

NEW JERSEY NON-NATIVE PLANTS



Purple loosestrife

(*Lythrum salicaria*)

Description

Purple loosestrife is a perennial herb, with square woody stems, that typically grows up to three or four feet in height, but under favorable conditions may grow up to 10 feet tall. The leaves are lance-shaped, and either heart-shaped or rounded at the base. They are arranged opposite or whorled in groups of three or four along the stem. In summer, plants produce large showy spikes of magenta or occasionally white or light pink flowers. Each flower has 5-7 petals. The fruit is a capsule containing minute seeds. A single mature plant may produce up to 2.7 million seeds. The seeds are mostly wind dispersed, but they can be transported on the feet of waterfowl or by other wetland animals. Seeds float and are also dispersed by water. Plants can spread by underground roots and shoots, as well as by seed.



Why is Purple loosestrife bad for New Jersey?

Purple loosestrife is one of the most widespread invasive plants occurring in New Jersey. In 1995, the National Park Service determined that purple loosestrife was a potential threat to state listed endangered plant species, special concern plant species, and two



globally rare calcareous riverside plant communities documented from the Delaware Water Gap National Recreation Area. It occurs in wetland areas including cattail marshes, sedge meadows, and open bogs. It can also tolerate a wide range of soil conditions and up to 50 percent shade. Once established, purple loosestrife displaces native vegetation through rapid growth and heavy seed production. Uncontrolled, purple loosestrife eventually forms a near monoculture that alters the structure of natural plant communities and reduces biological diversity. Dense stands can change drainage patterns by restricting the flow of water.

Wildlife can be affected by the displacement of indigenous food items such as cattails and pondweed. The Fish and Wildlife service estimates that purple loosestrife costs about \$45 million dollars a year in control costs and lost forage. It is currently illegal in 13 states to purchase and plant purple loosestrife.

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Control:

How can you get rid of Purple loosestrife?

Large populations are almost impossible to eradicate, and the best management strategy may be to contain the populations and try to limit seed production.

Mechanical/Manual: Hand-pulling before plants have set seed and digging can be effective for small populations and isolated stems, as long as root fragments are completely removed. Removal of all plant material is important. It is difficult to remove all of the roots in a single digging, so monitor the area for several growing seasons to ensure that purple loosestrife has not regrown from roots or seed.

Dispose of plants and roots by drying and burning or by composting in an enclosed area. Take care to prevent further seed spread from clothing or equipment during the removal process.

Chemical: Herbicides should be used with caution given that loosestrife is restricted to wetlands, often covering extensive acreage. It should be noted that many herbicides are not species-specific, meaning that they indiscriminately kill other non-targeted plants. Glyphosate will provide good control of purple loosestrife when applied from July to early September. Many formulations of glyphosate (e.g. Rodeo or Roundup) are sold but only those labeled for aquatic use can be applied in or near water. For example, the Rodeo and Glypro formulations of glyphosate can be used in water. Another herbicide, Garlon, is a selective broadleaf herbicide that will not kill cattail or other desirable monocot species. It is important to note that only the Garlon 3A formulation is labeled for use in wetland sites. Garlon will provide good to excellent purple loosestrife control when applied in the pre to early flower or late flower growth stages.



Biological: Control of purple loosestrife is being tested with six insect species, and three of these insects have been approved by the U. S. Department of Agriculture. Three insect species (with successful results in North Dakota) include *Galerucella pusilla* and *G. californiensis* (both leaf-feeding beetles), and *Hylobius transversovittatus* (a root-mining weevil). In New Jersey, biological control of purple loosestrife is currently

underway in several state natural areas and wildlife management areas, federal wildlife management areas, and Nature Conservancy preserves.

