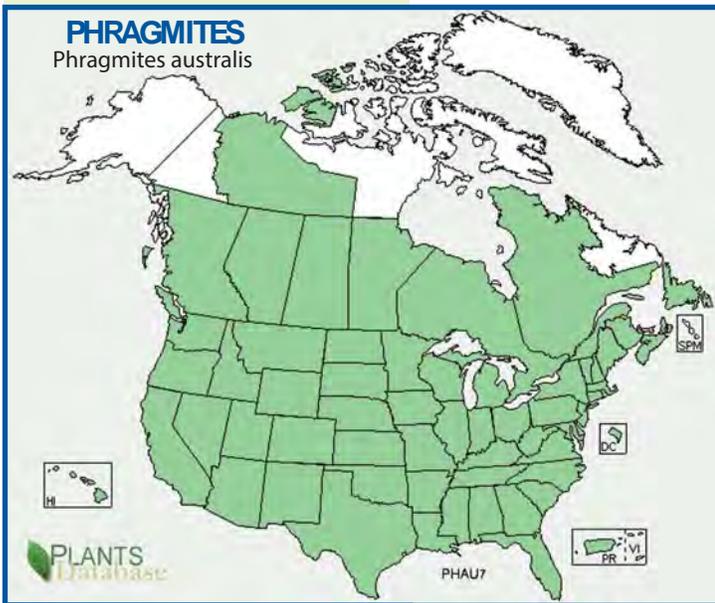


PHRAGMITES

Phragmites australis

Phragmites, also called the common reed, is a long-lived, perennial grass that grows in tall stands that can exclude almost all other vegetation. While some strains of the species are native to North America, aggressive non-native strains have expanded throughout the United States, replacing much of the native reed.

Map courtesy of USDA Plants Database.



SPECIES DESCRIPTION

Phragmites forms dense stands that can reach up to 15 feet high. Leaves are broad and pointed and reach 20-61 cm (8-24 in) long. Flowers form bushy clusters that look “fluffy” due to fine hairs that grow on the seeds as they mature. Below ground, *Phragmites* forms a dense network of roots and rhizomes several feet deep. Rhizomes can grow 10 ft (3m) or more in a single season. Differentiating between native and invasive forms of *Phragmites* can be very difficult so DNA analysis is the most reliable method for identifying strains.

NATIVE & INTRODUCED RANGES

Although the species name ‘*australis*’ suggests that *Phragmites* is native to Australia, it is believed to have originated from the Middle East. Genetic research has shown three separate lineages occurring in North America: a native strain, a European strain, and one whose lineage is currently unclear. The invasive European strain was introduced in the 1800s, most likely in ballast material from trans-oceanic ships. It is now widespread throughout the lower 48 states and southern Canada.

BIOLOGY & SPREAD

Phragmites reproduces and spreads both by seed production and through vegetative fragmentation of rhizomes. Hundreds to thousands of seeds are produced each year which can spread to new locations by wind and water; although, seed viability can be highly variable. In addition, the extensive root and rhizome network allows this species to reproduce vegetatively as rhizomes break off and float downstream to new locations. Heavy machinery and equipment may also transport this species along roadsides between sites.

HABITAT

Phragmites is unusual among grasses in that it is able to colonize a wide range of habitats, including fresh and brackish waters. It is abundant along the borders of lakes, ponds, rivers, marsh communities, roadsides and disturbed areas.



Photo courtesy of Ken Chamberlain, The Ohio State University, Bugwood.org.



Photo courtesy of Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.

PHRAGMITES



Photo courtesy of Richard Old, XID Services, Inc., Bugwood.org.

IMPACTS

Threat to Biodiversity

Introduced *Phragmites* is aggressive and quickly develops dense stands that take over wetland ecosystems, alter wetland hydrology, increase fire potential, and reduce wetland wildlife habitat. *Phragmites* consumes available growing space and pushes out other plants, including native strains of the species, quickly turning once biologically diverse wetlands into monocultures.

Economic Costs

Marsh restoration efforts to remove *Phragmites* can be very expensive and are often ineffective since this species can be quick to return after burning and chemical treatments.

PREVENTION & CONTROL

While there are several treatments available for *Phragmites*, the effectiveness of a particular treatment depends on the area and extent of infestation. Areas with large, established populations are best restored using herbicide treatments. Prescribed burning after the plant has flowered, either alone or in combination with herbicide treatment, may also be effective; however, plants should not be burned in the spring or summer before flowering because this may stimulate growth. Cutting can help manage the size of the population, but timing is critical, and shoots must be properly disposed of to prevent sprouting in treated areas. A combination of the above techniques is probably the most effective tool for eradication; however, frequent monitoring is needed to help prevent reinvasions.



Illustration courtesy of USDA NRCS PLANTS Database, Bugwood.org.



Photo courtesy of Bernd Blossey, Cornell University, Bugwood.org.



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