

NATIVE PLANTS

JOURNAL

vol. 20 | no. 1 | spring 2019



includes NEW ENGLAND ROADSIDE REVEGETATION AND MILKWEED TAPROOTS

An eclectic forum for dispersing practical information about planting and growing native plants.

EDITOR
Stephen Love

MANAGING EDITOR
Candace J Akins

ASSOCIATE EDITORS

Robert D Cox, R Kasten Dumroese, Joel Gramling, Diane Haase, Heidi Kratsch, James Muir, Rodney Pond, Deborah L Rogers, Larry Rupp, Daniela J Shebitz, Forrest S Smith, Steven E Smith, Mack Thetford

All papers undergo peer review.

Refereed research papers meet high scientific standards. General technical reports provide pragmatic information.

Authors are responsible for content and accuracy of their articles. All views and conclusions are those of the authors of the articles and not necessarily those of the editorial staff or the University of Wisconsin Press. Trade names are used for the information and convenience of the reader, and do not imply endorsement or preferential treatment by the University of Wisconsin or any other public agency. The University of Wisconsin is an equal opportunity and affirmative action employer and educational institution. *Native Plants Journal* publishes research involving pesticides, but such pesticides are not recommended. All uses of pesticides must be registered by appropriate state and/or federal agencies before they can be recommended. Pesticides can injure humans, domestic animals, desirable plants, and fish or other wildlife if improperly handled or applied. Read the pesticide label before purchasing, and use pesticides selectively and carefully. Follow label directions for disposal of surplus pesticides and pesticide containers.

CORRESPONDENCE

Manuscripts must be submitted via the Internet. See the first issue of each volume for complete author instructions or visit <http://npj.msubmit.net>. Address all subscription, business, back issue, bulk order, and advertising inquiries to:

University of Wisconsin Press Journals Division
1930 Monroe Street, 3rd Fl
Madison, WI 53711-2059 USA
608.263.0668 uwpress.wisc.edu/journals

SUBSCRIPTIONS

Subscription rates are:

Institutions
US\$ 200 print and electronic
US\$ 170 electronic only

Individuals
US\$ 70 print and electronic
US\$ 60 electronic only

Foreign postage is \$31.

PERMISSION TO REPRINT

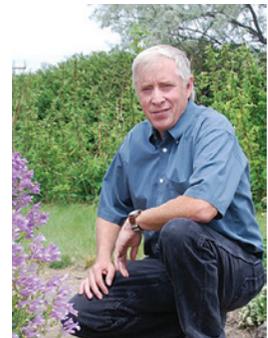
No part of this publication may be reproduced, stored in a retrieval system, transmitted, or distributed, in any form, by any means electronic, mechanical, photographic, or otherwise, without the prior permission of the University of Wisconsin Press. For educational reprinting, please contact the Copyright Clearance Center (1.978.646.2600; 1.855.239.3415). For all other permissions, please contact permissions@uwpress.wisc.edu

PUBLISHING

Native Plants Journal is published 3 times each year (Apr, Aug, Dec) by the University of Wisconsin Press
ISSN 1522-8339 E-ISSN 1548-4785

Copyright © 2019 the Board of Regents of the University of Wisconsin System

I was recently reading an article written by John Upton and printed by Climate Central that described a fresh study report by Jon Christensen and others who were documenting the geographical movement of native plant species in California as influenced by global warming. Two conclusions emerged from this article. One is that many native plants are not migrating to better sites of adaptation as rapidly as the animals that are historically included within common habitat. This is rapidly creating a situation wherein community relationships will unravel, with unknown but probably deleterious consequences. The other conclusion is that invasive weed species are successfully migrating with climate shift and filling the holes in many habitats created by natives that are no longer fully adapted. We have much to learn about creating solutions to these significant environmental problems. Contributors to and readers of the *Native Plants Journal* are, to some degree or another, involved in research and the development of methodologies that may prove invaluable in assisting nature in resolving the serious issues that are unfolding within our world. Journals such as ours will be key in communicating the results of these research efforts, thus allowing us to create an atmosphere of scholarly symbiosis that will further drive efforts and improve chances for success. I laud your efforts and hope you continue your important work. We at the *Native Plants Journal* will continue to serve as a communication pipeline for your findings. By working together, I feel strongly that we can make a positive contribution to an increasingly disturbing problem.



Dr Stephen Love
Editor-in-Chief

On the cover: *Echinocereus triglochidiatus* (kingcup cactus [Cactaceae]) taken June 2010 near Gates of Lodore in northwest Colorado. Photo by Stephen Love

Have a great idea for an article but don't have time or need help writing? Please e-mail. We can help.

Two types of manuscripts are welcome:

General technical articles are not research per se (lack strict experimental design and statistical analysis), but have important information for growers and planters of North American native plants. Articles could include new planting techniques, useful equipment, cultural techniques, habitat restoration, restoration techniques, production trends, technical information, descriptions of new species or cultivars entering nursery production, and so on. Propagation protocols are short, concise general articles detailing the specific methods used to propagate a particular plant. Germplasm releases are short articles that follow a standard format (see past issues) and announce the release of new plant materials for conservation use.

Refereed research articles (and scientific reviews or commentary) must have sound application of scientific method, appropriate statistical analysis, and state how the research is important to growers and planters of North American native plants. Accepted papers will be published with a "Refereed Research Article" designation.

All submitted manuscripts will be peer-reviewed by 2 referees to ensure the objective of *Native Plants Journal* is met.

MANUSCRIPT PREPARATION

Include a cover letter indicating what type of manuscript is being submitted (refereed or general). Refrain from special formatting. Use of active voice is encouraged. All text except tables and figure captions should be double-spaced. The first page should have title and author information (include full names of authors, their professional titles and affiliations, mailing and electronic addresses, and specify corresponding author to whom all pre-publishing correspondence should be sent).

The second page should contain the title, abstract, and key words. Abstracts should be double-spaced and brief and emphasize results, usefulness, and practicality to growers and planters of North American (Canada, Mexico, and US) native plants. Authors are strongly encouraged to make the first sentence of their abstract describe the most important finding of their work. Include 3 to 7 key words not in the title. Use the PLANTS database as the source for nomenclature (see below). Print an abbreviated title and page number in the upper right corner of this and all subsequent pages. Use line numbering. Construct tables using the table feature of word processing programs.

Follow the second page with the "Introduction, Materials and Methods, Results, Discussion, Conclusion, References," or some other logical system as headings, followed by figure captions

and tables. For matters of style, we generally follow *Scientific Style and Format, The Council of Biology Editors Manual for Authors, Editors, and Publishers*, 6th edition (ISBN 0-521-47154-0).

Use metric (SI) units with US units in parentheses and abbreviate all units, except those without numerical value (for example, "we measured parts per million and found 250 ppm nitrogen"). Use numerals for any countable amount (for example, 3 replicates, 2 populations).

REFERENCES

In the text, please list citations by date, and then alphabetically by author (for example, Smith 1986, 1997; Jones and Smith 1992; Smith and Jones 1992; Doe and others 1998). In the references section, list references alphabetically by author(s) and please do not abbreviate the name of the referenced journal. Examples:

Journal article: Arnold MA, Struve DK. 1989. Growing green ash and red oak in CuCO₃-treated containers increases root regeneration and shoot growth following transplant. *Journal of the American Society for Horticultural Science* 114:402–406.

Entire book: Davidson H, Mecklenburg R. 1981. *Nursery management: administration and culture*. 2nd ed. Englewood Cliffs (NJ): Prentice-Hall Inc. 450 p.

Article in proceedings: Dumroese RK, Wenny DL. 1997. Fertilizer regimes for container-grown conifers of the Intermountain West. In: Haase DL, Rose R, coordinators and editors. *Symposium proceedings, forest seedling nutrition from the nursery to the field; 1997 Oct 28–29; Corvallis, OR. Corvallis (OR): Oregon State University Nursery Technology Cooperative*. p 17–26.

Internet source: [USDA NRCS] USDA Natural Resources Conservation Service. 2011. The PLANTS database. URL: <http://plants.usda.gov> (accessed 20 Jan 2011). Greensboro (NC): National Plant Data Team.

Government article: Barnett JP, Brissette JC. 1986. *Producing southern pine seedlings in containers*. New Orleans (LA): USDA Forest Service, Southern Forest Experiment Station. General Technical Report SO-59. 71 p.

Thesis or dissertation: Wang Z. 1990. Effects of cupric carbonate on container-grown seedlings of ponderosa pine during greenhouse production [MSc thesis]. Moscow (ID): University of Idaho. 67 p.

Personal communication: Hoss GA. 2002. Personal communication. Licking (MO): Missouri Department of Conservation, George O White State Forest Nursery. Nursery Superintendent.

NOMENCLATURE

Use common names with scientific names (including authorities and family names) in parentheses the first time used in the abstract and body of the manuscript (if scientific names with authorities and families are summarized in a table, they need not be repeated in the body of the manuscript). All subsequent use can be either the common or scientific name. Example with common name: whitebark pine (*Pinus albicaulis* Engelm. [Pinaceae]). Example without common name: *Phacelia rattanii* Gray. (Hydrophyllaceae). The standard source of plant nomenclature is the PLANTS database (<http://plants.usda.gov>). Authors may use common names found in PLANTS or the local vernacular. Other nomenclature sources may be used only if justified. The nomenclature source should be included in the references.

MANUSCRIPT SUBMISSION

Manuscripts should be submitted via the Internet at <http://npj.msubmit.net>. Files will be converted to PDF when uploaded. Text and tables should be saved as one file. Graphics (graphs, drawings) should be in black and white and saved as individual jpg, tif, eps (preferred), SigmaPlot (preferred), or Adobe Photoshop files. Excel files embedded in manuscripts are acceptable for manuscript review but unacceptable for publication. Color slides or photographs are fine and can be sent directly to the Editor; digital images must have a minimum resolution of 300 dpi at a minimum width of 10 cm (4 in), although larger-sized images are preferred. Include photo credits.

Contact the Editor:

Stephen Love
Editor, Native Plants Journal
University of Idaho
Aberdeen Research & Extension Center
1693 S 2700 W
Aberdeen, Idaho 83210
telephone 208.397.4181
slove@uidaho.edu

Before accepted manuscripts can be published, authors must complete a consent to publish form.

Photo credits opposite page: (*top*) Rooting experiment of arid land peperomia (*Peperomia blanda* (Jacq.) Kunth var. *floribunda* (Miq.) H. Huber [Piperaceae]) on an outdoor shaded bench, photo by Orville C Baldos; (*middle*) rest stop pollinator habitat installation, photo courtesy of the Connecticut Department of Transportation; (*bottom*) *Chamerion angustifolium* (L.) Holub (fireweed [Onagraceae]) at Tiffany Mountain, Washington, photo by Stephen Love.

GREAT PLAINS RESEARCH

A JOURNAL OF NATURAL AND SOCIAL SCIENCES

VOLUME 28, NUMBER 1 SPRING 2018



CENTER FOR GREAT PLAINS STUDIES

UNIVERSITY OF NEBRASKA-LINCOLN

Great Plains Research is available online through Project MUSE
which offers free access via library subscriptions.

bit.ly/GPR_MUSE

For subscriptions or back issues,
visit nebraskapress.unl.edu or call 402-472-8536

UNIVERSITY OF
NEBRASKA  PRESS

REFEREED RESEARCH

Effect of cold stratification on germination of 9 boreal sedges
Jean-Marie Sobze, Çağdaş Kera Yücel, Ann Smreciu, and Kim Gould 5

Seedling emergence of *Lupinus diffusus* in response to abrasion in an electric seed scarifier
Gabriel Campbell-Martínez, Mack Thetford, Deborah L Miller, and Héctor E Pérez 14

Propagation of arid land peperomia (*Peperomia blanda* var. *floribunda*) via leaf cuttings
Orville C Baldos and Aleta K Corpuz 25

Attitudes toward and adoption of roadside revegetation using native plants by departments of transportation in New England states
John Campanelli, Yulia A Kuzovkina, Robert M Ricard, and Cristian P Schulthess 31

Successfully storing milkweed taproots for habitat restoration
Melissa L Topping, R Kasten Dumroese, and Jeremiah R Pinto 48

GENERAL TECHNICAL

Response of American and European elderberries to extreme winter temperature in North Central Ohio
Timothy J Malinich 59

Second summary of the native seed germination studies of Norman C Deno: species with names beginning with letters C through E
Prepared by Stephen L Love and Candace J Akins 65

