

“Invasive alien species such as Purple Loosestrife are the greatest threat to the biological diversity of natural ecosystems—second only to habitat loss.”

Partnerships control Exotic Invasive Species.

EcoAction 2000
Ducks Unlimited Canada
Canadian Wildlife Service
City of Winnipeg
Manitoba Weed Supervisors Association
Delta Waterfowl and Wetlands
Manitoba Conservation
The Murphy Foundation
Saskatchewan Environment and Resource Mgt.
Sask Water
City of Saskatoon
Friends of the Environment Foundation
Saskatchewan Wildlife Federation
Nature Saskatchewan
Saskatchewan Wetland Conservation Corporation
Fish and Wildlife Development Fund

Contacts for Further Information

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THE GOOD, THE BAD AND THE UGLY...

A Manitoba - Saskatchewan EcoAction 2000 Project

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The Ugly...

Purple Loosestrife is an invasive weed that was introduced into Canada from Europe in the early 1800s. It was first recognized as a problem in Manitoba in the 1950s when Purple Loosestrife invaded the Red and Assiniboine River systems. In Saskatchewan, it became a concern during the early 1990s as infestations were found in and around Saskatoon and Regina.

Purple Loosestrife replaces our native plant species that provide food, shelter, and breeding habitat for our wildlife. Loosestrife is an aggressive plant that can produce more than 2.7 million seeds in one year. It is believed that most Purple Loosestrife populations are the result of seeds from garden escapes. There is a need to control the spread of this exotic plant.

The Bad...

Without an effective Purple Loosestrife control strategy, all ecosystems including wetlands, riparian areas, lakes, agricultural and coastal landscapes are at risk from an invasion of Purple Loosestrife. Wildlife and plant diversity are reduced with Purple Loosestrife infestations.

The Good...

Biological control of Purple Loosestrife may provide long term sustainable control. Purple Loosestrife has natural enemies in specialized European plant-eating insects. By reintroducing Purple Loosestrife with its natural insect enemies, biological control may be the best option to combat this noxious plant.

In June of 1992, after rigorous screening and testing, five biological control agents were approved for release in Canada by the Canadian government. As of October 1998, four different insects have been released in locations across North America.

These are two leaf-feeders - *Galerucella californiensis* and *G. pusilla*, a root- weevil *Hylobius transversovittatus*, and a seed feeding weevil, *Nanophyes marmoratus*.



Galerucella californiensis,
a leaf eating beetle.

Visit the Purple Loosestrife Website at
www.ducks.ca/purple/



EcoAction 2000 Project Objectives

The main objective of this project was to establish satellite mass beetle-rearing stations within Manitoba and Saskatchewan. Satellite rearing stations provide an effective and efficient method for establishing and distributing the biological control agent *G. californiensis* within the regions and builds community investment in the control of exotic invasive species.

The leaf-eating beetle *G. californiensis* was the focus of this EcoAction 2000 project. It has proven to be the most effective biocontrol agent against Purple Loosestrife in other parts of North America. The beetle has been released and established at a number of sites across North America and is proving to be successful within three to five years. As of 1999, close to 1,000,000 insects have been released against Purple Loosestrife across Canada.



Hylobius transversovittatus has also been released in Manitoba.

Manitoba Initiatives

Manitoba has an estimated 350 confirmed Purple Loosestrife infestations covering over 13,000 acres.

In 1999, rearing stations were set-up in Glenboro, Winnipeg, Netley-Libau Marsh, and Morris. Each rearing site used either six foot by six foot rearing tents or sleeve cages to rear insects. In partnership with the Glenboro and Morris-Montcalm Weed Supervisors, insects were released into various infestations south of the Spruce Woods Provincial Park. Numerous Purple Loosestrife infestations received beetles around the Morris area including the Tobacco Creek and Graham Creek Drains - rearing was carried out by the Morris Weed Supervisor. The Netley Marsh Waterfowl Foundation successfully released beetles in the Netley-Libau Marsh which has the highest levels of Purple Loosestrife in Manitoba with large infestations along the Lake Winnipeg shoreline. Beetles were also reared in Winnipeg in partnership with the City of Winnipeg to manage Loosestrife populations in and around Winnipeg area. Both the Red and Assiniboine Rivers have large stands of Purple Loosestrife along their shores. Many storm water retention ponds in Winnipeg also have Purple Loosestrife infestations.



Tents used to rear beetles.



Infestation just outside Saskatoon.

Saskatchewan Initiatives

In Saskatchewan, there are more than 70 confirmed Purple Loosestrife infestations and another 50 unconfirmed. While some sites consist very few plants other sites are comprised of thousands of plants and stretch for more than an acre. The fact that many of the sites are found adjacent to storm-sewer outfalls strongly suggests that the garden varieties are producing viable seed.

In 1999, 3,250 beetles were released on a large Purple Loosestrife infestation adjacent to a greenhouse operation near Saskatoon. A second release was made in Moose Jaw along Spring Creek, where approximately 1,400 beetles were released in August 1999. In 2000, approximately 9,100 beetles were raised from 300 beetles. These beetles were released in mid-August in Swift Current, along a small creek on farmland near Kyle, at a dugout south of Yorkton as well as along the shore of Crater Lake. Monitoring of the 1999 release sites revealed that the beetles had successfully overwintered at all of the sites and have commenced "bugging" Purple Loosestrife.

