

PURPLE LOOSESTRIFE

(*Lythrum salicaria*)



Purple Loosestrife is an aggressive plant that is invading our wetlands and...

replacing valuable wetland plants;

eliminating food and shelter for wildlife;

choking waterways.

An Attractive But Deadly Threat To Pennsylvania Wetlands and Waterways

When to look for it:

July through August when it is in bloom and easily recognized

Where to look for it:

It is present on wet soils to shallow standing water such as: wet meadows and pastures, cattail marshes, stream and river banks, lake shores, ditches, and stormwater retention basins.

What it looks like:

Growth Habit: Upright hardy perennial, bushy, up to 7 feet tall

Flowers: Rose-purple. Flowers numerous on a long spike; 5-6 petals per flower

Leaves: Vary, although usually opposite; linear shape and smooth edges. Attached directly (no stalk) to a four-sided stem.

Roots: woody taproot with fibrous root system that forms a dense mat.



How did purple loosestrife get here?

This aquatic perennial was introduced from Europe in the 1800s and is widely distributed in the northeastern states.

Even though less than half of Pennsylvania's wetlands are presently infested, purple loosestrife is rapidly spreading in the Commonwealth. It is presently in all the major watersheds of Pennsylvania.

How does loosestrife spread?

Although purple loosestrife prefers moist, organic soils and full sun, it can survive and multiply in many soil types and moisture conditions, like so many other noxious weeds.

The power of reproduction: A perennial plant, purple loosestrife sends up numerous flowering stems year after year, each with tremendous seed production. In one year, a mature plant can produce over 1 million seeds with a generally high germination rate.

The tiny seeds, about the size of ground pepper, are transported by water, wind, and feathers and fur of aquatic birds and mammals. Seeds that stick to muddy footgear, boats, boat trailers and vehicle treads can travel far from the original site to spread this purple menace.

The seeds may remain viable for many years when submerged, waiting for the opportunity to sprout. Suddenly, during a dry summer, the seeds may germinate. Seed production, dispersal and germination are so effective that young seedlings can completely replace native vegetation.

New loosestrife plants can also grow from small pieces of broken or mowed plants that root in moist soil, and from roots that send up new shoots.

Protective beauty: People have accelerated the spread of purple loosestrife by planting it in gardens.

Others have planted it as a pollen source for honey bees. Perhaps you have seen loosestrife's showy rose-purple flowers in a garden or field near you.



How is loosestrife a threat?

A threat? In a harmless-looking plant with pretty purple flowers? Yes. Purple loosestrife's beauty is deceptive: it is killing our nation's wetlands. A wetland with lots of purple loosestrife is soon a wetland with little wildlife. Growing in dense thickets, loosestrife crowds out native plants that wildlife use for food, nesting, and hiding places, while having little or no value for wildlife itself.

For example, songbirds will not eat the small hard seed. Muskrats require cattail to build their homes, and they show a preference for cattail over loosestrife for food. Waterfowl, especially ducks, shun wetlands that have become dominated by loosestrife. In addition, overall waterfowl production is decreased as habitat is eliminated. Finally, the plant's growth is generally too compact to offer cover, and cover may be as crucial to wildlife as food.

The dense roots and leaves of purple loosestrife also choke waterways, slowing natural flows and promoting the deposit of silt. This process causes long term water quality degradation and requires costly maintenance, including dredging and cleaning of drainage ditches.

Wetlands and waterways are important recreational resources because of fish and wildlife abundance and diversity. As purple loosestrife invades a wetland, both wildlife and recreation are lost. Shore access becomes more difficult where loosestrife dominates a plant community, and the loss of hunting and fishing recreation hurts local economies.

No important enemies.

Because purple loosestrife was brought to the United States from Europe, the insects and diseases that control it there were left behind. While our native plant populations are kept in balance by insects, disease, and foraging animals, loosestrife is able to spread unchecked.



Purple loosestrife plant along a stream in Centre County, PA



How can we approach the problem?

Because purple loosestrife is so widespread in the United States, its total eradication is unlikely. But the spread of loosestrife can be halted and newly invaded areas can be controlled.

Pennsylvania is now fighting this quiet threat by declaring loosestrife a noxious weed, as many other states have done.

Preventing Further Spread

Prevention is the best way to stop the purple loosestrife invasion. The Department of Agriculture recommends the following steps to prevent its further spread:

1. Don't plant purple loosestrife. Even *Lythrum* varieties advertised not to make seeds can cross-breed with the invading loosestrife to make seeds.
2. Be on the lookout for pioneering plants or isolated small colonies, especially in areas otherwise free of loosestrife. Remove pioneer plants immediately.
3. Rinse off equipment, gear, clothing and footwear used in infested areas before moving into uninfested areas.
4. Cut off flower heads, bag and destroy them. Repeat throughout the flowering season (late June – early September). This will prevent millions of seeds from ripening and spreading.

Control Methods

Any control method you select should be repeated for several years to catch missed plants and those reestablishing from seed. Purple loosestrife seeds remain alive in the soil for many years.

By Hand (for small clusters)

Pull young plants – bag and destroy the plant material.

Dig older plants – remove all the roots – any remaining will sprout new shoots. Avoid excessive soil disturbance. If this is unavoidable, consider chemical methods.

If plants are mowed, the cut stems can sprout new roots in moist soil, multiplying the problem, unless all the cut stems are removed.

Handle plants prior to the onset of seeds (early August) or bag and cut the seed heads to avoid spreading seeds.

By Herbicide (on larger populations)

Use only those herbicides approved for aquatic areas. Be sure to follow label instructions for the greatest impact on purple loosestrife while avoiding injury to other plants and animals.

Before applying any pesticide to Pennsylvania waters, a permit is required, issued jointly by the Pennsylvania Fish and Boat Commission (PFBC) and the Department of Environmental Protection (DEP). Contact the nearest regional office of the PFBC or DEP for information.

Biological Control (in the future)

Pennsylvania is one of several states that are releasing insects for the biological control of purple loosestrife.

Biological control agents “manage” weeds over a long period of time. They reduce weed densities so their impact is minimized.



For further information contact:

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