



Purple Loosestrife

Lythrum salicaria

FAMILY	Lythraceae- loosestrifes	ORIGIN	Eurasia
LIFE CYCLE	Perennial	OTHER NAMES	Bouquet violet, Purple Lythrum, Willow herb, Spiked loosestrife, Red sally, Long purples

QUICK FACTS

- Purple loosestrife, native to Eurasia, was likely introduced to North America in the 1800s via discarded ship ballast or by colonial gardeners. It quickly spread along waterways and is now found across much of North America, thriving in disturbed wetlands and riparian areas.
- The plant is highly invasive, outcompeting native vegetation by forming dense stands in wetland ecosystems. This disrupts local biodiversity and creates challenges for agriculture, as its root systems can clog irrigation channels and affect water flow.
- Purple loosestrife produces an astonishing number of seeds—up to 2.7 million per plant annually—which are spread by water and animals. Its ability to rapidly reproduce and spread makes it a persistent problem for natural habitats and agricultural areas alike

The merciless invader of stream banks, purple loosestrife, may have been introduced to North America as an ornamental plant, but it has since become a highly invasive species. A native of Eurasia, this weed has spread across much of the northern hemisphere, including North America, where it has become quite a nuisance. Likely introduced in New England through discarded ship ballast or by colonial gardeners, it quickly spread inland via cargo vessels and waterways.

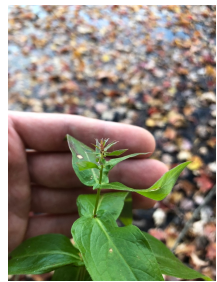
Purple loosestrife is a robust, perennial plant with tall, upright stems, vibrant purple flowers, and prolific seed production. It thrives in moist or flooded environments, where it crowds out native plants, disrupts local ecosystems, and presents challenges for agriculture and infrastructure.

What does it look like?

Purple loosestrife, a stout perennial, can grow up to 10 feet tall and has strong, upright stems that become woody as they age. They can last through the winter and remain for up to 2 years. Older plants can reach widths of 5 feet. As they age, the plants can start to look more like a bush because they produce more stems each year from the same root. Stems are 4 to 8-sided and either smooth (glabrous) or hairy. Wand loosestrife (*Lythrum virgatum*) is commonly mistaken for purple loosestrife due to its similar flowers and tendency to hybridize. It can be distinguished by narrower leaves that are pointed instead of cordate at the base. Because of the similar nature of *L. virgatum*, Minnesota has banned the sale of any plant in the *Lythrum* genus.



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- Roots:** Thick and woody roots form in mature plants. The root crowns produce vegetative buds each year, producing 30-50 new shoots.
- Leaves:** Opposite or in a whorled pattern, the leaves are hairy, non-toothed, and 1-5 inches long. They are lance-shaped, widest below the middle, gradually tapering to a pointed tip, and occasionally have a clasping base.
- Flowers:** Dark pink/purple flowers display radial symmetry and are arranged in rings on a 2-36 inch spike. Each inflorescence has a yellow center with five to seven petals with ~9 stamens, each of varying length. The sepals and petals are largely fused, forming a slender, hairy tube (called a hypanthium) with eight to twelve nerves.
- Seeds:** Each flower spike can produce upwards of 120,000 seeds, with plants producing up to 2.7 million seeds every year. Light tan seeds are very small (about 0.012 inches) and are contained within 0.13 to 0.19-inch brown capsules.

Impact and Management

Agriculture and Food Security

Purple loosestrife can invade rice fields and has the potential to affect a significant area of land. In North America, approximately 190,000 hectares of wetlands, marshlands, pastures, and riparian meadows are impacted annually, leading to economic losses of millions of dollars. The economic burden on farmers and the potential for decreased food supply contribute to the overall negative impact on food security in regions affected by purple loosestrife.

Ecosystem Health

Purple loosestrife can displace native plants like cattails, leading to a loss of biodiversity for wetland creatures and plants. Because purple loosestrife produces very little food, this displacement may reduce forage availability for waterfowl, especially during the winter months. However, recent studies suggest that the impact on birds and other native species may not be as severe as previously believed. According to the USDA, further research is necessary to fully understand this issue. Infestations of purple loosestrife do pose a threat to the survival of federally endangered species, such as the bog turtle and certain orchids.

Infrastructure Issues

Purple loosestrife can block waterways and wetlands, hindering boating and other recreational activities. Its impact on agriculture includes changes to the hydrology and soil conditions of wetland pastures and meadows, as well as the obstruction of irrigation systems.



Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Land managers should prioritize small, newly established populations before addressing large, well-established ones. The most significant long-term challenge is the buildup of seeds in the soil, which creates a persistent seed bank. Efforts to deplete seed banks in well-established areas are difficult, as purple loosestrife seeds can remain dormant for extended periods, and disturbing the soil may inadvertently spread the weed.

Flooding may reduce purple loosestrife by inhibiting its growth and reproductive capacity, although results vary, and research is needed to optimize this approach.

DO's

- Plant native species in affected areas to outcompete purple loosestrife and restore biodiversity.
- Pull or cut purple loosestrife plants before they flower and seed to prevent further spread.
- Check areas that have been treated to ensure purple loosestrife doesn't regrow from remaining seeds or root fragments.

DON'Ts

- Avoid planting this species as an ornamental or in water gardens to prevent unintentional spreading.
- Underestimate the seed bank: Purple loosestrife seeds can remain viable in the soil for up to three years, requiring ongoing management efforts.
- Disturb the streambank unnecessarily, as this can inadvertently spread seeds or root fragments to new areas.



For more information on managing purple loosestrife, please visit www.nmweeds.org

