

# Garlic Mustard

(*Alliaria petiolata*)

Garlic mustard is an invasive herb native to Europe. It was brought to North America in the early 1800s for use as an edible herb. Available in the early spring and high in vitamins A and C, it has a strong, distinctive smell similar to garlic. Since its arrival in North America it has escaped into the wild and is now one of Ontario's most aggressive forest invaders.



Second-year plants grow up to 1.2 metres with high triangular, alternate, sharply toothed leaves and white flowers.

Photo: Wasyl Bakowsky, MNR

Garlic mustard has two distinct life stages over its first two years. In the first year, it grows only a cluster of leaves shaped like a rosette, while a strong root system develops. Plants that survive the winter produce flowers and hundreds of seeds in their second year. Dense stands produce more than 60,000 seeds per square metre. Stands of garlic mustard can double in size every four years.

Garlic mustard seeds are easily spread by people and animals. They can stay dormant over winter and remain viable in the soil for up to five years. The plant can grow in a wide range of sunny and fully shaded habitats, including undisturbed forest, forest edges, riverbanks and roadsides. Garlic mustard does not provide a valuable food source for native wildlife.

## Range

Garlic mustard is established in southern and eastern Ontario as far north as Sault Ste. Marie, in parts of Quebec, and south to North Carolina and Kentucky in the United States. Isolated populations have

been found in British Columbia, Nova Scotia, Prince Edward Island and New Brunswick.

## Impacts of Garlic Mustard

- Garlic mustard can invade relatively undisturbed forests. Once established it can displace native wildflowers like trilliums (*Trillium* sp.) and trout lily (*Erythronium americanum*). It hinders other plants by interfering with the growth of fungi that bring nutrients to the roots of the plants.
- The plant threatens several of Ontario's species at risk, including American ginseng (*Panax quinquefolius*), drooping trillium (*Trillium flexipes*), false rue-anemone (*Enemion biternatum*), hoary mountain mint (*Pycnanthemum incanum*), white wood aster (*Eurybia divaricata*), wild hyacinth (*Camassia scilloides*) and wood poppy (*Stylophorum diphyllum*).

Masthead photo: Victoria Nuzzo, Natural Area Consultants, Bugwood.org



## How to Identify Garlic Mustard

- Young leaves release a strong garlic odour when crushed.
- First-year plants produce a rosette of dark green, kidney-shaped leaves with scalloped edges.
- Second-year plants grow a stem 0.3 to 1.2 metres high with triangular, alternate, sharply toothed leaves.
- Lower leaves are broad, kidney-shaped and up to 10 centimetres across. Upper leaves are triangular and five to 10 centimetres across, narrowing towards the tip.
- Second-year plants produce white flowers with four small petals in May.
- Narrow seed pods 2.5 to six centimetres long split open in mid-summer to reveal tiny black seeds.



First-year plants produce a rosette of dark green, kidney-shaped leaves. Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Garlic mustard resembles several native Ontario plants. The leaves at the base of the plant look like those of several plants in the carrot family (*Thaspium* and *Zizia*), the daisy family (*Senecio*) and the violet family (*Viola*). The seed pods look like those of several other mustard (*Brassicaceae*) species. The easiest way to distinguish garlic mustard from these plant families is to crush the leaves. If they emit a strong garlic smell, then the plant is most likely garlic mustard.



Garlic mustard flowers. Photo: Ken Towle

## What You Can Do

- Learn how to identify garlic mustard and other invasive plants, and how to effectively manage these species on your property. See *The Landowner's Guide to Controlling Invasive Woodland Plants*. Go to [ontario.ca/invasivespecies](http://ontario.ca/invasivespecies), click on **Here's a list of things you can do to help fight invasive species**, and click on the title.
- Avoid using invasive plants in gardens and landscaping.
- Buy native or non-invasive plants from reputable garden suppliers. Native plants provide habitat and food sources for native wildlife. See *Grow Me Instead: Beautiful Non-Invasive Plants for Your Garden*. Go to [ontario.ca/invasivespecies](http://ontario.ca/invasivespecies), click on **Here's a list of things you can do to help fight invasive species**, and click on the title.
- Dispose of invasive plants in the garbage. Do not put them in the compost or discard them in natural areas. Discarded flowers may produce seeds.
- When hiking, prevent the spread of invasive plants by staying on trails and keeping pets on a leash.
- If you've seen garlic mustard or other invasive species in the wild, please contact the Invading Species Hotline at 1-800-563-7711, or visit [www.invadingspecies.com](http://www.invadingspecies.com) to report a sighting.

## Other Resources:

[www.invasivespeciescentre.ca](http://www.invasivespeciescentre.ca)  
[ontario.ca/invasivespecies](http://ontario.ca/invasivespecies)  
[www.ontarioinvasiveplants.ca](http://www.ontarioinvasiveplants.ca)  
[www.invadingspecies.com](http://www.invadingspecies.com)

## For More Information:

Please contact the Invading Species Hotline at 1-800-563-7711.

This fact sheet may be reproduced for non-commercial purposes.

© Queen's Printer for Ontario, 2012

Cette publication est également disponible en français.