

Invasive Species in Coastal Areas

Common Reed (*Phragmites australis*)

Description and Biology

Common Reed, or *Phragmites australis*, is an alien, invasive plant with origins in Europe and Asia. While there is a native variety, it appears to be much less aggressive and harmful than its alien counterpart. Common Reed has recently found its way to some of Lake Huron's beaches and has raised much concern amongst the public and the scientific community.

Most frequently, Common Reed colonizes a new area from small fragments of rhizomes, dispersed by water, animals, machinery and humans. Once established, new upright stems grow from underground rhizomes and a colony begins to spread vegetatively. Rhizomes spread horizontally in all directions during the growing season. Flowering begins in late June, and seeds are formed by August. In early autumn, food reserves move from leave and stems to the rhizome system. The leaves die and fall off, with only the dead brown vertical shoots remaining. The accumulation of dead leaves and stems, as well as the pervasive rhizome system, prohibits the growth of desirable plant species.

Common Reed generally has annual cane like shoots that reach heights of 2 to 4m and disperses by seeds or rhizome fragments. Rhizomes are responsible for renewing and maintaining the population; a single plant spreads at a rate of 1-2m per year. The dead canes remain standing for 3 to 4 years before becoming part of the slowly decomposing litter layer.

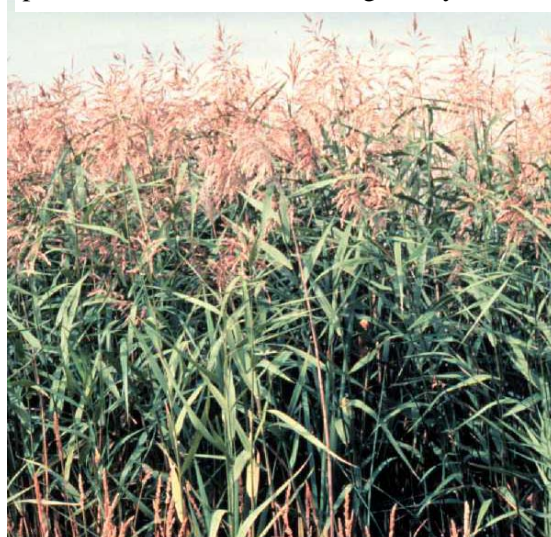
In a recent study of this invasive plant at Long Point on Lake Erie, Common Reed abundance increased with lower lake levels and was reduced with higher water levels.

Also, air temperature played an important role in Common Reed abundance. Higher air temperatures led to increases in abundance. Air temperatures over the last decade have been on an upward trend in southern Ontario.

Common Reed expansion in the past 4 years on Lake Erie was exponential. Reasons for the rapid growth are unclear but lower water levels and a warmer climate may explain the change.

Threats

Scientists are concerned that the growth of this plant in beach areas could negatively alter dune



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ecology and displace the rare native species found in Lake Huron's dunes. The displacement of native species and the formation of dense monocultures also have negative impacts on insects, birds and other species that rely on intact dune habitats.

Control

Once established, common reed is very difficult to completely eradicate. However, careful planning and long-term management can produce satisfactory results. Invasive populations of Common Reed must be managed in order to protect rare dune plants that it might outcompete, valued plants and animals whose habitat it might dominate and degrade, and healthy ecosystems that it might greatly alter.

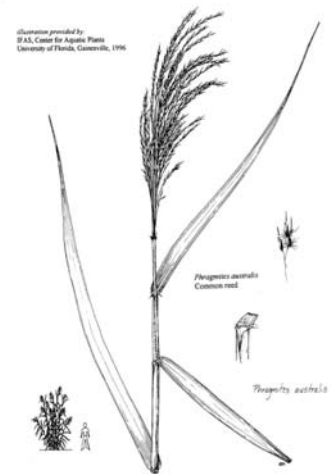
Cutting has been used successfully to control Common Reed. Since it is a grass, cutting several times during a season, at the wrong times, may increase stand density. However, if cut just before the end of July, most of the food reserves produced that season are removed with the cut portion of the plant, reducing the plant's vigour. This regime may eliminate a colony if carried out annually for several years. Care must be taken to remove cut shoots to prevent their sprouting and forming stolons. Stalks and seed heads must be either bagged and removed from the site, or burned to ensure that seeds are destroyed.

Do not disturb the rhizomes. Breaking them up may result in an increased population and encourage its spreading.

The Centre for Coastal Conservation and the Township of Huron-Kinloss are investigating best management practices to control existing populations and minimize the introduction of future impacts for Common Reed.



Flower cluster



P.O. Box 178 Phone: (519) 523-4478
Blyth, Ontario, Canada
N0M 1H0

www.lakehuron.on.ca



P.O. Box 130 Phone: (519) 395-3735
Ripley, Ontario
N0G 2R0

www.huronkinloss.com