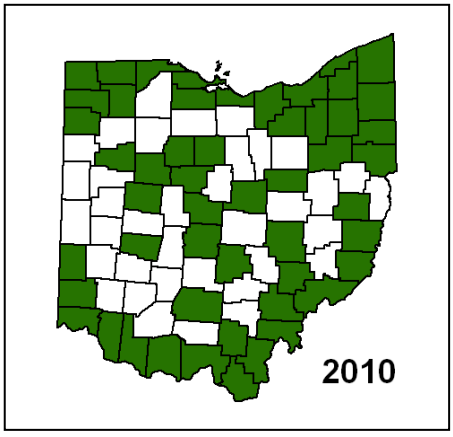
INVASIVE PLANTS OF OHIO

Fact Sheet 4 — Purple Loosestrife

Lythrum salicaria

DESCRIPTION:
Purple loosestrife is an erect perennial with opposite or whorled leaves. The thick taproot supports thirty to fifty stems that can attain a height of 3-6 feet. Leaves are lance-shaped and stalkless. The attractive magenta flowers bloom in long spikes. This non-native invasive may be mistaken for the native loosestrife, *Lythrum alatum* except *L. alatum* has alternate leaves on the upper stem, wider spaced flowers and is a shorter plant. Another difference is in the flower; *L. salicaria* has 12 stamens, while *L. alatum* has 4-6 stamens. It is illegal to sell fertile varieties of *L. salicaria* in Ohio.

Purple loosestrife was introduced to North America from Europe and Asia in the early 1800s. Purple loosestrife was valued as a medicinal herb and ornamental. It is found throughout most of Ohio.



HABITAT:
Purple loosestrife thrives in wetlands, including marshes, fens, wet meadows, stream and river banks, lake shores and ditches. It can also survive in drier conditions.

INVASIVE CHARACTERISTICS:
Purple loosestrife has an extended flowering season, generally from June to September, which allows it to produce vast quantities of seed. The flowers require pollination by insects, for which it supplies an abundant source of nectar. A mature plant may have as many as thirty flowering stems capable of producing an estimated two to three million seeds per year. Commercially available "sterile" cultivars cross pollinate with the wild populations to produce viable seed (Jim Amon, pers. comm.).

CONTROL:

Mechanical:

Small infestations of purple loosestrife can be removed by hand-pulling. The entire root system must be removed from the ground; all plant material should be bagged and removed for the area. Mowing is not recommended because it can contribute to seed dispersal and seed bank exposure if the mower scrapes the soil.

Chemical:

Systemic herbicides can be used effectively to control purple loosestrife. For small populations or individual, large plants, spot treatment is recommended (spraying or hand-wicking). Only herbicides approved for wetland use, such as Rodeo, Accord, Glypro, AquaNeat, or Garlon 3A, should be used. These herbicides may be most effective when applied late in the season before the plants become dormant. However, it may be best to do mid-summer and late season treatment to reduce the amount of seed produced. Cutting and treating the stems with herbicide is also effective. Foliar sprays can be applied after peak bloom in late August.

Biological:

Several species of insects have been studied at Cornell University for their effectiveness in the control of purple loosestrife. *Galerucella* beetles have been approved for control and were introduced in Ohio in 1994. The beetles feed primarily on purple loosestrife leaves, stems, and flowers, but do not feed on other plant species. More than 1.5 million beetles have been released at 30+ sites by the Ohio Division of Wildlife in Lake Erie marshes and have slowly proven to be very effective at reducing purple loosestrife populations. *Hylobius transversovittatus* weevils lay eggs in the stem and upper root system. As the larvae develop, they feed on root tissue. *Nanophyes marmoratus* weevils feed on flowers. Although these insects will not eradicate purple loosestrife, they do control the populations at a tolerable level.

Credits and additional information:

Plant Conservation Alliance-Alien Plant Working Group
Ohio Department of Natural Resources, www.ohiodnr.gov
The Nature Conservancy, Ohio Chapter
Cornell University, www.invasiveplants.net
OIPC website, www.oipc.info

Note: Map of species range is based on records as of 2010.