

INVASIVE PLANT SCIENCE AND MANAGEMENT



VOLUME 12 | NUMBER 4
OCTOBER–DECEMBER 2019

<https://doi.org/10.1017/mp.2019.31> Published online by Cambridge University Press

 **WSSA**
WEED SCIENCE SOCIETY OF AMERICA

Invasive Plant Science and Management

Published quarterly by the Weed Science Society of America

Antonio DiTommaso, *Editor*

The Weed Science Society of America (WSSA) publishes original research and scholarship in the form of peer-reviewed articles in three international journals. *Weed Science* is focused on understanding “why” phenomena occur in agricultural crops. As such, it focuses on fundamental research directly related to all aspects of weed science in agricultural systems. *Weed Technology* focuses on understanding “how” weeds are managed. As such, it is focused on more applied aspects concerning the management of weeds in agricultural systems. *Invasive Plant Science and Management* is a broad-based journal that focuses not only on fundamental and applied research on invasive plant biology, ecology, management, and restoration of invaded non-crop areas, but also on the many other aspects relevant to invasive species, including educational activities, policy issues, and case study reports.

Associate Editors (Assignment Year)

Edith B. Allen, Botany & Plant Sciences Department, University of California, Riverside, CA 92521 (2008)
Jacob N. Barney, Department of Plant Pathology, Physiology, & Weed Science, Virginia Tech, Blacksburg, VA 24061 (2012)
John Cardina, Department of Horticulture & Crop Science, Ohio State University, Wooster, OH 44691 (2008)
Stephen F. Enloe, Center for Aquatic and Invasive Plants, University of Florida, Gainesville, FL 32653 (2010)
Songlin Fei, Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN 47907 (2015)
Guillaume Fried, Plant Health Laboratory, Anses, 34988 Montferrier-sur-Lez, France (2017)
Catherine S. Jarnevich, US Geological Survey, Fort Collins, CO 80526 (2015)
Marie Jasieniuk, University of California, Davis CA 95616 (2017)
Darren J. Kriticos, CSIRO, Canberra, ACT 2601, Australia (2010)
James K. Leary, Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, Honolulu, HI 96822 (2014)
Kelly G. Lyons, Department of Biology, Trinity University, San Antonio, TX 78212 (2008)
Jane M. Mangold, Department of Land Resources and Environmental Sciences, Montana State University, Bozeman, MT 59717 (2014)
John A. Randall, The Nature Conservancy, University of California, Davis, CA 95616 (2008)
Rob J. Richardson, Department of Crop Science, North Carolina State University, Raleigh, NC 27695 (2014)
Steve S. Seefeldt, NWREC, Washington State University, Mount Vernon, WA 98273 (2014)
Ryan M. Wersal, Minnesota State University, Mankato, Mankato, MN 56001 (2014)

Tracy Candelaria, *Managing Editor*

Officers of the Weed Science Society of America

<http://wssa.net/society/bod/>

Invasive Plant Science and Management (ISSN 1939-7291) is an official publication of the Weed Science Society of America, 12011 Tejon Street, Suite 700, Westminster, CO 80234 (720-977-7940). It is published quarterly, one volume per year, four issues per year beginning in March.

Membership includes receipt of *Weed Science*, *Weed Technology*, *Invasive Plant Science and Management*, and the online *WSSA Newsletter*. Dues should be sent to WSSA, 12011 Tejon Street, Suite 700, Westminster, CO 80234 no later than December 1 of each year. Membership in the society is on a calendar-year basis only.

New subscriptions and renewals begin with the first issue of the current volume. Please visit the *Invasive Plant Science and Management* subscription page at <https://www.cambridge.org/core/journals/invasive-plant-science-and-management/subscribe>; Email: subscriptions_newyork@cambridge.org in USA, journals@cambridge.org outside USA.

Invasive Plant Science and Management publishes four times a year in March, June, September, and December. Annual institutional electronic subscription rates: US \$404.00; UK £281.00.

Please use Editorial Manager to access manuscript submissions (<http://www.editorialmanager.com/ipsm>). Authors are asked to pay \$65 per page as a portion of the cost of publication, plus an additional processing charge of \$55 per manuscript if none of the authors are WSSA members. The Editor can make exceptions in advance when justified.

The Weed Science Society of America fully subscribes to the belief that progress in science depends upon the sharing of ideas, information, and materials among qualified investigators. Authors of papers published in *Invasive Plant Science and Management* are therefore encouraged, whenever practicable and when state and federal laws permit, to share genotypically unique, propagative materials they might possess with other workers in the area who request such materials for the purpose of scientific research.

Invasive Plant Science and Management published by the Weed Science Society of America.

Copyright 2019 by the Weed Science Society of America. Printed in USA.

All rights reserved. Reproduction in part or whole prohibited.

Cover Photo: A *Pennisetum ciliare* (buffelgrass) invaded hillslope of the Sonoran Desert of Southern Arizona, USA. *P. ciliare* represents a threat to biodiversity and native desert scrub plant communities (including the iconic Saguaro Cactus) due to its competitive abilities and impacts on the fire regime. Photo credit: Frank Staub, printed with permission.



INVASIVE PLANT SCIENCE AND MANAGEMENT

Table of Contents

Review

- Pennisetum ciliare*: a review of treatment efficacy, competitive traits, and restoration opportunities. Hannah L. Farrell and Elise S. Gornish 203

Research Articles

- Soil characteristics drive *Ficaria verna* abundance and reproductive output.
Justin P. Kermack and Emily S. J. Rauschert 214
- Management of *Ventenata dubia* in the inland Pacific Northwest with indaziflam.
Lindsay E. Koby, Timothy S. Prather, Harold Quicke, Jared Beuschlein and Ian C. Burke 223
- Selective herbicides for control of hen's eyes (*Ardisia crenata*) in forests and natural areas.
Richard Cristan, Patrick J. Minogue, Stephen F. Enloe, Brent Sellers and Anna Osiecka 229
- Cut-stem treatments using graminicides for burmareed (*Neyraudia reynaudiana*) invasions
in Pine Rocklands, South Florida, USA. Candice M. Prince, Kaitlyn H. Quincy,
Stephen F. Enloe, Jennifer Possley and James Leary 236

Note

- Ventenata dubia*'s native range and consideration of plant pathogens for biological control.
Maryam Alomran, George Newcombe and Timothy Prather 242