



MAINE INVASIVE PLANTS

Common Reed (Phragmites)

Phragmites australis (Grass Family)

Threats to Native Habitats

Common reed is a very aggressive, robust, densely growing member of the grass family. Its height and density allow it to form monocultures or near monocultures that outcompete and overrun most nonwoody native wetland plants. The buildup of litter from previous years of growth prevents other species from germinating or establishing. It is capable of occupying and degrading vast areas of important wetland habitat. It is tolerant of a wide variety of environmental conditions. Wetlands composed of mixes of native plants provide habitat for more wildlife species than do wetlands overrun by common reed. Common reed is problematic in both coastal and inland wetland types. In coastal situations, debris trapped within stands of common reed can increase the elevation of marsh surfaces, which can reduce the frequency of tidal inundation and ultimately alter the natural ecosystems.

Description

Common reed is an upright perennial that ranges in height from five to 13 feet. Long, narrow leaves alternate on its tall stalks. Culms (flower-bearing stems) have smooth nodes and hollow internodes. Leaf blades are approximately one inch wide and are flat or rolled. Plants grow in dense, single-species or monocultural stands. Plume-like flower spikes six to 12 inches long form at the tops of the plants. Flowers are tiny with lots of silky hairs. Large purple flower heads turn gray and fluffy in late summer as they go to seed. They remain on the plant throughout the winter. The plant spreads through the growth of rhizomes or by seed. Aerial stems rise from joints in the rhizomes and aerial shoots that are knocked over can take root and produce new shoots at the nodes. The prostrate stalk sends out runners that generate new plants. Stout rootstalks, often exceeding 20 feet in length, interlock to form a dense network that can withstand fires, mowing and other forces that damage stalks and leaves. The underground



Common reed (photo by Don Cameron, Maine Natural Areas Program)

network of rhizomes has an expansion rate of about three feet per year, but in nutrient-rich areas can spread up to 30 feet. Plants can spread by wind-blown or bird-deposited seeds, by movement of the rhizomes, by maintenance equipment in highway ditches, or by the action of tidal ice.

Habitat

Common reed grows on wetland fringes, where salt marsh and freshwater wetlands meet. It is found at the upper edges of wetlands, commonly in brackish or fresh water and at the edges of saltwater marshes, or where there are lower marsh water levels and less salty conditions. It also occurs in both acidic and alkaline freshwater marshes, where it may occupy the entire wetland. It is more common near cities than in rural areas. Use of road salt may be promoting common reed along roadsides in New England. It is common in marshes that are in poor health and thrives in environments that kill most marsh grasses. Opportunity for invasion is often linked to human-caused disturbance.

Distribution

Common reed is a cosmopolitan species occurring throughout the world. It is thought to be the most widely distributed flowering plant. It lives in temperate zones, from the Sahara to the Arctic, as well as in tropical wetlands, with the exception of the Amazon Basin and central Africa. Common reed is a native of the Americas and Eurasia but the highly invasive form that is taking over U.S. wetlands originated in Europe. The invasive form is found in every state of the U.S. Examples of the native form are reputed to be less dense and generally smaller than the invasive European form.

Control

Phragmites plants are susceptible to extended periods of flooding, wave action and changes in salinity. Strong wave or current action will break the stalks. Long term tidal flushing is beneficial in all these cases, minimizing the influence of fresh water and higher nitrate levels, both of which aid the plant. Herbicides are effective in the short term of four to five years; glyphosate, formulated for use in wetlands, should be applied after the plants form their fluffy flower clusters, when the plants are sending carbohydrates to the rhizomes. Combined cutting, burning, herbicide application and water management plans can help control the plant by removing old canes and allowing other vegetation to grow. Plant stands can actually increase when cut early in the season. For effective management, cut plants in late summer, in several successive years. Monitoring the spread of this plant is crucial because of its tendency to reinvade. Control techniques may need to be repeated indefinitely. Anyone planning a control project at a site infested with common reed should research the options carefully, paying particular attention to the unique conditions of the site. Use herbicides responsibly and follow manufacturer's directions. Contact the Maine Department of Agriculture for information on restrictions that apply to the use of herbicides. Consult a licensed herbicide applicator before applying herbicides over large areas.



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