

PURPLE LOOSESTRIFE

Lythrum salicaria

Purple loosestrife is an attractive but aggressive wetland invader that was introduced to North America for its beauty and medicinal value. It can rapidly degrade wetlands and replace valuable native species that provide food and shelter for wildlife.

Photo courtesy of John D. Byrd, Mississippi State University, Bugwood.org.



SPECIES DESCRIPTION

Purple loosestrife is an upright and hardy perennial that can grow 4-10 ft (1-3 m) tall. It has a square woody stem and opposite or whorled leaves that are covered by soft fine hairs. Leaves are heart-shaped with smooth edges, and usually appear in groups of three. Loosestrife plants produce a showy display of colorful flower spikes throughout much of the summer. Flowers typically have 5-6 petals, and may be purple, pink, or even white.

NATIVE & INTRODUCED RANGES

Purple loosestrife is native to Europe and Asia and was brought to eastern North America by settlers in the early 1800s for ornamental and medicinal uses. Since its introduction, it has quickly spread and by 1996 was found in all contiguous U.S. states (except Florida), and all Canadian provinces. It is still sold today as an ornamental; however, it is regulated in many states including Pennsylvania. In 1997, Pennsylvania declared purple loosestrife a noxious weed, which prohibits the sale, transport, planting, and propagation of purple loosestrife and its hybrids and cultivars. Purple loosestrife currently infests all major watersheds in the Commonwealth.

BIOLOGY & SPREAD

Conversion of wetlands to crop fields, construction of canals for waterborne commerce, and lack of natural herbivores enabled purple loosestrife to spread across inland areas. It is a prolific reproducer, enjoying an extended flowering season and producing up to one million seeds each year. These seeds can remain viable for years until conditions are optimal for germination. Seeds are tiny and can be transported by water, wind, and in the feathers or fur of aquatic birds and mammals. Seeds can also stick to muddy footwear, boats, trailers, and vehicle treads, which can travel long distances and disburse purple loosestrife to new areas.



Photo courtesy of Barry Rice, Sarracenia.com, Bugwood.org.

PURPLE
 LOOSESTRIFE

(Right) photo courtesy of Steve Dewey,
Utah State University, Bugwood.org.

(Below) photo courtesy of Norman E. Rees,
USDA Agricultural Research Service,
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HABITAT

Purple loosestrife is capable of invading many wetland habitats, including freshwater meadows, tidal and non-tidal marshes, river and stream banks, pond edges, reservoirs, and ditches.

IMPACTS

Threat to Biodiversity

Purple loosestrife is very hardy and adapts readily to natural and disturbed wetlands. Once established it expands to form dense monotypic stands that prevent the growth of valuable native plants that provide high nutritional sources for wildlife. The formation of these monotypic stands also alters the structure, function, and ecological value of the wetland. Changes in the plant community can impact waterfowl, mammals, and other aquatic life that rely on the wetland for food and habitat. In addition, purple loosestrife's ability to outcompete native plants has jeopardized some already threatened and endangered native wetland plants in North America, including some orchid species.

Economic Costs

Dense establishments of purple loosestrife have impeded water flow in some areas, impacting fish spawning sites and areas where wild rice is grown and harvested. An estimated 190,000 hectares of wetlands, marshes, pastures and riparian meadows are affected in North America each year, with an economic impact of millions of dollars.

PREVENTION & CONTROL

Physical or chemical control of purple loosestrife is crucial to protecting valuable wildlife habitat. Small localized aggregations may be pulled by hand, preferably before seed set. Other control techniques include water-level manipulation, mowing or cutting, burning, and herbicide application. These control methods are costly and require continued long-term maintenance. In addition, herbicides are non-selective for purple loosestrife, and can have degrading effects on the environment. For infestations too heavy for other control methods, a promising biocontrol technique may be to utilize two European *Galerucella* beetles, which feed mainly on purple loosestrife and cause reduced flower and seed production.

References:

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