

BUILDING THE DATABASE FOR INTRODUCED PLANTS IN THE UNITED STATES

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ABSTRACT

More than 4000 nonnative plant species have been introduced to the U.S. and Canada. Identifying potentially invasive species is an important goal. Ecologists have generally agreed that there is no simple biological predictor of invasion success, but certain biological traits tend to be associated with invasion success more than others. For example, recent literature suggests that characteristics of successful invaders often included broad ecological tolerances, r-selected life strategies, associations with disturbed or anthropogenic habitats, and origins from large continents with diverse biotas. Life history/genetic information is thus critical for developing early warning/prevention systems, predictive simulation models, risk assessment, and management plans.

We are compiling data for biological traits including life cycle, growth form, woodiness, deciduousness, pollinating agent, fruit type, seed mass, dispersal agent,

and photosynthetic pathway. We collect data from a large body of literature and a variety of other sources including the Internet, herbarium specimens, and existing relevant databases. We also collect information regarding introduction pathways/vectors, introduction time and locations, and current distribution. We will ask the following questions: (1) What are the major life history characteristics and common traits of about 4,000 plant species introduced into the United States?; (2) What kinds of species are most invasive and is such invasiveness related to particular life history/genetic traits?; and (3) How do such biological traits as growth form, pollinating agent, dispersal agent, habitat distribution, and photosynthetic pathway influence the spread of introduced species naturalized in the United States and Canada?