

Ecological Restoration

Volume 28, Number 1



March 2010

Editorial	1
OCBILs, YODFELs, and NENEGOLs <i>Mirill Ingram</i>	
SER Editorial	3
Restoration in the City <i>Jim Harris</i>	
Conference Report	4
A Personal Assessment of the SERI Conference in Perth and What It Reveals about the Society <i>Paddy Woodworth</i>	
Letters	7
Unsettled Terminology or Conceptual Shift? A Response to Clewell and McDonald <i>Thomas B. Simpson</i>	
Some Thoughts on Self-Sustainability in Restoration: A Response to Thomas Simpson <i>Andre Clewell and Tein McDonald</i>	9
RESTORATION NOTES	
Growth Rates in a Southern California Population of Knobcone Pine (<i>Pinus attenuata</i>) <i>Eva Begley</i>	10
Rehabilitation of Red Mud Bauxite Wasteland in India (Belgaum, Karnataka) <i>Suresh Chauhan and Chandra Shekhar Silori</i>	12
Restoring Nutrient Capture in Forest Herbaceous Layers of the Midwest (Iowa) <i>Michaeleen E. Gerken, Janette R. Thompson and Cathy M. Mabry</i>	14
Avoiding “Band-Aid” Solutions in Ecosystem Restorations <i>Jason Krumholz, Todd Barber and Catherine Jadot</i>	17
Soil Microbial Composition and Nitrogen Cycling in a Disturbed Wet Prairie Restoration (Wisconsin) <i>Jenny Kao-Kniffin and Teri C. Balsler</i>	20
ARTICLES	
Climax and “Original Capacity”: The Science and Aesthetics of Ecological Restoration in the Southwestern USA <i>Nathan F. Sayre</i>	23
Florida’s Approach to Natural Resource Damage Assessment: A Short, Sweet Model for States Seeking Compensation <i>Josephine Faass</i>	32
Burning and Grazing to Promote Persistence of Warm-Season Grasses Sown into a Cool-Season Pasture <i>Emma L. Bouressa, Julie E. Doll, Richard L. Cates Jr. and Randall D. Jackson</i>	40
A Cost-Benefit Analysis of Watershed Rehabilitation: A Case Study in Farta Woreda, South Gondar, Ethiopia <i>Yitbarek T.W., Satishkumar Belliethathan and Masresha Fetene</i>	46
Restoring Whitebark Pine Forests of the Northern Rocky Mountains, USA <i>Robert E. Keane and Russell A. Parsons</i>	56

An Assessment of Urban Lakeshore Restorations in Minnesota <i>Dana A. Vanderbosch and Susan M. Galatowitsch</i>	71
Restoration of a Tropical Forest: The Orchid and Botanical Garden of Puyo, Ecuador <i>Matthew Bare and Omar Tello</i>	81

ABSTRACTS

Grasslands	86	Tools & Technology	92
Woodlands	86	Climate Change	93
Wetlands	87	Management & Monitoring	93
Lakes, Rivers & Streams	88	Urban Restoration	94
Coastal & Marine Communities	88	Endangered Species	94
Other Communities	89	Economics & Ecosystem Services	95
Propagation & Introduction	90	Education	95
Control of Pest Species	90	Collaborations	96
Wildlife Habitat	91	Planning & Policy	97
Ecological Dynamics	92	Issues & Perspectives	97

BOOK REVIEWS

Rewilding the West: Restoration in a Prairie Landscape <i>Richard Manning, reviewed by Joe Truett</i>	98
A Critique of Silviculture: Managing for Complexity <i>Klaus J. Puettman, K. David Coates and Christian Messier, reviewed by Susan Stout</i>	99
Invasion Biology <i>Mark A. Davis, reviewed by Daniel Simberloff</i>	101
Forests Forever: Their Ecology, Restoration, and Protection <i>John J. Berger, reviewed by Dean Apostol</i>	103

RECENTLY RECEIVED TITLES	104
--------------------------	-----

MEETINGS	106
----------	-----

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
International Publications Committee
Tucson AZ

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), \$62 print and electronic, \$55 electronic only; \$42 students; \$145 businesses and nongovernmental organizations; libraries and government agencies, \$240 print and electronic, \$214 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.

Oh, how much is today hidden by science!
Oh, how much it is expected to hide!

Friedrich Nietzsche, *On the Genealogy of Morals*

Editor: *Mrill Ingram*

Associate Editor: *Chris Reyes*

Abstract and Copy Editor: *Carol Steinhart*

Publications Volunteer: *Autumn Sabo*


Science Advisors: *Joy Zedler & Paul Zedler*

Website: *Art Levy*

University of Wisconsin Arboretum Director: *Kevin McSweeney*

Chair, Society for Ecological Restoration International: *Jim Harris*

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 and article or illustration should be made directly to UW Press, 1930 Monroe St, 3rd Floor, Madison, WI 53711-2059, permissions@uwpress.wisc.edu.

 Printed on 30% recycled text paper.

Contributions are welcome. Authors should send their materials to editor Mrill Ingram via email (mingram@wisc.edu) or surface mail to Editor, *Ecological Restoration*, UW Arboretum, 1207 Seminole Hwy, Madison, WI 53711. Guidelines for contributors are printed on the following page.

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. The *Ecological Restoration* web site is www.ecologicalrestoration.info.

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.

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: In the wake of Hurricane Ivan (2005), scuba divers (Larry Beggs, *foreground*) transplant rescued coral colonies onto concrete Reef Balls as part of a Cayman Islands Department of Environment-sponsored experimental nearshore habitat restoration project at Cemetery Reef, Grand Cayman, British West Indies. Photo courtesy of www.reefball.com

Back Cover: Almost one-quarter of Ecuador's plant species are orchids (*Epidendrum macrocarpum* pictured here), and the Orchid Botanical Garden in Puyo Ecuador harbors many species. Orchids attract many visitors to the reserve, who are then introduced to many other plants as well as to the importance of rainforest conservation. Photo by Omar Tello

INSTRUCTIONS FOR CONTRIBUTORS

Submissions

We welcome submissions to *Ecological Restoration* from any part of the world that relate to the restoration of plants, animals, ecological communities, or landscapes. Manuscripts may consider ecological and cultural aspects of restoration, as well as political, economic, legal, philosophical, and regulatory issues, urban restoration, and other subjects related to the ongoing development of the endeavor. Relevant topics also include techniques and tools for planning, species introduction, undesired species control, and monitoring. Manuscripts dealing with plant or animal community composition or general ecology must explicitly address restoration practice and theory. Similarly, material dealing with reclamation or rehabilitation, or with economic goals—economic forestry, range management, water quality—must relate to ecological restoration.

Material may be submitted for the following categories (listed as they are encountered in the journal): **Letters** to the Editor; **Editorials**; **Policy Reports**; **Restoration Notes** (shorter items describing projects, collaborations, events, innovative technologies, preliminary or unusual findings, thought-provoking concepts, imaginative solutions, etc.); full-length **Manuscripts** (case studies, research reports, photo essays, experiments, etc.); and book, journal, web, or movie **Reviews**.

Authors of articles and reviews should send their material to Editor Mrill Ingram, mingram@wisc.edu. Manuscripts must be submitted with a cover letter stating that the material has not been previously published, has not been submitted elsewhere, and will not be until a final decision has been reached by the editor.

Authors of Restoration Notes should submit their manuscripts to Associate Editor Chris Reyes, cmreyes@wisc.edu.

Review and Editing Process

All efforts are made to find appropriate peer reviewers for research and practitioner-oriented manuscripts (typically a minimum of three anonymous reviewers). The process requires approximately four months. Authors are welcome to suggest appropriate reviewers. Restoration Notes are reviewed and edited in-house unless additional expertise is required to evaluate the submission. The editors reserve the right to edit for style and clarity.

Style

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”). We do not require the standard research publication format and encourage alternative formats, such as case studies with well-developed discussions of lessons for practitioners, or articles on a specific study, beginning with a brief overview and including a discussion of the practical applications for restoration. Extensive quantitative data or detailed statistical analyses can be included as online supplementary material.

Manuscript Specifications and Format

For additional format specifications please refer to www.ecologicalrestoration.info/instructionsForContributors.asp. We appreciate full-length manuscripts kept below 5,000 words, although we will accept longer pieces. Manuscripts should include a 250-word abstract plus up to five alphabetized keywords. Author affiliation and contact information should be at the end of the article after the references. Restoration Notes are generally a maximum of 1,500 words and may include up to two accompanying graphics. Book reviews are typically less than 2,000 words. Manuscripts should be one-and-one-half spaced with one-inch margins.

Avoid footnotes. We use metric measurements. Write out numbers ten and under, except when supplying measurements or in tables. Spell out each acronym the first time it is used: warm-season grasses (WSG). Scientific names for all species should be presented in italics and parentheses after the first usage of each common name in the text: Culver’s root (*Veronicastrum virginicum*). The Integrated Taxonomic Information System is our default nomenclatural authority, but authors may use regional taxonomic sources when cited appropriately. Statistical terms and other measures should conform to the Council of Biology Editors Style Manual. Please consult the Chicago Manual of Style (15th ed.) and the Merriam-Webster Dictionary (11th ed.).

Authors of Restoration Notes and book reviews should keep references to a few key citations. We use the author–date system for in-text citations: (Xi et al. 2008a, 2008b, Smart and Dick 1999, ISCO 2006). Please see example references on our web site, in the free online issue, and below:

Gosine, A. 2003. Myths of diversity. *Alternatives* 291:12–14.

Illinois State Climatologist Office (ISCO). 2006. ISWS climate data: Monthly data for station 113320 (Galesburg). www.sws.uiuc.edu/data/climatedb/choose.asp?stn=113320

Kilvington, M., J. Rosier, R. Wilkinson and C. Freeman. 1998.

Urban restoration: Social opportunities and constraints. Paper presented to the Symposium on Restoring the Health and Wealth of Ecosystems, Christchurch, New Zealand, September 28–30.

Richburg, J.A., A.C. Dibble and W.A. Patterson III. 2002. Woody invasive species and their role in altering fire regimes of the northeast and mid-Atlantic states. Pages 104–111 in K.E.M. Galley and T.P. Wilson (eds), *Proceedings of the Invasive Species Workshop*. Miscellaneous Publication No. 11. Tallahassee FL: Tall Timbers Research Station.

Smart, R.M. and G.O. Dick. 1999. Propagation and establishment of aquatic plants: A handbook for ecosystem restoration projects. U.S. Army Corps of Engineers Technical Report A-99-4.

Tables, Photos, and Illustrations

Captions should be *useful and detailed and include photo credits*. Photographs can illustrate or augment an article. Figures will be 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 welcome submissions of eye-catching, high-quality *color* photographs for the front and back covers of the journal. MS Word is the preferred format for tables. Figures must have a minimum resolution of 300 dpi for photos at print size, 400 dpi for images containing text, and 600 dpi for images containing fine details. Please refer to www.wisc.edu/wisconsinpress/journals/preparing_illustrations.html.