

# Purple Loosestrife



*Lythrum salicaria* L.

## Alternate Names

Spike loosestrife

## Synonyms

*Lythrum salicaria* L. var. *gracilior* Turcz., *Lythrum salicaria* L. var. *tomentosum* (P. Mill.) DC., *Lythrum salicaria* L. var. *vulgare* DC.

## Description

Purple loosestrife is a perennial plant with erect square stems growing 6–8 feet high. Stems have soft hairs.

Leaves are simple, entire, opposite or whorled, stalkless, lance-shaped, and slightly hairy. Rose to purple flowers are arranged in long vertical racemes.



XID Services photo by Richard Old

## Similar Species

Another non-native loosestrife, introduced as a garden ornamental, is garden yellow loosestrife (*Lysimachia vulgaris* L.), which has begun to aggressively colonize the same wetland habitats in North America as purple loosestrife. Garden yellow loosestrife can be distinguished by its bright yellow 5-petaled flowers.

## Ecological Impact

Outside of Alaska, purple loosestrife displaces native vegetation through rapid growth and heavy seed production. Important wildlife food plants such as cattails and pondweed are displaced or shaded out by loosestrife. Generally, it becomes a virtually monospecific stand, and native animals avoid nesting and foraging in these stands. It lacks natural enemies in the United States (Blossey 2002) and is able to invade intact wetlands. Purple loosestrife can also invade deeper water and push out floating vegetation by closing out open water species. This species alters

biogeochemical and hydrological processes in wetlands by lowering phosphate levels in the summer. Outside of Alaska, purple loosestrife leaves decompose quickly in the fall, resulting in a nutrient flush, whereas leaves of native species decompose in the spring.

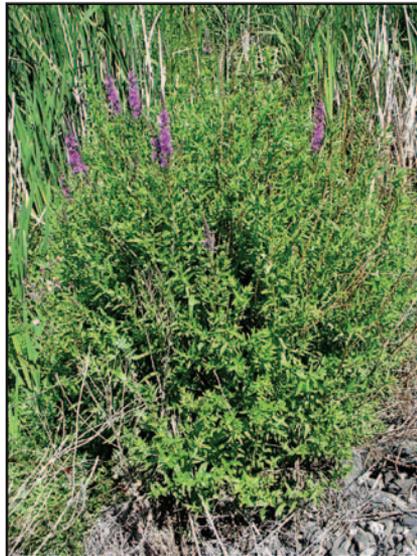
**Biology and Invasive Potential**

Purple loosestrife begins to bloom in July or August and continues until September or October. Seed production is prolific, averaging 120 seeds per capsule for up to 900 capsules per plant (Shamsi and Whitehead 1974). It can spread vegetatively by resprouting from cut stems and regenerating from root and stem fragments (Bender 1987, Royer and Dickinson 1999). Seed dispersal is mainly by wind, but seeds can also be transported by waterfowl or other wetland animals. The seeds and seedlings are buoyant and can be dispersed by water. Minimal levels of light are required for germination (Shamsi and Whitehead 1974). Temperature at the soil surface is a critical factor for germination, with an optimal range of 60°–70°F. Purple loosestrife grows best in highly organic soils, but tolerates a wide range of soil textures including clay, sand, muck, and silt. Generally, the plant is found in full sun, but it can survive in 50% shade. Purple loosestrife is listed as a noxious weed in 25 of the United States and two Canadian provinces.



*The Nature Conservancy photo by John M. Randall*

*An infestation of purple loosestrife.*



*XID Services photo by Richard Old*

### Distribution and Abundance

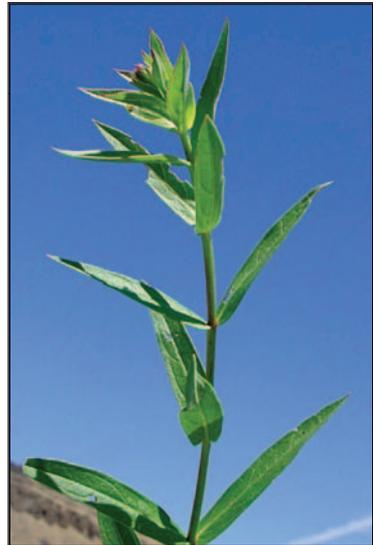
Currently, purple loosestrife is found all over the world except in extremely cold regions. It occurs in wetlands such as cattail marshes, sedge meadows, and open bogs, as well as along streambanks, riverbanks, lake shores, ditches, and other disturbed wet soil areas. Purple loosestrife is native to Eurasia. It has not yet been reported growing wild in Alaska but is grown in Alaska gardens and sold in nurseries and seed catalogs. It is included in this book because of its tremendous destructive potential.

### Management

Small infestations can be controlled by removing all roots and underground stems. It is difficult to remove all of the roots in a single digging, and so the area should be monitored for several growing seasons to ensure that purple loosestrife has not regrown from roots or seed. Follow-up treatments are recommended for 3 years after plants are removed. Current control methods for large, dense populations of loosestrife are not totally effective, as mechanical control methods are inefficient and most herbicides are non-selective. Biological control measures are being developed in the western United States.

### Notes

Loosestrife cultivars previously thought to be non-invasive as well as cultivars of a native species are now known to cross-pollinate with invasive loosestrife varieties. These plants were introduced from Europe as ornamentals. The Latin species name *salicaria* means willow-like, for the leaves resemble those of willows.



XID Services photo by Richard Old