

# Invasive Alien Plant Species of Virginia

**Garlic Mustard** (*Alliaria petiolata* (Bieb.) Cavara & Grande)

## Description

Garlic mustard is a biennial herb in the mustard family. Plants can range in height from 5 to 46 inches. The first year plants form rosettes of kidney-shaped leaves. In its second year, the plant grows a stem with leaves that are triangular and sharply toothed. The flowers are born in a cluster at the end of the stem, and each small flower has four white petals. Seeds are black, oblong and found in rows within a long narrow capsule called a silique. Crushed leaves and stems of this plant give off a distinctive garlic odor.

## Habitat

Garlic mustard grows in rich, moist upland forests and wooded streambanks. It is shade tolerant and readily invades disturbed areas such as roadsides and trail edges. Garlic mustard cannot tolerate acidic soils, including undrained peat or muck.

## Distribution

Native to Europe and Asia, garlic mustard is now found in Canada, south to Virginia, and as far west as Kansas and Nebraska. It is believed to have been brought to North America by European settlers for use in cooking and medicine. In Virginia, garlic mustard is found throughout the state, with notable exceptions of southeastern and northeastern counties.

## Threats

This species can invade a forest through a disturbance such as treefall or trail construction. Along streambanks, the plant does exceptionally well because of the distur-

bance created by periodic flooding. Prolific seed production and lack of natural predators which might feed on garlic mustard allow it to quickly dominate the ground cover. Native herbs in competition with garlic mustard may suffer population declines.

## Control

Light infestations of garlic mustard can be controlled by hand-pulling. Plants should be pulled before seeds have ripened. Care must be taken to insure the entire root is removed and disturbance of the soil is minimal.

Severe infestations can be controlled with herbicides. Garlic mustard is biennial. Its first year growth overwinters as a basal rosette of kidney-shaped leaves, therefore it is still green when many other herbs have died or gone into dormancy. Foliar application of a glyphosate herbicide can be made in late fall to minimize damage to other plants. Follow-up treatments may be necessary over two or three years to get



Garlic Mustard (*Alliaria petiolata*)

For more information, contact the Department of Conservation and Recreation or the Virginia Native Plant Society.



Department of Conservation & Recreation

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target plants that were missed as well as new sprouts. Glyphosate herbicides are recommended because they are biodegradable, breaking down into harmless components on contact with soil. However, glyphosate is a nonselective, systemic herbicide and will affect all green vegetation. To be safe and effective, herbicide use requires careful knowledge of the chemicals, ap-

propriate concentrations, and the effective method and timing of their application. For more information on herbicide use, contact a natural resource specialist or agricultural extension agent.

### References

Kennay, J., G. Fell, and V. Nuzzo. 1990. Garlic Mustard. Vegetation Management Guideline 1(10). Illinois Nature Preserves

Commission.

Fernald, M. 1950. Gray's manual of botany. 8th ed. American Book Co. New York.

Harvill, A., et. al. 1992. Atlas of the Virginia Flora. Virginia Botanical Associates. Burksville.

Nuzzo, V. 1991. Experimental control of garlic mustard in Northern Illinois using fire, herbicide and cutting. Natural Areas Journal 11(3):158-167.

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