

Common Reed: An Invasive Wetland Plant

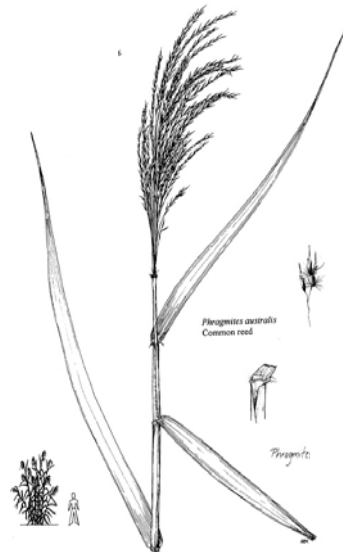
Phragmites australis



Description

- *Phragmites* is a tall perennial monocot (grass) that is an aggressive wetland invader.
- *Phragmites* can reach 16 feet high and form dense impenetrable monocultures.
- The silky flower head is initially purplish in color but turns white and fluffy as it matures. The plume grows 1 - 2.5 inches long, often drooping to one side.
- The leaves are green/gray in color, strap-like and taper to a point. Leaves are up to 2" wide and 24" long and are located alternately on the stem. An appendage (ligule) is present where the base of the leaf attaches to the stem. (see photo on last page)
- Rhizomes (under ground roots) can extend down over 2 meters to reach deep ground water, and rhizomes often form dense mats on the earth's surface that deter other plants from becoming established.

Common Reed

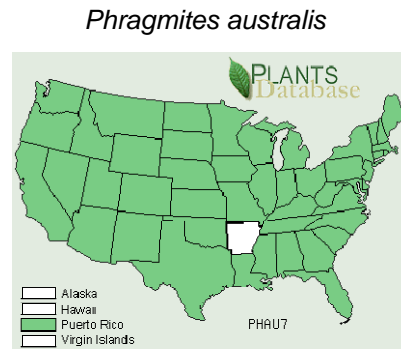


Habitat

Phragmites is a very hardy and persistent species that can grow in a variety of conditions.

- Thrives in fresh water or brackish water and can tolerate high salinity and a wide pH range of 4.8 – 8.2.
- Prefers compact mineral clays with water fluctuations ranging between 15 cm above to 15 cm below the surface. It is often the first species to invade disturbed sites, including irrigation ditches and road sides.
- Prefers calm waters since fast flowing water and wave action can break the stems.
- Survives in stagnant and poorly aerated waters due to the presence of air spaces in the aboveground section of the roots and in the rhizomes, which allow fresh air to be transported

Distribution Map



States where Common Reed occurs

Reproduction

Phragmites reproduces by vegetative (primarily) and by seeds.

- Vegetatively, *Phragmites* reproduces by rhizomes and rhizome fragments can be transported and regrow in new locations. As vertical shoots fall over they can become horizontal runners.
- Seeds that form between July and September are released from November through January. Seeds are dispersed by wind, water and wildlife but germination is often inhibited by environmental factors including water depth, salinity and temperature.

Impacts and Threats Posed by Common Reed

Common Reed is a highly competitive plant that is capable of rapid growth and spread. Common Reed displaces native species, reduces biodiversity, offers little value for wildlife and chokes waterways.

- Once established, *Phragmites* can negatively impact native vegetation and wildlife. *Phragmites* can form very dense impenetrable monospecific stands that may exclude native vegetation and not provide ideal shelter or food for wildlife.
- As *Phragmites* spreads rapidly and fills in wetlands, water flow is reduced and the flood retention on the wetland is decreased.
- *Phragmites* stems can trap sediments, causing the waterbody to become increasingly shallow.

Management Methods

There are many management methods that have been attempted to control *Phragmites*, including burning, cutting and mowing, altering the water table or salinity and application of herbicides. No known biological controls exist. (Gall-forming and stem boring insects have been noted to have an impact on wild populations, but no species-specific insects have been identified.)

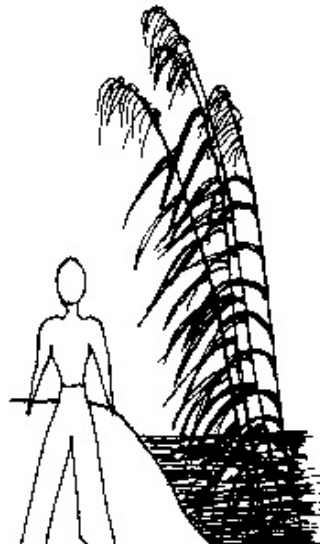
- Although burning can greatly reduce the biomass it usually does not impact the underground rhizomes and *Phragmites* can re-grow from these rhizomes. Burning can be dangerous and is not species specific; however, the reduction in biomass can give other species an opportunity to germinate.
- Mowing or cutting just before the end of July when most of the food reserves are stored in the plants upper portion, can knock *Phragmites* back, however, re-growth from rhizome fragments continues.
- Treating the plants with a glyphosate product, such as Round-Up or Rodeo has proven to be effective. The glyphosate will kill leaves, stems and most importantly, the underground rhizomes, however, glyphosate is not species specific and will impact other broadleaf plants.
- Increasing the salinity and tidal action to the area has shown to cause a decline in *Phragmites* and an increase in abundance of other native plants.
- In all cases, replanting with native species following a treatment is recommended.

Other Information

- It is uncertain whether *Phragmites* is native or non-native to the US. *Phragmites* remains were found in 3000 year old peat moss samples in Connecticut and also in Colorado, in 600-900 A.D old archeological artifacts. Recently, due to the discovery of two genetically different populations, it has been speculated that a newer, aggressive genotype was recently introduced to North America from the Old World.
(for more information: <http://tncweeds.ucdavis.edu/esadocs/documnts/phraaus.html>)
- *Phragmites* comes from the Greek word phragma, which means fence.
- *Phragmites*' flowering stalks can be used in upholstery and stalks or leaves can be used for thatching, sandals, baskets, brooms, and mats.
- Informational websites:
<http://aquat1.ifas.ufl.edu/welcome.html> (Center for Aquatic Invasive Species, Florida)
<http://plants.usda.gov/> (USDA Nature Conservancy Site)
www.ProtectYourWaters.net (Aquatic Nuisance Species national web site)
- There are really no plants that *Phragmites* can be easily confused with due to its unusual height, conspicuous silky plumes and ligule.



Distinct silvery plume



Heights of up to 16 feet



Ligule present

References:

1) Literature sources:

- <http://plants.ifas.ufl.edu/phraus.html> (Center for Aquatic and Invasive Species)
- <http://tncweeds.ucdavis.edu/esadocs/documnts/phraaus.html> (Nature Conservancy's ESA)
- <http://www.epa.gov/OGWDW/dwh/c-soc/glyphosa.html> (EPA Glyphosate fact sheet)

2) Photographs were obtained from:

- <http://aquat1.ifas.ufl.edu/welcome.html> (line drawings and photos of Common Reed)

3) The distribution map was taken from:

- http://plants.usda.gov/cgi_bin/topics.cgi (USDA Plant Data Base)

For more information please contact:

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Or visit the Lakes and Ponds web site at: www.mass.gov/lakesandponds

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