

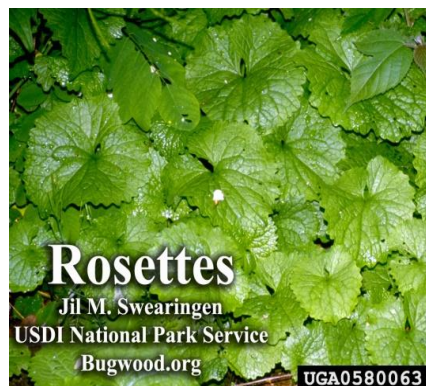


**Noxious and Invasive Weed Program - <http://www.mda.state.mn.us/weedcontrol>**

**Restricted Noxious Weeds**

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

**Noxious Weed Classification** – Garlic mustard is listed as a Restricted Noxious Weed in Minnesota. Transportation,



propagation, or sale of this plant is prohibited except as provided in Minnesota Statutes, Section 18.82. Landowners are encouraged to control this species on their properties.

**Origin** – Native to Europe

**Impacts** – Garlic mustard has had a significant impact on forest understory habitats in Minnesota. Due to its ability to aggressively spread, outcompete important native forest understory species, and create large monocultures, many ecologically important plant communities are being displaced. Habitat suitability for native animals that rely on invaded landscapes for food and shelter can be severely altered.

**Description** – Early season biennial herb with alternate triangular (upper) and heart-shaped (lower and rosette) coarsely toothed leaves that produce an onion or garlic scent when crushed. Low-lying



rosettes are produced from seeds the first year, staying green throughout the winter. During the second year, the rosettes mature producing erect stalks – 1 to 3 ft. tall – where small white 4-petaled flowers (in the shape of a cross) cluster at the top of stems. In Minnesota, garlic mustard is generally the only white-flowered woodland species of its height blooming in May. Following flowering, slender seed capsules (1 – 2 ½ inches long) develop and produce a single row of oblong black seeds. Seeds can remain viable in the soil for up to five years.



**Habitat** – Garlic mustard typically invades woodlands and riparian forested habitats. It can also be found along forested roadsides, trails, and waterways. Garlic mustard will invade disturbed areas, but will also spread into high quality woodland habitats.

In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651/201-6000. TTY users can call the Minnesota Relay Service at 711 or 1-800-627-3529. The MDA is an equal opportunity employer and provider.

**Distribution in Minnesota** – Garlic mustard is found throughout much of the southern half of Minnesota and continues to spread into northern Minnesota forests, including the Chippewa and Superior National Forest.

**Control and Management** – Garlic mustard is a biennial and only reproduces by seed. The key to successful management is to eliminate seed production in maturing second year plants and to continually monitor populations for several years until the seedbank has been exhausted. Both early spring and fall management works the best.



Small patches of garlic mustard can be hand-pulled in the early spring prior to or at flowering. Flowering in Minnesota occurs in mid-late May depending on the temperatures and weather conditions for a given spring. It is important to remove the entire root system since new shoots can re-sprout from root fragments left in the soil. Root removal is easiest when the soil is moist. In case root fragments are left behind, be sure to recheck the site for several weeks following hand removal to ensure that no re-sprouting has occurred. If plants are hand-pulled prior to flowering, plant material can be composted off-site. However, if flowering has occurred, it is best to compost plants on site since there could be danger of contaminating community compost sources with garlic mustard seeds.

Larger patches can be cut at the ground level prior to or at flowering with a weed whip or a lawn mower, depending on the terrain or layout of the landscape. It will be necessary to recheck the site periodically to determine if further cutting of re-growth is required. Mowing is not recommended if seedpods are present because it will disperse seeds.

**Chemical control** using broadleaf herbicides can be effective on large infestations in the early spring before flowering and late fall. Late fall applications of herbicide can be applied after many of the other forest understory plants are dormant, thus reducing non-target impacts. Early spring applications should consist of spot spraying specific plants and or infestations to limit non-target impacts. If using herbicides, check with your local University of Minnesota extension agent, co-op, or landscape care expert for assistance and recommendations. There are several businesses throughout MN with state-certified herbicide applicators that can be hired to perform chemical applications for garlic mustard and other noxious weed species.

### **PERSISTENCE IS THE KEY!**

***Garlic mustard is an aggressive perennial that invades disturbed and undisturbed forest ecosystems. It is a prolific seed producer but can be managed by preventing seed production of plants over several years. Managing this species takes a strong commitment once it becomes established.***