INVASIVE PLANT SCIENCE AND MANAGEMENT





VOLUME 16 | NUMBER 4 DCTOBER-DECEMBER 2023

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)

Jacob N. Barney, School of Plant and Environmental Sciences, Virginia Tech, Blacksburg, VA 24061 (2012)
Chelsea Carey, Point Blue Conservation Science, Petaluma, CA 94954 (2022)
Stephen F. Enloe, Center for Aquatic and Invasive Plants, University of Florida, Gainesville, FL 32653 (2010)
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, Department of Plant Sciences, University of California, Davis CA 95616 (2017)
Darren J. Kriticos, Cervantes Agritech, Canberra, ACT 2601, Australia (2010)
Elizabeth LaRue, Department of Biological Sciences, University of Texas, El Paso, TX 79968 (2022)
James K. Leary, Center for Aquatic and Invasive Plants, University of Florida, Gainesville, FL, 32653 (2014)
Kelly G. Lyons, Department of Biology, Trinity University, San Antonio, TX 78212 (2008)
Mark J. Renz, Department of Agronomy, University of Wisconsin, Madison, WI 53706 (2023)
Rob J. Richardson, Department of Crop Science, North Carolina State University, Raleigh, NC 27695 (2014)
Ryan M. Wersal, Department of Biology, Minnesota State University, Mankato, Mankato, MN 56001 (2014)

Biology of Invasive Plants Series Editors

David R. Clements, Trinity Western University, Langley, BC V2Y 1Y1, Canada (2020) Darren J. Kriticos, Cervantes Agritech, Canberra, ACT 2601, Australia (2010)

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 calendaryear 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 \$422.00; UK £294.00.

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 2024 by the Weed Science Society of America. All rights reserved. Reproduction in part or whole prohibited.

Cover Photo: *Tamarix aphylla* (Athel tamarisk), a tree or shrub species of high impact is expected to expand its range by midcentury into all eight mid-Atlantic states. For more information, see article by Salva & Bradley in this issue. Photo credit: Joseph DiTomaso.



Volume 16 Number 4 October–December 2023

INVASIVE PLANT SCIENCE AND MANAGEMENT

Table of Contents

Research Articles

High-impact invasive plants expanding into mid-Atlantic states: identifying priority range-shifting species for monitoring in light of climate change Justin D. Salva and Bethany A. Bradley	197
Genetic analysis of invasive spread of wintercreeper (<i>Euonymus fortunei</i>), a popular ornamental groundcover Robert J. Elam and Theresa M. Culley	207
Invasion by Callery pear (<i>Pyrus calleryana</i>) does not affect understory abundance or diversity in early-successional meadows Andrea N. Nebhut and Jeffrey S. Dukes	215
Seed longevity and germination of the emerging invasive species wavyleaf basketgrass (<i>Oplismenus undulatifolius</i>) under varied light regimes Dominique H. Pham and Carrie A. Wu	225
Case Study	
Efficient and rapid control of Eurasian watermilfoil (<i>Myriophyllum spicatum</i>) by combining benthic mats and hand pulling Vincent Gagné and Claude Lavoie	233
Research Articles	
Tourists' (mis)understandings of nature: international and domestic visitors' perceptions of invasive alien plants in New Zealand Brent Lovelock, Yun Ji, Anna Carr and Clara-Jane Blye	240
Novel basal bark and cut stump herbicide treatments for Brazilian peppertree (<i>Schinus terebinthifolia</i>) management Mackenzie E. Bell, Stephen F. Enloe, James K. Learv and Dwight K. Lauer	253