

Garlic Mustard

Alliaria petiolata



What are invasive species?

Invasive species are species that are 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.

CONCERN

Garlic mustard seeds germinate early in the spring, before most native plant species. It forms dense stands that block sunlight and outcompete native species for water and nutrients. Its vegetation is unappealing to native herbivores because of toxins produced in the plant's tissues. In addition, chemicals released from the plant's roots negatively affect mycorrhizal fungi by depleting their population. Since the fungi grow underground and form mutually beneficial relationships with plant roots, this also negatively impacts that native plant species that depend on it.



Garlic Mustard invading a forest understory in PEI

CONTROL METHODS

In the life cycle of Garlic Mustard there are two distinct growth forms: the rosette and the adult plant. The rosette form occurs in the first year and the plant reaches maturity in the second year. Flowers and seeds are not produced until the second year.



Garlic Mustard plant and roots

PULLING

Pulling should take place before the second year plants have gone to seed. Sites should be monitored every growing season, because Garlic Mustard seeds can remain viable in the soil for at least 10 years. However, as long as no plants go to seed, there should be a steady decrease in population size

until eventually the seed bank is depleted.

CUTTING

Cutting Garlic Mustard rosettes rarely leads to mortality because they are capable of producing new shoots. However, cutting adult plants at ground level has been shown to be effective in killing the plant. Re-sprouting shoots will die in a few weeks if the plant has been cut to the ground. Monitor the site in subsequent years. As long as no plants go to seed, there should be a steady decrease in population size until eventually the seed bank is drained.



CONTROL METHODS

BURNING

Burning is not an effective control method for Garlic Mustard. Habitat and surrounding vegetation often present inappropriate conditions for burning. Roots of the burnt plant are not affected, and can re-sprout the following year. Garlic Mustard is quick to dominate a disturbed area, and burning may improve conditions for this invader by inhibiting native species.

CHEMICAL CONTROL

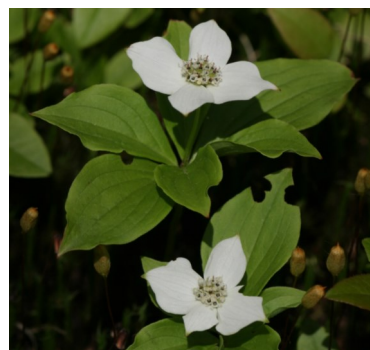
Chemical control methods are not recommended by the PEI Invasive Species Council. Herbicide application may negatively impact native species. Herbicides may not be used near watercourses on PEI. Care should be taken in herbicide application, and chemical control should only be considered as a final option.

DISPOSAL

Plants removed from a site should be transported in plastic bags to a waste management facility for incineration. In addition, it is important that native species be planted where invasive plants were removed to prevent future invasions, and that sites are monitored for Garlic mustard to ensure that new sprouts and shoots are identified and removed.

GARDEN ALTERNATIVES

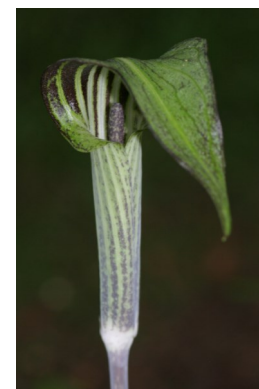
There are many native plant alternatives available for Garlic Mustard. Please refer to the Invasive Alien Species of PEI: Garlic Mustard fact sheet for more information on garden alternatives.



Bunchberry
(*Cornus canadensis*)



Bluebead Lily
(*Clintonia borealis*)



Jack-in-the-Pulpit
(*Arisaema triphyllum*)

PREVENTION

The most effective and cost efficient way to avoid infestations of invasive species is to learn about potential invaders and be on the look out for them before they get a chance to establish. To learn more about how you can get involved in preventing invasives in PEI, contact the PEI Invasive Species Spotter's Network at: peiinvasives@gmail.com.

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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
- When disposing of invasive species, they should be placed in a clear or dark plastic bag and taken to Island Waste Management for incineration
- Report a sighting

How to report:

If you think you have seen this invasive species on PEI, please report your sighting to the PEI Invasive Species Council at: peiinvasives.ca/report or email peiinvasives@gmail.com

