INVASIVE SPECIES OF PEI

Common Reed Grass

Phragmites australis ssp. australis

What are invasive species?

Invasive species are species that may be invasive when introduced to an area outside of their native range. They can be introduced intentionally or unintentionally.

Why are invasive species a problem?

Once they establish, invasive plants can reproduce quickly because they have no natural predators or pathogens to keep them in check, and they often become the dominant species in an ecosystem. This can have devastating effects on the environment. Invasive species can displace native plants by monopolizing space, light, water and other resources needed for growth. They can completely alter native plant communities and drastically lower biodiversity. Invasive species can also adversely affect the economy and human health, and interfere with recreational activities.

HISTORY

Common reed grass (Phragmites australis ssp. australis) is an invasive perennial grass that is native to Eurasia. It is not known for certain how it was moved to North America, but it likely arrived on the Atlantic coast accidentally via ballast materials in the late 1700s – early 1800s. Since establishing in North America, Phragmites australis ssp. australis has spread throughout continental U.S. and to most provinces in Canada. It prefers to grow in standing water but will tolerate growing in dryer areas. It can easily be confused with a closely related native subspecies, Phragmites australis ssp. americanus.

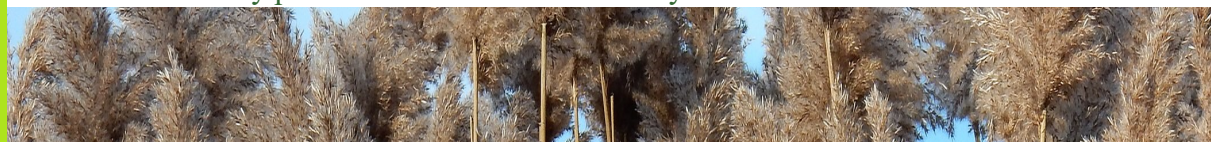
IDENTIFICATION: INVASIVE VS NATIVE

Phragmites australis ssp. australis (Invasive)	**Phragmites australis ssp. americanus (Native):**
Grows in dense stands and crowds out other species.	Grows in a more scattered manner, mixed in with other native wetland species.
Grows to be ~5 m tall, a much more robust plant than the native Phragmites.	Typically reaches 2 m in height.
Lower stems are tan or beige-coloured.	Lower stems are red.
Leaves are arranged alternately and are a blue-green colour.	Leaves yellowish-green, smaller than invasive Phragmites', distributed on the same side of the stem.
The panicle inflorescence (seed head) is larger and fuller than the native subspecies.	The panicle inflorescence (seed head) is smaller and more sparse.
Grows earlier in the spring and later into the fall than the native subspecies.	Usually has reddish brown stems.

CONCERN

Invasive common reed grass (phragmites) is a fast-growing and quickly spreading invasive plant. It invades primarily wetland ecosystems and rapidly chokes out and outcompetes native species for space and nutrients. The plant grows to be very tall (up to 15ft.) and can shade out other native species easily. The word phragmites comes from the greek word "phragma" which means fence. It certainly earns this name, as common reed grass forms dense monoculture stands that create imposing barriers. These barriers are not only physical, but also ecological, and even chemical. Common reed grass alters water movement and sedimentation. It creates a fire hazard in the dry season due to the buildup of dead material. As the grass dominates an ecosystem, it removes habitat not only for other plants, but also for the birds, fish, and amphibians that depend on displaced native plants for food and shelter. Chemical barriers are created by common reed grass's allelopathic ability, meaning that it changes the soil chemistry to prevent or reduce native plant competition.

For humans, common reed grass infestations affect our ability to take part in recreational activities like boating and fishing, by changing and blocking shorelines. From a safety standpoint, tall fences of common reed grass can block sightlines for vehicles, and block access to key public infrastructure like fire hydrants.



How can you help?

Here are a few things you can do to help stop the introduction and spread of alien invasive species:

- Learn more about invasive species in PEI, including how to identify species of concern
- Choose native species whenever possible
- Carefully inspect and clean clothing, gear, animals, and vehicles before visiting a new natural area
- Never dump garden or pond waste in a natural area
- Report a sighting

How to report:

Record any invasive species sightings at:
https://www.eddmaps.org/report/
OR https://www.inaturalist.org/
OR contact
peiinvasives@gmail.com

Prince Edward Island Wildlife Conservation Fund
Your Conservation Dollars at Work

Photos credits: Beth Hoar, Green Thumb Photography, User R. A. Nonenmacher on Wikimedia Creative Commons, User Darkone on Wikimedia Creative Commons, NY State IPM Program at Cornell University, user Daniel Case on Wikimedia Commons, user Matt Lavin on flickr.

PREVENTION AND CONTROL

First, determine whether you are dealing with the native or invasive species of common reed grass. The native species does not require management. Once this determination is made, begin thinking about which management strategy will work best for your time and labor constraints. Think also of how your management will affect neighboring organisms and their habitat. Often, multiple control methods are used simultaneously.

You should monitor the population's flowering and plan to remove and bag flower/seed heads before they are dispersed. If planning to manually cut common reed grass, it is recommended that you do so when the plant reaches maximum height, just before it goes to seed. In aquatic environments, it is recommended that the plant be cut at the soil level, which will effectively drown the plant as new shoots fail to break the water surface. On land, cutting should be done below soil level to ensure the rhizome is properly severed. Using a spade, cut the plant a few inches below the soil surface and remove. Return to the site regularly to continue management of any new growth.

In wet environments, flooding is an effective way to stress and reduce populations of common reed grass. In an area where the water level can be manipulated, this can be an effective method of disturbance. The plant appears to be intolerant of changing water levels. Chemical control in aquatic and wetland environments is not a viable option, and so alternative measures such as flooding and cutting must be implemented. When working around a waterbody, one should obtain a Watercourse, Wetland and Buffer Zone Activity Permit from the Department of Environment, Energy, and Climate Action. This permit should be applied for a minimum of six weeks before work commences.

Multiple years of treatment will likely be necessary to completely eradicate an infestation. One way to decrease regrowth may be to remove the accumulated dead reed grass from the area. Making competition for common reed grass by replanting the area with competing native grasses will apply an additional stressor. It is important to collect, bag, and properly dispose of all removed invasive plant material to prevent potential regrowth, especially any root pieces and seed heads. Clean all equipment and clothing of all plant parts before moving on to prevent inadvertent spread.

DISPOSAL

Place invasive plants in a clear plastic bag and secure. Write plant name (or "invasive plant") on the bag. Place in waste cart (you can also have up to 2 excess bags beside your cart) OR bring them to any Waste Watch Drop-Off Center and pay applicable waste disposal fee.

For information on plants that are considered invasive, visit the PEI Invasive Species Council website at https://peiinvasives.com/invasive-species/. Businesses and residents disposing of loads greater than what would fit in a half-tonne truck require a permit from the Department of Environment (1-866-368-5044). After receiving the permit, businesses and residents will be directed to an appropriate final disposal facility. Please note that only loads for which permits have been issued will be accepted at these facilities.

GARDEN ALTERNATIVES

Saltmarsh cordgrass
Spartina alterniflora

Prairie cordgrass
Spartina pectinate

Cottongrass
Eriophorum angustifolium