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Steud.

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# Technical Report



## Wetland Flora

No. 91-1 / January 1991

Gene Silberhorn

### Reed Grass Phragmites

*Phragmites australis* (Cav.) Trin. ex. Steud.

#### Growth Habit And Diagnostic Characteristics

Reed Grass is a tall, coarse grass with a terminal, feathery seed head that is all too often an invader of disturbed wetlands, especially marshes. The broad, acutely tapering leaves, 1 to 5 centimeters (cm) wide (0.5 to 2 inches) and up to 50 cm long (up to 20 inches), the characteristic seed head, and the very long, exposed rhizomes are typical features of this giant grass. It usually grows rapidly to heights of 2 to 4 meters (m) or more (6 to 12 feet).

The dense, but somewhat delicate reproductive panicle (flowering head), is approximately 15 to 35 cm long (6 to 13 inches), brownish-purple in flower (late June to August), fading to a pale straw color later in the season. It grows in dense monospecific stands, usually outcompeting other species exclusively. Characteristically, the leaves are deciduous by late fall or winter, but the naked stems and head remain until spring. The rhizomes, which are actually horizontal stems, produce new sprigs every several inches along their length. Rhizomes often grow above ground and can be up to 13 meters long (over 40 feet). The aggressive nature of this plant is attributed to the rapid growth of these modified stems. Rhizomes originate from mature plants and can each produce as many as 20 new sprigs (clones).

#### Density and Production

Stem density ranges from 30 to 65 stems per meter<sup>2</sup>. Annual productivity ranges from 4 to 6 tons per acre per annum.

#### Distribution

Reed Grass is a cosmopolitan plant found nearly throughout the world, especially in the northern hemisphere. It appears mainly in tidal and non-tidal freshwater wetlands. In Eastern Europe, fibers from its tough, thick stems are used for paper making. In Great Britain, *Phragmites* marshes are the prime habitat for the marsh hawk. In its European habitats, Reed Grass is held in check by natural biological controls, and is considered a valuable plant. On this side of the Atlantic, most wetland managers consider it an unwanted weedy invader.

Reed Grass was first recorded in New England during colonial times. Its distribution has since expanded south and west. Along the lower Hudson River, the great New Jersey 'meadowlands' (a term still used today) were once dominated by Saltmeadow Hay (*Spartina patens*), hence the placename. The original meadows were disturbed long ago by solid waste and fill from various sources, and that which has not been developed (a football stadium, interstate highways and the like), is now overgrown with *Phragmites*.

Reed Grass was little noticed in Virginia until approximately the last 30-40 years. It is now definitely gaining ground in the Commonwealth. Managers are concerned about the species because of its ability to out-compete more desirable species such as Big Cordgrass (*Spartina cynosuroides*), Wild Rice (*Zizania aquatica*), *Spartina patens*, and other native wetland plants.

#### Habitat

*Phragmites* is usually not found in undisturbed high salinity marshes. It is prevalent, however, where such areas have been diked to contain dredged material, restricting tidal communication. This practice is no longer permitted of course. Chronic marsh fires may also disturb natural marshes sufficiently to allow *Phragmites* to invade and take over as a dominant plant.

#### Ecological Values/Benefits

Although it is not desired, *Phragmites* is able to propagate in dredged spoil areas, thereby reducing sheet erosion and enhancing aeration to the surface sediments.

#### Hydrophytic Factor/Federal Delineation

According to the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* and the *National List of Plant Species that Occur in Wetlands: Virginia* (1988), *Phragmites australis* is classified as a **facultative plus wetland plant (FACW+)**. FACW+ plants usually occur in wetlands (67-99% estimated probability), but are occasionally found in nonwetlands.

*Phragmites australis* (Cav.) Trin. ex. Steud.

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