

Plant Invasions: Global Progress in the 21st Century
SRM-WSSA Invasive Species Symposium Agenda

Moderator: Dr. Joseph DiTomaso, UC Davis
 Plaza Ballroom ABC

Time	Speaker	Topic
8:00 – 8:20	Joel Holtrop	Introduction and Welcome – State of the Nation
8:20 – 9:00	Dr. Tom Stohlgren	Forecasting Invasions: An Introduction in Space and Time
9:00 – 9:40	Dr. Sarah Ward	Population Biology: Epidemiology of Plant Invasions
9:40 – 10:00		Break
10:00 – 10:40	Dr. John Gaskin	Contribution of Genetics to Invasive Species Management
10:40 – 11:20	Dr. Richard Mack	Invasions Across the Global Landscape
11:20 - 12:00	Dr. Jayne Belnap	Ecological Consequences of Invasions: Communities and Ecosystems
12:00 – 1:00		Lunch
1:00 – 1:40	Dr. Bruce Maxwell	Ecological Processes Driving Invasions
1:40 – 2:20	Dr. Jeff Dukes	Invasions in a Changing Global Environment
2:20 – 3:00	Dr. Rieks van Klinken	Fire and Invasion: Managing Landscapes
3:00 – 3:20		Break
3:20 – 4:00	Dr. Jodie Holt	Bridging Scientific Perspectives: Weed, Range, and Forestry
4:00 – 5:00	Speakers from above	Panel Discussion
6:00 – 7:30		Posters and Reception (Plaza Ballroom D&E)

Speaker Biographical Information

Joel D. Holtrop has served as Deputy Chief of the National Forest System Deputy Area at agency headquarters in Washington D.C., since March 2005. In this capacity, he oversees strategic and national program leadership for the 193 million acre National Forest System of forests and grasslands located in 42 states and Puerto Rico. A Michigan native, Deputy Chief Holtrop earned a bachelor's degree in forestry at Michigan State University, and a master's in forest management at the University of Washington. His natural resource management emphasis areas include ecosystem management, engineering, forest management, rangeland management, lands, minerals, geology management, recreation, heritage, wilderness, wild-scenic rivers management, watersheds, fish, wildlife, air, and rare plants. He launched his career on the Mt. Baker-Snoqualmie National Forest, Washington, and later served on the Eldorado National Forest, California, Mt. Hood National Forest, Oregon, and Hiawatha National Forest, Michigan. Subsequently he became deputy forest supervisor on the Nicolet National Forest, Wisconsin, and forest supervisor on the Flathead National Forest, Montana. He is a member of the Federal Government's Senior Executive Service. He recently received the Distinguished Alumnus Award for his alma mater Calvin College in 2007. He has served in a number of natural resource, conservation, and leadership organizations throughout the country.

Dr. Tom Stohlgren received a B.S. in Forestry from the University of California, Berkeley (1978), M.A. in Biology from California State University, Fresno (1982), and Ph.D. in Ecology from the University of California, Davis (1990). He is a Research Ecologist with the Fort Collins Science Center, U.S. Geological Survey (30 years in the Department of the Interior); and Senior Scientist at the Natural Resource Ecology Laboratory, Colorado State University. He is Affiliate Faculty with the Department of Forest, Rangeland, and Watershed Stewardship and Graduate Degree Program in Ecology, Colorado State University. His research interests include: (1) Assessing invasions of plants, animals, and diseases at local to global scales, land use change and climate change on natural ecosystems and invasions, and monitoring the effects of multiple stresses on ecosystems; (2) Linking information at landscape-, regional-, national-, and global-scales with known precision and accuracy; (3) Developing GIS-based, predictive spatial and temporal ecological models (Invasive Species Forecasting Models) to guide management of public lands; and (4) Establishing a National Institute of Invasive Species Science with the USGS and partnerships with NASA, the Eros Data Center, and federal and state agencies and non-government organizations. He has over 180 scientific publications and a text book, and he's served as Editorial Board member for Ecology and Ecological Monographs, and Ecological Applications since 2000. He writes novels in his spare time.

Dr. Sarah Ward is Associate Professor of Plant Genetics in the Department of Soil and Crop Sciences at Colorado State University (CSU). She received her BS in Applied Plant Sciences from the University of London (UK). Various adventures, including two years working on an agricultural development project in highland Ecuador, led to graduate school in the U.S. where she received an MS and PhD in Plant Breeding and Genetics from Colorado State University. Although Sarah started her academic career as a plant breeder working with new crops and alternative cropping systems, several years of collaboration with the CSU weed science group

eventually convinced her that weeds were much more interesting. Sarah's current research focuses on the ecological genetics of weeds and invasive plants. She is a faculty member of the Graduate Degree Program in Ecology at CSU, where she teaches graduate courses in crop/weed evolution and plant population genetics, as well as an undergraduate genetics course.

Dr. John Gaskin received a BA in Botany from the University of California, Santa Cruz, and a PhD from Washington University in St. Louis and the Missouri Botanical Garden. He is currently Botanist and Research Leader for the USDA-ARS in Sidney, MT. The focus of John's research is population genetics and molecular systematics of invasive plants. Specific goals of this research are to find out which genotypes of exotic plants are invading, where these genotypes originated from, which native and exotic species they are most closely related to, and where the invasive genotypes are distributed in North America. He also has a strong interest in hybridization and invasion, and how novel hybrids can influence invasion and resistance to biological control agents.

Dr. Richard N. Mack (Ph.D, Washington State University, 1971) is a Professor in the School of Biological Sciences at Washington State University. For approximately the last 30 years his research has been largely devoted to the ecology of invasive species. Much of his research has dealt with the aggressive invader, *Bromus tectorum* (cheatgrass or downy brome) in the Intermountain West (USA). He has also investigated plant invasions in Hawaii, the southeastern U.S. and China. He is particularly interested in population biology (including the immigration, demography, competition, and ecological genetics) of plant invaders and their environmental effects. He has framed much of his research with the goal of addressing applied aspects of combating invasive species, including prediction of future invasive species and their early detection and eradication. He served as Chair of the Department of Botany at Washington State University, 1986-1999. He served as Chair from 1999-2001 for the National Research Council's Committee for "Predicting the Invasive Potential of Non-indigenous Plants and Plant Pests in the United States." He has served on the editorial boards of *Ecology & Ecological Monographs*, *Oecologia*, *Ecological Applications* and *Biological Invasions*. He also served on the SCOPE (Scientific Committee for Problems in the Environment) Executive Committee, and a member of the Board for the Global Invasive Species Programme (GISP) until 2003. He is currently a member of the IUCN (International Union for the Conservation of Nature) specialist group on invasive species.

Dr. Jayne Belnap has been a scientist with the Department of Interior in Moab, Utah since 1987. Her scientific work has focused on how land uses (such as hiking, biking, military training, livestock grazing, and energy exploration) affect fertility, stability, and invasibility of desert soils, how these lands can be used sustainably, and how interaction of climate change and land use will influence these landscapes. Dr. Belnap's studies have taken her around the world, including South Africa and eastern Africa, Mongolia, China, Siberia, Australia, and Iceland, advising scientists and managers in these regions. She also travels extensively throughout the United States, interacting with and training federal, state, and private land managers on best management practices for dryland ecosystems. She has recently been president of the Soil Ecology Society and on the governing board of the Ecological Society of America.

Dr. Bruce Maxwell is Professor of Agroecology/Weed Ecology in the Department of Land Resources and Environmental Science at Montana State University in Bozeman, Montana. He was Interim Department Head in 2008 and 2009. Bruce came to Montana State University in 1992 from the University of Minnesota, holds a doctorate degree in crop science and forest ecology from Oregon State University. Maxwell was instrumental in formation of the Department of Land Resources and Environmental Science and has received national awards for outstanding teaching, best peer reviewed paper, and outstanding graduate student from the Weed Science Society of America. During his career he has published over eighty scientific journal articles and book chapters, chaired and been a member on numerous agricultural and ecological research grant review panels and been a member of two National Research Council Committees on Agriculture.

Dr. Jeff Dukes is a professor of Forestry and Natural Resources and Biological Sciences at Purdue University. Professor Dukes's research group seeks to understand how ecosystems respond to climate and atmospheric change, understand and minimize the impacts of invasive species on ecosystems, and a variety other topics. Dr. Dukes has particular interest in understanding how changes in climate and the atmosphere will affect the success and impact of invasive species.

Dr. Rieks van Klinken leads the tropical invasive plants team at CSIRO (Australia) and is interested in mechanisms of invasions and the impacts and management of invasive plants, especially at a landscape to continental scale. For the past 13 years he has been working on invasive shrubs, grasses and aquatics across rangelands of Australia, including the use and integration of biological control, grazing management, fire and other management tools.

Dr. Jodie S. Holt is Professor of Plant Physiology and Chair of the Department of Botany and Plant Sciences at the University of California, Riverside. She received her B.S. degree in Botany from the University of Georgia and her M.S. and Ph.D. degrees in Botany from the University of California, Davis. In her position at UC Riverside she and her students conduct research in ecology of weedy and invasive plants to contribute to ecologically sound weed management practices. The third edition of her co-authored book, *Ecology of Weeds and Invasive Plants: Relationship to Agriculture and Natural Resource Management*, was released in August 2007. Her current teaching responsibilities include Foundations of Plant Biology and graduate seminars in Invasion Biology. Previously she also taught Plant Ecology; General Biochemistry; Weed Ecology and Management; Resistance of Insects, Plant Pathogens, and Weeds to Toxic Agents; and portions of Plant Physiology Labs. In 2008 she won the UCR Distinguished Teaching Award for 2008-09. Holt is an elected Fellow of the American Association for the Advancement of Science (AAAS) and the Weed Science Society of America (WSSA), where she is also an Associate Editor of the new journal, *Invasive Plant Science and Management*. She has been actively involved in the WSSA for many years and previously served as Secretary of the Board of Directors, Member-at-Large, and Associate Editor of *Weed Science*. She has won the Outstanding Paper in Weed Science Award twice (1993, 2000), and is also an elected member of Phi Beta Kappa, Gamma Sigma Delta, and Sigma Xi. Her most recent activity was serving as a

botanical consultant to the recent movie, Avatar, directed by James Cameron, and the related game products, which feature a botanist in the lead role.