás A. Carlo.

Ecological Restoration (ISSN 1522-4740, E-ISSN 1543-4079) is published quarterly by the University of Wisconsin Press, 1930 Monroe Street, 3rd Floor, Madison, WI 53711-2059. Periodicals postage paid at Madison WI and at additional mailing offices.

Subscriptions: Individual (please pre-pay), \$68 print and electronic, \$58 electronic only; \$42 students; \$160 businesses and nongovernmental organizations; libraries and government agencies, \$257 print and electronic, \$227 electronic only. Non-U.S. subscribers please add \$35 for foreign shipping. All correspondence regarding subscriptions, advertising, and related matters should be sent to Journals Division, 1930 Monroe Street, 3rd Floor, Madison, WI 53711-2059, USA; www.wisc.edu/wisconsinpress/journals. Members of the Society for Ecological Restoration International receive *Ecological Restoration* at a discounted rate. Please visit our Web site at www.wisc.edu/wisconsinpress/journals for more information.

POSTMASTER: Send address changes to *Ecological Restoration*, 1930 Monroe Street, 3rd Floor, Madison, WI 53711-2059.

Submissions

We welcome submissions to *Ecological Restoration* from any part of the world. Submissions should relate to the restoration of plants, animals, ecological communities, or landscapes. We understand ecological restoration to be a multidisciplinary and diverse effort and welcome manuscripts considering ecological, and social aspects of restoration, as well as political, economic, legal, and regulatory issues, and other subjects related to ecological restoration. Relevant topics also include techniques and tools for planning, site preparation, species introduction, undesired species control, and monitoring. Manuscripts dealing with plant or animal community composition or general ecology must relate the work explicitly to ecological restoration practice and theory. Similarly, material dealing with reclamation or rehabilitation in a broader sense, or with restoration for economic purposes—economic forestry, range management, waste disposal—must be connected to ecological restoration.

Material may be submitted for the following categories (listed as they are encountered in the journal):

- Letters to the Editor
- Observations/Editorials/Commentary/Policy Reports
- Restoration Notes (shorter items describing project updates, new collaborations, events, innovative technologies, preliminary or unusual findings, thought-provoking concepts, imaginative solutions, etc.)
- Full-length feature articles on ecological restoration theory, practice, and research (case studies, research reports, photo essays, experiments, etc.)
- Book, journal, web, or movie reviews

Authors of full-length articles or reviews should submit their material online at <http://er.msubmit.net>. Manuscripts must be submitted with a cover letter stating that the material has not been previously published, and has not been submitted elsewhere and will not be until a final decision has been reached by the editor. Questions about the online submission site, or general inquiries may be emailed to ERjournal@aesop.rutgers.edu.

Review and Editing Process

Manuscripts are reviewed externally by experts in the field. The process requires approximately four to six months. Restoration Notes are reviewed and edited in-house unless additional expertise is required to evaluate the submission.

Style

Practitioners of ecological restoration are both a core audience and source of contributions to *ER*. Contributors should use a straightforward style free of unnecessary technical terms and jargon. We prefer the active voice (for example, “We measured three trees” instead of “Three trees were measured”). Please see our Submission Guidelines at <http://er.uwpress.org> for more information.

Tables, Photos, and Illustrations

Table and Figure captions should include useful and detailed information, and should be independent of the text. Figures will be reproduced in black and white in the print version of *Ecological Restoration* (usually requiring higher contrast) and can be reproduced in color in the online version. We use color photos on the front and back covers of the journal and welcome submissions of eye-catching, informative, high-quality photographs.

Page Charges

Payment of \$50 per page is requested from authors with research grant or other institutional funds available to underwrite publication costs. Invoices will be sent after composition of pages. Authors with no grant or institutional funds do not need to pay publication costs. Ability to pay page charges is not a condition for acceptance of a manuscript.