



**The New England Botanical Club  
Graduate Student Research Awards**

**2006 AWARD WINNERS**

**Jonathon Schramm**

Graduate Program in Ecology and Evolution  
Department of Ecology, Evolution, and Natural Resources  
Rutgers University, New Brunswick, NJ

**A multi-scale analysis of contemporary and historical facilitators  
of the invasion of an exotic grass into hardwood forests of New Jersey**

Japanese stiltgrass (*Microstegium vimineum*), a C<sub>4</sub> annual grass native to eastern and southern Asia, has been expanding its range rapidly along the eastern seaboard of the United States since its introduction in 1919. The species can reach high densities in the understory of mixed hardwood forests, and often reduces native plant species abundance and diversity in such sites. Efforts to understand the biology and spread of this species to date have primarily focused on either broad habitat matching or plant-level controls on growth. There remains a need to understand what processes link these levels of analysis, and thus how the pattern of invasion into a landscape is determined. In order to address this, this research will examine distributions of stiltgrass across selected sites in a region of west-central New Jersey known as the Sourlands. Stiltgrass distribution will be quantified in relation to a primary potential dispersal vector (perennial and intermittent surface streams) and major propagule source (young forests growing on former agricultural land). Combined with small-scale data on stiltgrass environmental tolerances (shade, soil disturbance, litter depth), a predictive model of stiltgrass distribution and abundance will be created using geographic information systems.

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**Lynn McNamara**

Antioch New England Graduate School  
Keene, NH

**The geographic and ecological distribution of  
wild chervil, *Anthriscus sylvestris* (L.) Hoffm. in Vermont**

Wild chervil, *Anthriscus sylvestris*, is a fast-spreading, invasive biennial in the Apiaceae family. Wild chervil has dominated local habitats in Randolph, Vermont since the early 1990s, and has been rapidly spread throughout central Vermont. Although it is observed most frequently along roadsides, chervil is able to invade moderately open natural communities, such as floodplain forests, threatening the unique flora in these areas. The goal of my thesis research is to map wild chervil's current geographic distribution and describe its ecological characteristics. This knowledge will aid in slowing its spread and preventing future invasion into vulnerable habitat. By knowing its habitat preferences, management efforts can be targeted at those communities most susceptible to invasion. Additionally, this information will be used by the Vermont Invasive Exotic Plant Council to determine if wild chervil should be placed on Vermont's Invasive Plant Quarantine list.