



Contact: Stephen Miller
Telephone: 814/723-5180, X198

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FOR IMMEDIATE RELEASE

GARLIC MUSTARD INVADING YOUR NATIONAL FOREST

How to Help Stop the Spread of Garlic Mustard!

Garlic mustard is not a condiment of garlic and mustard, but is a highly invasive, non-native plant (*Alliaria petiolata*). Its heart-shaped leaves give off an odor of garlic when crushed, and the plant is in the mustard family of plants (Brassicaceae). Garlic mustard was first noticed in the United States in 1868 at Long Island, New York, and probably introduced from Europe by settlers for food or medicinal purposes.

Once a garlic mustard seed has sprouted, the first-year plants appear as a rosette (circle) of green leaves close to the ground. These rosettes may remain green through the winter and will develop into mature flowering plants the following spring. In the spring, garlic mustard produces button-like clusters of small white flowers, each with four petals in the shape of a cross. The second-year flowering plants of garlic mustard are one to three feet tall once seeds are produced and they die typically by late June.

Garlic mustard thrives in shady, damp areas in river floodplains, forests, roadsides, and edges of woods and trails, but can also be found in drier soils and openings. It is a major threat to the survival of native plants and wildlife because garlic mustard does not provide food for insects or small mammals like the leaves, pollen, nectar, fruits, seeds and roots of native plants. Garlic mustard particularly interferes with the egg development of a rare native butterfly called the West Virginia white butterfly.

Garlic mustard spreads rapidly and outcompetes native plants. A single plant produces thousands of seeds, which scatter several feet from the parent plant. Garlic mustard also produces a phytotoxic (plant-killing) chemical that inhibits the growth of other plants. Although water may transport seeds, long distance dispersal is most likely aided by human activities and wildlife. White-tailed deer prefer native plants to garlic mustard, and may help to expand the range of garlic mustard by removing native plants and exposing the soil and seedbed through trampling. Garlic mustard likes to take over recently disturbed areas, where it monopolizes the sunshine, water, food, and space for other flowers. Toothworts, trout lilies, spring beauties, and trilliums lose growing space to the aggressive garlic mustard.

WHAT CAN YOU DO TO HELP PREVENT THE SPREAD OF GARLIC MUSTARD? The most important thing is to be committed. Seeds of garlic mustard can live in the soil for five years, so even if you get rid of one year's growth of garlic mustard, four more years worth of seed are in the soil. Hand removal of garlic mustard plants can be successful in small areas, particularly if native plants are nearby that can take up the 'space'.

Hand Removal: The goal in hand removal of plants is to pull the plant from the ground before the seeds develop. Remove the plant with its entire root system because new plants can sprout from root fragments. When the soil is moist, grasp low and firmly on the plant and tug gently until the main root loosens and the entire plant pulls out. Pulled plants should be contained in the infested area by bagging



them or allowing them to dry out and burn them. For larger infestations, flowering stems can be cut at ground level to prevent seed production. Stems cut too high may still produce flowers.

Chemical Removal: Several infestations can be controlled by applying 1-2% active ingredient solution of herbicide (glyphosate) to the foliage during late fall or early spring. At these times, most native plants are dormant, but garlic mustard is green and vulnerable as long as there is no snow cover and the temperature is greater than 35°F. Glyphosate is a nonselective herbicide that will kill non-target plants if it comes into contact with them. Exercise caution during application, and do not spray so heavily that herbicide drips off the target plants.

Use herbicides wisely. Always read the entire label carefully, follow all mixing and application instructions, and wear all recommended protective gear and clothing. Contact the Pennsylvania Department of Agriculture for additional herbicide use information.

Notice: Mention of herbicides does not constitute endorsement of any product.

Regardless of the control method employed, annual monitoring is necessary for a period of at least five years to ensure that seed stores of garlic mustard have been exhausted.

For more information on garlic mustard and other invasive plants contact April Moore, Allegheny National Forest, amoore02@fs.fed.us or 814-723-5180, X231, or check out the following websites:

<http://www.fs.fed.us/invasivespecies> - general information

<http://www.invasiveplants.net> – general information

<http://tncweeds.ucdavis.edu> – general information

<http://www.nps.gov/plants/alien/fact/pdf/alpe1.pdf> – garlic mustard

<http://www.neartica.com/butter/plate3/Pvirgin.htm> - butterfly photos

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Trillium battles garlic mustard along the Tionesta Creek near Henry's Mills.



Photo by: April Moore, USFS