



BRANDYWINE
CONSERVANCY

Preserving Our
Land & Water

GARLIC MUSTARD

(*Alliaria petiolata*)

Garlic mustard is **capable of invading high quality, mature forests** because of its high shade tolerance. It modifies soil pH and **develops monocultures** in areas otherwise used by ephemeral wildflowers and other native plants. It plays a role in killing the offspring of the rare West Virginia white butterfly (*Pieris virginensis*) and may also disrupt the mutualistic relationship between native trees and mycorrhizal fungi.

IDENTIFY

GARLIC MUSTARD | David Cappaert, Michigan State University, Bugwood.org



CHARACTERISTICS

Garlic mustard is a cool season biennial herb. It develops rapidly, with each plant dispersing thousands of seeds. It has weak single stems, 12–36 inches high in its second and flowering year. Leaves are triangular to heart-shaped, and when crushed, give off an odor of garlic. First-year plants appear as a rosette that remain green throughout the winter. In the spring, small white flowers give way to slender, erect pods. Although stalks die in the summer, the seeds are still viable.

WHERE FROM

Originally native to Europe, garlic mustard was first recorded in Long Island, New York in 1868. Early settlers introduced garlic mustard to North America for culinary and medicinal purposes.



GARLIC MUSTARD FLOWERS
Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

WHERE FOUND

Garlic mustard now occurs in 27 states as far south as Georgia and as far west as Oregon. It is found in moist, shaded soil of river floodplains as well as forest edges and openings, particularly in disturbed areas. Garlic mustard thrives in shade.



GARLIC MUSTARD FOLIAGE
Tom Heutte, USDA Forest Service, Bugwood.org



GARLIC MUSTARD FRUITS
Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

CONTROL

CHEMICAL METHOD

Spot application of 2% glyphosate (e.g., *Roundup*) in late fall or winter when native plants are dormant but still green. This application may need to be repeated multiple times due to the number of seeds garlic mustard produces.

MANUAL METHOD

The best method is to pull plants by hand, in spring, and remove all pulled material from the site. If mature fruits are present, one must be very careful to bag the plants while removing, to prevent the seeds from being spread.

REMEMBER

When removing, **be careful** not to remove or destroy desirable species.

If flowering, it is not advisable to cut plants to the ground. Though this may help to prevent seed production, cut plants will re-grow.

If mature fruits are present, do not remove plants without bagging carefully. Failure to do so will cause seeds to spread and new plants to grow.

(Read and follow all herbicide labels carefully before use.)

SOURCES
U.S. Dept. of the Interior, National Park Service, Plant Conservation Alliance (www.nps.gov/plants/)
U.S. Dept. of Agriculture, National Agricultural Library (www.invasivespeciesinfo.gov)
The Nature Conservancy (www.tnc.org)
Pennsylvania Dept. of Conservation of Natural Resources (www.dcnr.state.pa.us)