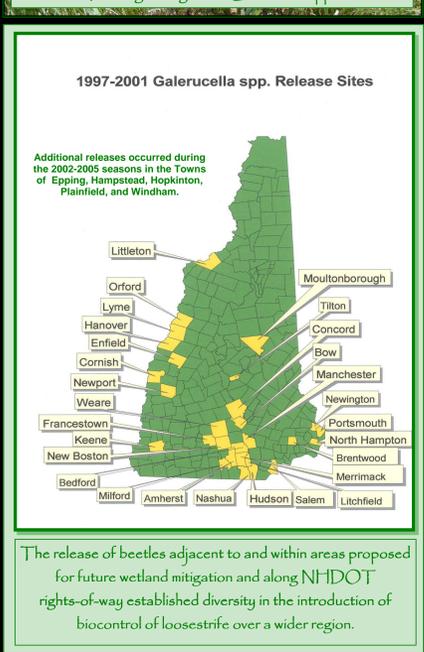




Through 2005, approx. 205,700 beetles have been released



Feeding damage from *Galerucella* spp.



As the purple loosestrife population expands, concerns increase about its potential impact in moist habitats. Since the 1950's, a variety of mechanical, cultural, and chemical controls have been employed in an attempt to control the effect of the species on natural and manmade wetlands. These methods were either impractical or abandoned due to ineffectiveness or environmental concerns. This poster summarizes a pilot program instituted by the NHDOT and the New Hampshire Department of Agriculture, Markets and Food to control purple loosestrife in New Hampshire wetlands between 1997 and 2001.

The program included the screening and selection of candidate insects, rearing, controlled releases and monitoring at numerous sites throughout the state. A total of 130,400 *Galerucella* spp. leaf-eating beetles were released during the period. The program was successful in establishing viable populations of these beetles at several locations.

Galerucella spp. leaf-eating beetles are a natural enemy of Purple Loosestrife. The beetles reduce the growth & reproduction of the plants through feeding and depositing of eggs on the plant.

These insects were selected because they are host-specific, possess good survival and reproductive potential, and are considered effective biological control agents.

The NH Department of Agriculture, Markets and Food has received a number of grants in recent years enabling NH communities and the Concord State Prison to participate in beetle-rearing activities through the Community Purple Loosestrife Integrated Pest Management Program.

CONCLUSIONS & RECOMMENDATIONS

Biological control is considered a safe, sustainable, cost effective, long-term method for reducing invasive plant populations in NH and is a key component for controlling purple loosestrife. The research recommended that bio-control of this species be maintained and expanded. Community rearing and release is encouraged, and continued monitoring should occur. Further investigations into the possible use of root feeding weevils was suggested.

Purple Loosestrife, *Lythrum salicaria*, is an invasive, non-native plant introduced in the United States from Europe and Asia beginning in the early 1800's. A single plant can produce more than 2.5 Million seeds each season. Its long flowering season, prolific seed set, strong root stock and adaptability to poor conditions enable the plant to out-compete other plant species.



BENEFITS

- Control of purple loosestrife increases the biodiversity of the Department's wetland creation sites
- Provides compliance with US Army Corps of Engineers and NH Wetlands Bureau permit conditions
- Replaces mechanical control efforts which are impractical, expensive and inefficient
- Reduces the use of herbicides which, though effective, cause concern when applied near water and residential areas