INVASIVE SPECIES OF PEI

Woodland Angelica
Angelica sylvestris

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

Woodland angelica is believed to have originated in Syria and is found throughout Eurasia. This plant is thought to have been introduced to North America as a culinary herb by early French settlers in the 17th or 18th century. It may have been brought to PEI as a hitchhiker on a motor vehicle. Woodland angelica has been used medicinally in the past for the treatment of numerous gastric disorders. A powder made from ground seeds was used to prevent and treat lice infestations.

IDENTIFICATION

Woodland angelica is a biennial or short-lived perennial herbaceous plant that can grow up to 2.5m tall. It only flowers once in its lifetime but is a prolific seed producer. The plant has many lookalikes both native and invasive. Here are some distinguishing features that may help you positively identify it:

- Stems are thick, ribbed and finely hairy beneath the inflorescence, are hollow, and can be tinged purple (especially at nodes).
- Leaves are alternate, have long petioles, are compound with sessile ovate leaflets, have serrated margins, and are bipinnately compound.
- Small white flowers form umbels (umbrella-shape) that are 10-20cm across, there are multiple umbels per plant, and flowering occurs from July to August, fragrant.
- Seeds are small, apple shaped, with three central ridges, and turn from green to white to brown.
- Large sheaths at the axils.
- Upper leaves are small and consist mostly of the sheath.
- Root is long and thick, similar to a carrot.

Leaf axil with sheath.

CONCERN

Woodland angelica is an aggressive invader of many diverse ecosystems including roadsides, meadows, woodlands, and hedges. It spreads prolifically and outcompetes native plants for space and nutrients. It is shade tolerant, and can grow well in places where other plants struggle. When native plants are displaced, wildlife that depends on displaced species for food and shelter may also be affected. Woodland angelica is also a prolific seed producer, and can spread very easily because of this. As it is so commonly found, it may be inadvertently dispersed by recreational and agricultural practices among other methods of human-induced spread. Seeds can also spread by water, as they have a porous floating chamber that allows them to travel long distances over water. The seeds also have thin, papery wings that allow them to be swept up and blown about by the wind. Woodland angelica can also pose a threat to any humans that come in contact with it, as the sap contains a compound called furanocoumarin that causes skin irritation and increased sensitivity to sunlight.

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.
- Please check the IWMC sorting guide www.iwmc.pe.ca/sort (type Invasive Species in the search window) to ensure these instructions are up to date.

How to report:

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

TOXICITY

When handling woodland angelica, it is important to consider its toxicity. A cousin of giant hogweed, woodland angelica is known to contain an irritating sap. When the plant is damaged, this sap is released and if the sap comes in contact with skin, the exposed area will become highly sensitive to UV damage. If you expose the area to sunlight, you will get a severe inflammatory reaction that results in a bad sunburn, blistering, redness, and itchiness. Protective gear should be worn when handling woodland angelica, such as eye and face protection, thick waterproof gloves, a long sleeve shirt, pants, and boots. Apply sunscreen and stay out of direct sunlight as much as possible during management to prevent the UV reaction from happening.

PREVENTION AND CONTROL

Before managing woodland angelica, ensure you have properly identified it. This invader has many lookalikes that can easily confuse management efforts. Before selecting a control method, consider the size of the infestation, your available resources, and the amount of effort you are willing to expend. Often, multiple control methods are used simultaneously. Consider also the local ecosystem and what other organisms or ecological processes may be affected by management.

Physical removal of first-year plants by digging or hand pulling (in moist soil) can be an effective means of control. Remove the entire root, as the plant can regrow from its roots. Beginning management early in the growing season, before flowers form is ideal. Mechanical controls such as mowing are ineffective in killing the plant immediately, as woodland angelica can regrow from its root system. Regular repeated mowing will effectively stop the plant from going to seed, and will thus reduce spread. Eventually, the population may begin to dwindle due to a lack of light and energy. If managing the plant after seeds have formed, carefully remove and bag seed heads first to avoid seed dispersal during management. After physical removal, you can "go the extra mile" by covering the infested area with a thick dark tarp. This will "solarize" any new growth, overheating it and starving it of light. The tarp can also be covered with 8" of topsoil and replanted with desirable native plants.

Chemical control methods exist, but the PEIISC does not offer advice on chemical control measures at this time. If using chemical controls, all local legislation and manufacturer's instructions must be followed during application.

If managing an invasive species nearby a watercourse or waterbody, you are required to obtain a Watercourse, Wetland and Buffer Zone Activity Permit from the PEI Department of Environment, Energy, and Climate Action. This permit should be applied for at least six weeks before beginning management activities to allow for processing time. Please note it is unlawful to apply herbicides when nearby a watercourse or waterbody on PEI.

GARDEN ALTERNATIVES

Spotted Joe-pye Weed

Tall Meadow Rue

Photos copyright of Beth Hoar, Green Thumb Photography; User Ryan Hodnett on Wikimedia Commons, "Tall Meadow Rue (*Thalictrum pubescens)* in Springdale, Newfoundland and Labradour, Canada."

Prince Edward Island CANADA

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