



## INTRODUCTION TO VOL. 6

### *Minimizing the effects of invasive species in restored ecosystems*

This issue of Restoration and Reclamation Review focuses on the biology and management of invasive species during ecosystem restoration. Invasions by aggressive, often non-indigenous species increasingly are the primary stressor that needs to be remedied for many restorations. In some cases these invasions are triggered by obvious changes in the abiotic conditions in a locale, but in many others what has made a place prone to invasion is unclear. Even if a restoration is initiated in a relatively invasive-free condition, the likelihood that weedy species will colonize rapidly is often great. Minimizing the effects of invasive species to prevent arrested succession in recovering ecosystems is increasingly recognized as a major part of restoration. The time and costs associated with weed control during site preparation and during vegetation establishment are often substantial and easily underestimated.

Predictable, efficient approaches for continued management of invasive species are critical to the success of many restorations worldwide. The two-dozen papers in this issue of RRR provide many examples of species that will likely continue to be extraordinarily successful because they capitalize on human-disturbed landscapes, alter the places they colonize, or simply have unexpected advantages in their introduced regions. Each of these papers chronicle restorationists' attempts to manage these species – some invaders are clearly possible to manage and others perhaps not. The available management tools are sometimes potentially damaging to the environment – pesticides, extensive mechanical removal, introductions of bio-control organisms. Understanding the risks associated with these choices are clearly part of restorations – but often non-target risks are poorly understood.

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