NORTH CAROLINA FOREST SERVICE NC

Invasive Species Leaflet

Excerpted with permission from "Invasive Exotic Plants of North Carolina"
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Phragmites australis (Common Reed)

Initial Introduction and Expansion in Range

Until recently, the status of *Phragmites australis* as a non-native or native species to North America has been in dispute. Current research confirms the existence of native North American haplotypes (family lines or lineages) and introduced European haplotypes. Peat core analyses in coastal areas indicate that the native *P. australis* has been a component of mixed tidal wetland plant communities in North America for at least 3,000 years. The non-native *P. australis* was probably an accidental introduction in ballast material from ships in the late 18th or early 19th centuries. Over the course of the 20th century, this plant has spread across the continent invading fresh and brackish marshes and displacing native mixed communities with near monocultures.

Phragmites australis can spread by seed dispersal and vegetatively by fragments of rhizomes that break off and are transported elsewhere. Non-native *P. australis* is capable of vigorous vegetative reproduction and can quickly take over a marsh community. This invasion is causing serious problems for many native North American wetland plants and has resulted in changed ecosystem processes and detrimental impacts to native wildlife. Generalist bird species such as red-winged blackbirds will roost in *P. australis*, but specialist bird species will not use marsh habitat that has been taken over by this plant.

In Europe, *P. australis* is grown commercially and is used for thatching, as fodder for livestock, and for cellulose production. The decline of this plant in parts of Europe is causing concern because of its economic importance and because ecological degradation is thought to be the cause of this decline. In North America, there is no known economic use for *P. australis*, and it thrives in degraded habitats.

Description and Biology

- Tall, perennial, wetland grass ranging in height from 3 to 13 feet.
- Strong, leathery rhizomes growing on or beneath the ground surface.
- Cane-like stems are green during the growing season and turn tan by fall.
- Leaves are alternately arranged, flat and hairless, up to 24 inches long, 0.5 to 2 inches wide, tapering to a point at their ends.
- Large, dense, feather-like, 5 to 12 inches long, grayish purple plumes appear on top of the stem by late June.

- *Spartina cynosuroides* (giant cordgrass) is a native species that can be confused with *P. australis*. It is distinguished from *P. australis* by its sparse flowering structure and longer, more gracefully arching leaves.
- Non-native and native *P. australis* are difficult to distinguish without genetic analysis. Typically, non-native *P. australis* will occur in monocultures while native *P. australis* co-exists with other wetland species. Non-native *P. australis* tends to have leaves that persist in contrast to the native *P. australis* that typically loses most of its leaves by fall. The stems of native *P. australis* are reddish in the summer and fall. Non-native *P. australis* predominates in North Carolina.

Habitats Susceptible to Invasion

Phragmites australis is found in tidal and nontidal brackish and freshwater marshes, river edges, and shores of lakes and ponds within the coastal plain of North Carolina. It occurs in disturbed areas as well as pristine sites. This plant is particularly common in roadside ditches.

Prevention and Control

Control of *P. australis* is time-consuming and labor intensive. Management efforts have shown that *P. australis* can be controlled with the return of native vegetation, but monitoring is imperative since this plant tends to re-invade, necessitating control techniques for years or possibly in perpetuity. It is also important to realize that some areas have been so severely manipulated and degraded that it may be impossible to eliminate *P. australis*.

The use of glyphosate (labeled for use in aquatic sites) has proven to be an effective means of controlling *P. australis*. The herbicide should be applied in the late summer or early fall after the plant has flowered as a 2 percent foliar spray. Successive treatments for several years will definitely be necessary. The most successful chemical control can be achieved with a foliar solution of 1 to 2 percent imazapyr plus 1 percent mentholated seed oil. Prescribed burning after herbicide treatment has the advantage of reducing standing dead stems and litter, giving the seeds of other native species area to germinate.

THE LABEL IS THE LAW!

WHEN USING ANY PESTICIDE, FOLLOW ALL LABEL INSTRUCTIONS

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