

INVASION NOTE:

Relative importance of wetland type vs. anthropogenic activities in determining site invasibility

Gary Ervin ¹, Melissa Smothers ², Christopher Holly ¹, Cori Anderson ³, and Jeffrey Linville ¹

¹ Department of Biological Sciences, Mississippi State University

² Department of Biological Sciences, Humboldt State University

³ Department of Biological Sciences, Birmingham-Southern College

Abstract

We assessed wetland invasibility by conducting surveys of three wetlands in each of five categories (riverine, depression, lacustrine fringe, mineral flat, and seepage slope). Invasibility was measured as the number of invasive species present, percent of plant species classified as invasive, percent cover of invasive plants, and percent of total cover represented by invasive species. The working hypothesis for this study was that certain types of wetlands (e.g., lacustrine fringe and riverine) would be more prone to invasion than others (spring-seep/slope wetlands or mineral flat wetlands). No significant differences were found among wetland types in any of the invasion metrics evaluated, despite high average invasibility in the riverine and lacustrine fringe categories. However, invasion was correlated very strongly with a qualitative index of anthropogenic modification to the surrounding landscape. A probable result of the substantial influence of human activities on wetland invasion in this study was that effects potentially attributable to greater opportunity for dispersal in certain types of wetlands were obscured. Another factor that likely contributed to the lack of differences among wetland types was the high variability in human activities observed among wetlands within types. These results further highlight the overwhelming contributions of anthropogenic habitat modification and human-assisted dispersal of invasive species to the currently observed homogenization of natural ecosystems.

2006. Biological Invasions, *In press*.