

Invasive Plants in Pennsylvania

Floating Primrose-willow

Ludwigia peploides ssp. glabrescens



Photo: Joan Avise, Natural History of Orange Co., CA, U. of California, Irving

Range:

Floating primrose-willow is indigenous to the southeastern U.S., ranging from South Carolina out west to Kansas and as far south as Texas and Louisiana. In Pennsylvania it can be found in scattered locations in the southwest and southeast.

Biology and Spread:

Reproduction occurs mainly through stem fragmentation. Seeds have been proven to be viable in a laboratory setting but no extensive research has been conducted as to the role of sexual reproduction in *L. peploides ssp. glabrescens* population establishment.

Description:

This is a perennial aquatic plant that is found rooted in the silty substrate of slow-moving bodies of water and has stems and leaves that float on the water surface. Its leaves are alternate, lanceolate-oblong and pinnately veined. Flowers have five bright yellow petals and 10 stamens. The fruit is inferior and elongate.



Photo: KENPEI© [Wikipedia.org](https://en.wikipedia.org)

Ecological Threat:

Since this plant is not native to Pennsylvania it lacks natural predators that prevent it from getting out of control. Under the right conditions – warm water, plentiful nutrients and lots of sunlight – this species can form a vegetative mat on the water that limits solar penetration into the water. As a result, native submergent plants become starved of sunlight and die, which can harm aquatic life by lowering the amount of dissolved oxygen within the water.

Habitat:

This invasive plant grows rooted in fine sediments. The stems can float on the water surface and bend upward, or they can be erect and emerge out of the water. Dense mats can form in warm, shallow waters and become a nuisance.



Photo: John Randall, TNC, www.invasive.org

How to Control this Species:

Physical removal of floating primrose-willow is currently the most preferred control method since chemicals can impact desirable native plants.

The use of *Lysathia ludoviciana* (water-primrose flea beetle) has shown potential as a biological control agent for the closely-related *Ludwigia grandiflora* in the southeastern U.S., however more research is needed to discover a control agent that is species-specific to floating primrose-willow.

Look-A-Likes:

Decodon verticillatus (water-willow/ swamp loosestrife) is a native emergent perennial that has a similar form as *L. peploides* ssp. *glabrescens* but lacks the floating-stem growth habit, has purple axillary flowers and opposite leaves.



Photo: Robert H. Mohlenbrock, USDA NRCS, <http://plants.usda.gov>

Native Alternatives:

Caltha palustris (marsh marigold) also has five-petaled flowers but is distinguished from *Ludwigia peploides* by the lack of sepals and a rosette of ovate leaves with cordate leaf bases. Marsh marigold grows in shallow, slow-moving (if not stagnant) water, much like *L. peploides*, but marsh marigold is a desirable native alternative (see photo below).



Photo: Jasper33© Wikipedia.org

References:

Plants of Orange County, CA: <http://nathistoc.bio.uci.edu/plants/Onagraceae/Ludwigia%20peploides.htm>

Peconic Estuary Program: http://peconice.ipower.com/pdf/SCPE_v2.pdf

University of Michigan Herbarium: <http://michiganflora.net/species.aspx?id=1659>

Center for Invasive Species and Ecosystem Health: www.invasive.org

For More Information:

DCNR Invasive Plants Site: <http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm>

Plant Invaders of Mid-Atlantic Natural Areas, National Park Service: <http://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf>