

# Garlic Mustard

One of Ontario's Most

# UN-WANTED

Invasive Plant Species

Garlic Mustard - *Alliaria petiolata*  
Alias: Hedge-garlic, Sauce-alone, Jack-by-the-edge, Poor Man's-mustard and Garlicwort

## ECOLOGICAL THREAT

Native to Europe, garlic mustard was brought by early settlers as a green vegetable and a medicinal plant. First reported in gardens of Toronto in 1879, the rest is history. It can be found in moist forests, wooded stream banks, floodplain forests, roadsides and trail edges and yes, maybe in your garden. In these places, it dominates the ground layer of plants reducing the forests' natural ability to regenerate.

Recent research demonstrates that toxic chemicals produced by the roots of garlic mustard interfere with the microscopic fungi in the soil needed to stimulate the growth of native plants, giving the garlic mustard something scientists call "displacement capacity". A nasty ability to change our forests forever.

## MUG SHOT

The plant is green year round, with dark triangular shaped toothed leaves arranged alternately on the stem. The leaves produce a distinctive garlic odour when crushed. The plant grows from 13 to 120 cm tall, producing a single floral stalk with delicate white flowers from May to early June. Garlic Mustard is often found along trail edges, as it is often spread by people's boots, clothes or on tires of recreational vehicles.

Flowers are produced in clusters at the end of the plant, typically six to seven millimeters long. Fruit is produced in late July through August as a small oblong black seed. A single plant can produce up to five thousand seeds that germinate the following spring. The seed is its only way of reproducing. Accomplices contributing to its spread are animals in nature, humans and their dogs.

Unknowingly we can capture seeds on hair, fur, clothes, shoes and bike tires, carrying them to new frontiers where the conditions are right and the seeds literally put down their roots. While we know the seeds don't float well in our waterways, they search out and readily attach to moist surfaces.



LEAF



FLOWER



INVASION  
Photo Credits: Ken Towle  
Wasył Bakawsky

UNWANTED CASE: GARLIC MUSTARD

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No.



## TIPS ON MANAGEMENT

Land managers, farmers, landowners and community members everywhere, must extend their best efforts to detect this species on their properties early in its establishment, avoiding larger more labour intensive control efforts down the road.

The slender tap root with a distinctive “s” curve is easily pulled by hand, but only in light moist soils, for small infestations and over a minimum of 5 successive years to ensure the seedbank is exhausted. In larger infestations pulling often results in stimulating the seedbank, disturbing the soil and further compounding the problem.

Garlic mustard is a biennial, meaning it takes two years to complete its growing cycle then it dies. First year plants are referred to as basal rosettes, with just a few leaves appearing. In year two, the plant actually flowers. Each plant can produce between 200 and 800 seeds and they continue to photosynthesize during the winter months between the two stages.

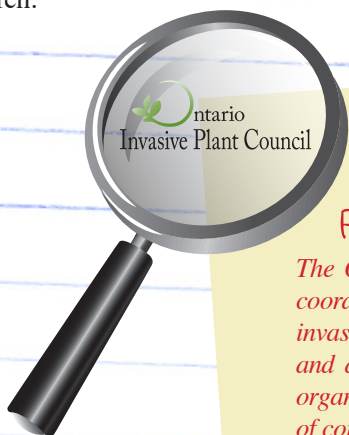
Cutting the plants using a hand-held motorized trimmer like those used for lawn trimming, from the top down rather than side to side should be done twice a year and prior to flowering.

The use of herbicides has met with some success, however a Letter of Opinion from the district MNR may be required before controlling invasive plants with chemicals. The Pesticide Act does have some excepted uses including control in forestry, agriculture, public health and safety as well as others. Consult with your district MNR if you have questions. A licensed applicator must do the application.

Biological control and the reintroduction of microbial content to locations where garlic mustard has been removed still require extensive research.

## TIPS ON PREVENTING THE SPREAD OF INVASIVE PLANTS IN THE LANDSCAPE

- ◆ Learn to properly identify and manage invasive plants on your property.
- ◆ Avoid using invasive perennials in gardens and landscaping. Always check your plant references before choosing garden plants.
- ◆ Purchase non-invasive plants from reputable suppliers. Native plants will provide a variety of benefits to the plants and wildlife that also depend on them.
- ◆ Do not dispose of compost or garden waste in natural areas as this can disturb the natural vegetation.
- ◆ When hiking, remain on designated trails and keep pets on a leash to reduce transferring invasive plants and seeds to new areas.
- ◆ When an invasive plant is flowering, cut the flower tops to prevent the plant from going to seed, put it in a garbage bag and throw it in the garbage.
- ◆ Share this fact sheet and spread the word to friends, family and neighbours.
- ◆ When in doubt about a plant, whether it is invasive or how it should be controlled, contact the “Invading Species Hotline” @ **1-800-563-7711** or **www.invadingspecies.com** or **www.ontarioinvasiveplants.ca**



### A Message from the Ontario Invasive Plant Council (OIPC)

*The Ontario Invasive Plant Council facilitates a coordinated and effective response to the threat of invasive plants by providing leadership, expertise and a forum to educate, motivate and empower organizations and citizens. The OIPC is composed of conservation authorities, academic institutions, aboriginal organizations, stewardship networks, private consultants, industry and environmental NGOs as well as all levels of government. For more information on the council please visit [www.ontarioinvasiveplants.ca](http://www.ontarioinvasiveplants.ca)*