

# INVASIVE PLANTS OF OHIO

Fact Sheet 4

Purple Loosestrife

*Lythrum salicaria*

## DESCRIPTION:

Purple loosestrife is a dense, herbaceous, non-native perennial that grows up to 7 feet tall. With attractive purple to magenta flowers, purple loosestrife cultivars are a popular ornamental. The flowers bloom in long spikes with 1-50 square stems per plant. One plant can produce over 100,000 seeds. The linear green leaves are opposite along the stem. This plant has a woody taproot and fibrous rhizomes that form a thick mat. Purple loosestrife is similar to the native loosestrife *Lythrum alatum*, however, *L. alatum* has alternate leaves on the upper stem, wider spaced flowers and is smaller in size. Looking closely at both flowers *L. salicaria* has 12 stamens and *L. alatum* has 4-6 stamens. Currently in Ohio, *Lythrum salicaria* is illegal to sell. However, commercially available cultivars like *L. virgatum* can cross pollinate with wild populations of purple loosestrife and produce viable seed.

## HABITAT:

Purple loosestrife occurs mostly in wetland environments, but when well established, it can survive drier conditions. Wetlands impacted by this plant include marshes, fens, wet meadows, stream and river banks, and lake shores.

## DISTRIBUTION:

Purple loosestrife was introduced to North America from Europe and Asia in the early 1800s as a contaminant in ship ballast, as well as a medicinal herb and garden plant. It escaped and became a pioneer species of newly constructed waterways and canals. Purple loosestrife occurs throughout the United States with its heaviest concentrations in the northeast. Although *Lythrum salicaria* is currently no longer available to purchase, cultivars continue to be distributed. In Ohio, this plant can be found throughout the state, although it is more established in the northern half.



Division Photo



Division Photo

## PROBLEM:

Purple loosestrife adapts readily to natural and disturbed wetlands. As it establishes and expands, it out-competes and replaces native grasses, sedges, and other flowering plants that provide a higher quality source of nutrition for wildlife. Purple loosestrife forms dense, homogeneous stands that restrict native wetland plant species and reduces habitat for waterfowl. Seed production is as prolific as the vegetative growth. Seeds are widely distributed by animals, machinery and people and in waterways.

## CONTROL:

**Mechanical:** Small infestations of purple loosestrife can be removed by hand. The entire root system must be removed from the ground. All plant material should be bagged and removed from the area to eliminate re-sprouting. Larger populations are harder to control using mechanical means. Mowing should not be used because it can increase the spread of the population by dispersing seeds and exposing the seed bank.

**Chemical:** Herbicides can be used effectively to control small populations of purple loosestrife. Only herbicides permitted for wetland use, such as Accord® or Glypro®, may be used. By eliminating all the plants in an area, the soil is exposed for the immense purple loosestrife seed bank to germinate. Spot application of herbicide can help limit this problem. The most species specific way to apply herbicide is by cutting and treating the stems. Foliar spray can be used by applying herbicide after the period of peak bloom, in late August. Any control method should be followed up on a yearly basis to catch any missed plants or new sprouts. Certain broadleaf specific herbicides, such as Garlon 3A®, which do not harm monocot species (grasses and sedges) that typically occur in wetlands, can also be used.

**Biological:** Several species of insects are being studied for their effectiveness in the control of purple loosestrife. A species of weevil (*Hylobius transversovittatus*) lays eggs in the stem and upper root system of the plant and as the larvae develop, they feed on root tissue. Two species of leaf-eating beetles (*Galerucella calmeriensis* and *G. pusilla*) and a weevil (*Nanophyes marmoratus*) that feeds on flowers and stresses the plant are being released into areas of high purple loosestrife density and are being monitored. Since 1994, the Ohio Division of Wildlife has introduced these insects into 13 areas. Although this method will not eradicate the species, it may create a more tolerable population level that will stabilize over time.

## ADDITIONAL INFORMATION SOURCES:

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Hoffman, R. and K. Kearns, eds. 1997. Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants. Bureau of Endangered Resources, Wisconsin Department of Natural Resources.

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## FOR MORE INFORMATION:



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