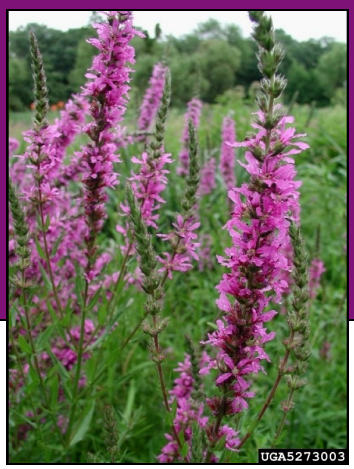
PA Noxious Weed Alert

# PURPLE LOOSESTRIFE

## *Lythrum salicaria*




### Purple Loosestrife

Purple loosestrife is a Pennsylvania state listed noxious weed with nationwide distribution. Purple loosestrife is capable of forming a monoculture in all wetland habitats, displacing native or beneficial wetland plants.

### History

Purple loosestrife is native to Eurasia. The introduction of purple loosestrife into the United States was both intentional and accidental. Along eastern seaports, purple loosestrife was present in the 1830's because of ships dumping seed-contaminated ballast. From the seaports it spread through canals, rivers, and streams into sites disturbed by human activities.

Immigrants intentionally planted purple loosestrife in their herbal gardens for its medicinal qualities, which includes treatment for fever, liver problems, cleaning sores, and to stanch bleeding wounds. It was also planted as forage for bees, and due to it's beauty and long bloom period, it was planted as an ornamental.

In North America, purple loosestrife now occurs as a weed across the entire United States, minus Alaska and a few southern states, and southern Canada. It occurs in greatest concentrations in northeastern parts of the United States.

### Purple Loosestrife in Pennsylvania

The four exotic species of *Lythrum* occurring in Pennsylvania are *L. salicaria* (purple loosestrife), *L. hyssopifolia* (hyssop loosestrife), and *L. virgatum* (wand loosestrife). By 1985, Lythrum salicaria was colonizing wetlands and marshes in Pennsylvania at an alarming rate.

The Pennsylvania Department of Agriculture added the *Lythrum salicaria* Complex: Any nonnative *Lythrum* including, *Lythrum salicaria* and *Lythrum virgatum*, their cultivars and any combination thereof; to the PA Noxious Weed Control list in 1997.

Purple loosestrife is widespread in Pennsylvania and has been reported in all counties. The highest density of purple loosestrife in PA occurs in marshes, wetlands, and along the banks of rivers and streams throughout the state as well as along roads in drainage ditches and areas that accumulate standing water.

### Purple Loosestrife Program

There was a targeted program to control purple loosestrife in Pennsylvania and in other states by the release of two beetles (*Galerucella calmariensis* and *Galerucella* pusilla) that were identified by extensive testing to feed exclusively on the plant. Sponsored by the USDA in 1992 the releases have made a substantial reduction in purple loosestrife. Today, PA citizens can still order beetles from various rearing labs via a permit from PDA and USDA. No permit is required if beetles are captured from existing sites in PA for release in another part of PA.

## How You Can Help

All properties owners should manage purple loosestrife infestations by the application of herbicides or by hand pulling on a yearly basis to prevent the spread of seed.

pennsylvania
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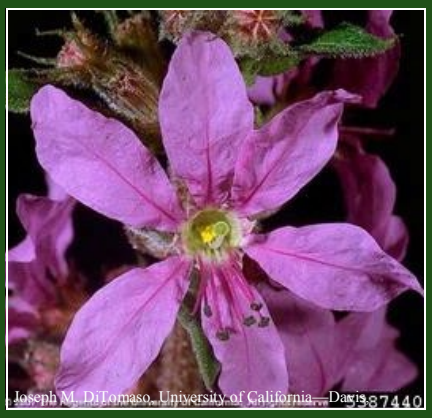
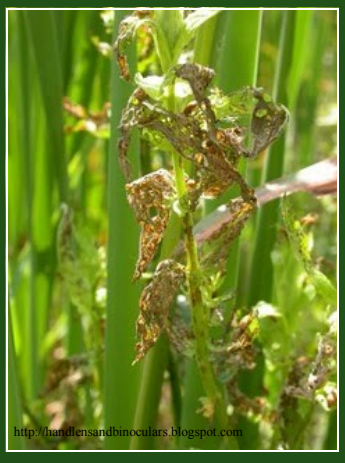



Purple loosestrife flower


Purple loosestrife stem and leaves



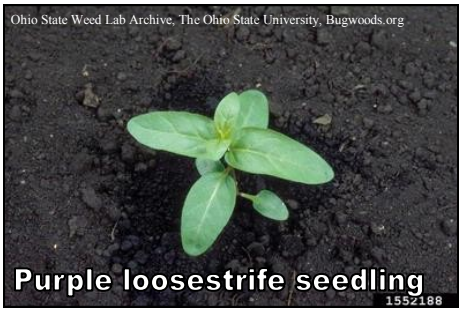

Damage caused to purple loosestrife by *Galerucella spp.* beetles.

## Purple Loosestrife Description

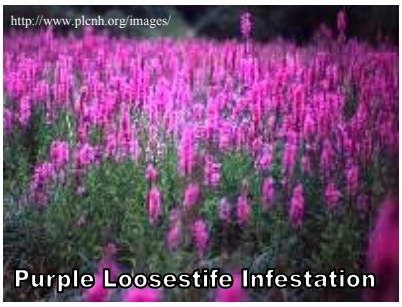
Purple loosestrife is a perennial member of the Lythraceae or loosestrife family. This plant can grow up to 8 feet tall and can have multiple stems giving the plant a bushy appearance.


**Leaves** are opposite or whorled in groups of three and lanceolate to linear. Size ranges from 1.2" to 4". The larger leaves are heart-shaped at the base. Sometimes the leaves have short upright hairs.

**Stems** are square and sometimes six-sided. Stems can be hairless or have short upright hairs.




**Flowers** are purple to magenta in color. They are arranged in 4" to 16" long terminal spikes. Fused sepals form a tube surrounding the ovary. Petals are attached to the fused tube. Flowering occurs from July to September.




**Seeds** are small (0.04" long) and reddish brown in color. The seeds are contained within a capsule. A single plant can produce more than 2 million seeds.

**Roots** are thick and fleshy and a fibrous root system develops. As the plant ages, a large woody crown is formed.

## Similar species

While few plants are mistaken for purple loosestrife, **northern willowherb** and **hairy willowweed** can look like purple loosestrife seedlings or root sprouts. Both these plants are annuals and much smaller than purple loosestrife.

Northern willowherb has round stems and 4 petal pink flowers. Hairy willowweed has long spreading hairs and is a weed of fields.

## Biology/Ecology

Purple loosestrife grows in moist soil to shallow water. The plant reproduces from seeds but can also grow from fragment of stems and roots. Small seeds are easily spread by wildlife and streams. The seeds remain viable for many years.

Purple loosestrife plants colonize and form dense, impenetrable barriers between water and land, preventing wildlife from entering wetland areas. Once established, a stand of purple loosestrife can persist for over 20 years destroying the biodiversity of wetland communities. There are no natural predators of purple loosestrife in the U.S. Three insects from Europe have been approved for release in the United States, two Galerucella beetles which eat the leaves and a root boring beetle *Hylobius transversovittatus*.

**Bravo et al. 2011. Pennsylvania Department of Agriculture. Noxious Weed Alerts.**