Maryland DNR Forest Service
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# Forest Pests

## Invasive Plants and Insects of Maryland

Invasive plants and insects can be problematic for forest landowners. From vines that take over disturbed areas, forest edges, and tree canopies to insects that defoliate and girdle trees, these pests not only decimate the natural ecosystem, they are difficult to control and can be expensive to eradicate. This informational sheet discusses the vine commonly known as English ivy.

# English Ivy (*Hedera helix* (L.))


*Forest & Kim Starr, Starr Environmental, Bugwood.org*

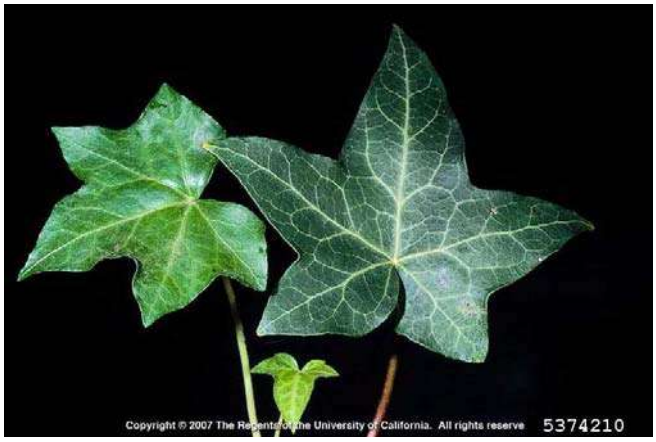
**DESCRIPTION**

English ivy is an evergreen vine from the Ginseng (Araliaceae) family. It is a climbing vine capable of reaching heights of 90 feet, given the structure it is climbing on. Leaves are alternating, waxy or leathery, and green with white veins. Juvenile leaves are dark

green and have 3-5 lobes, while mature leaves are light green and, if ready to flower, often have no lobes. Mature leaves produce pale greenish-yellow flowers in the fall. Blackish-purple fruits form that contain 1 to 3 stone-like seeds. Birds typically feed on the fruit, although it is eaten in small amounts due to its slight toxicity. Humans ingesting the leaves or fruit have been known to present a wide range of symptoms which include: upset stomach, diaherria, lack of coordination, muscle weakness, fever, or even coma. Also, persons with sensitive skin have suffered severe skin irritation after coming in contact with sap from inside the leaves.

## ORIGIN & SPREAD

English ivy is native to Europe, western Asia, and northern Africa. It was introduced to the U.S. by European immigrants. Its use as an ornamental vine along homesites, steep yards, and in houses have made the vine very popular. Over the years, English ivy has spread from an ornamental to a naturalized vine in 18 states, including Maryland.




*Joseph M. DiTomaso, University of California-Davis, Bugwood.org*

When the vine enters the forest, it grows over vegetation and regeneration. Over time, the vine climbs and topples over trees. English ivy is shade tolerant and can spread quickly across the forest floor. This alters the native ecosystem and changes the food source and habitat for wildlife. Early detection of English ivy is important so that control measures may be put into place before it takes over the entire site.


*Chris Evans, River to River CWMA, Bugwood.org*

## CONTROL OPTIONS

### *Hand Control*

Controlling English ivy is a long-term intensive process. There are manual, mechanical, and chemical methods of addressing infestations, but unless the infestation is small, usually some combination of the three is most effective. For small infestations, hand pulling and grubbing the vine and roots can be effective over the course of a couple of seasons. It is important that all plant matter pulled up be bagged and disposed of to discourage re-establishment. Remaining roots can continue to resprout throughout the season and repeated pulling and grubbing will eventually exhaust the stored energy in the roots and the vine will die.

Mulching is another option for controlling smaller infestations on the forest floor. Cover the English ivy with several inches of mulch and keep covered for at least two growing

seasons. Wood chips, grass clippings, hay, or straw are suitable options. Over the two growing seasons, the mulch will settle and additional mulch will be needed. Also, layering cardboard over the mulch may make the practice more effective.

***Equipment & Herbicide Control***

Larger infestations will usually require the use of herbicides or, in some cases, heavy equipment. Since English ivy creates dense blankets and can climb trees, equipment like skidsteers or brush hogs can be used to pull up thick areas of vines or cut the stems. Re-establishment can occur from the cut stems sprouting, seed germination, or any missed vine pieces left in the dirt. If the equipment is not completely cleaned on site, spread of the vine can occur when the equipment is transported.

*Jil M. Swearingen, USDI National Park Service, Bugwood.org*

English ivy is commonly controlled with herbicide, and as with all invasive plants, control methods have been and are being researched and documented. Table 1 shows some of suggested uses of herbicides as found in Miller, Manning, and Enloe (2010) and Swearingen et al (2010). The most commonly used herbicides for controlling English ivy include glyphosate (e.g. Accord® XRT) and triclopyr (e.g. Garlon® 4). The following methods are some of the most common ways of applying herbicide to the vine.

**Foliar Spray Method**

This method is common for very large infestations where there are no other desirable species. Generally, an herbicide solution is sprayed on the foliage just enough to wet it, not drip. The herbicide is absorbed through the leaves and is carried to the root system. Use of a surfactant is recommended to aid with absorption through the leaves. If conditions are right, spraying during the winter is a good way to minimize damage to desired plants.

**Cut Stem Method**

This method is usually used for controlling large tree-climbing vines. Simply cut the vine at ground level and apply the herbicide directly to the rooted section of vine. This is generally done with a paint brush or plastic spray bottle. Once applied, the herbicide is absorbed throughout the root system.

**Basal Spray**

Large tree-climbing vines may also be controlled by applying herbicide directly to the stem. Basal sprays are herbicides mixed with oil and a penetrant that is applied to the

lower 12 – 20 inches of the stem. Always read the herbicide label to ensure that the correct oil and penetrant are used. Some herbicide products, such as Pathfinder® II, are already mixed and are ready to be applied.

## SUMMARY

When dealing with English ivy, it is important to remember that these applications will not completely control the infestation on the first attempt. Several attempts may be needed over several years. When viable, seeds may germinate in the soil for a couple of years and pieces of vines or roots may take hold and begin to grow vines again.

**Table 1. Herbicide Suggestions for Controlling English Ivy Infestations.**

| Application Method | Active Ingredient | Brand Name | Percent Solution | Time of Year |
|---|---|---|---|---|
| Foliar Spray | Triclopyr | Garlon® 3A | 3-5% in water and surfactant | July to October |
| Foliar Spray | Triclopyr | Garlon® 4 | 3-5% in water, and surfactant | July to October |
| Foliar Spray | Glyphosate | Accord® XRT | 3-5% in water, and surfactant | July to October |
| Cut Stem (large vines) | Triclopyr | Garlon® 3A | 3-5% in water and surfactant | July to October |
| Cut Stem (large vines) | Triclopyr | Garlon® 4 | 3-5% in water and surfactant | July to October |
| Cut Stem (large vines) | Glyphosate | Accord® XRT | 5% in water and surfactant | July to October |
| Basal Spray (large vines) | Triclopyr | Garlon® 4 | 20% in a basal oil product | July to October |
| Basal Spray (large vines) | Triclopyr | Pathfinder II® | Undiluted | July to October |

Use pesticides wisely. The information in this sheet is intended to illustrate methods that are currently being practiced and does not endorse or promote any of the herbicide products listed. Please be sure to read herbicide labels, even if you have experience with the herbicide, as labels are updated frequently. All information in this sheet is based on the information of the herbicide labels at the time of printing. Please contact the Maryland Department of Agriculture (MDA) if you have any questions about pesticides. The MDA website (www.mda.md.state.us/plants-pests) contains a searchable pesticide database where you can search for pesticides, applicators, dealers, and businesses.

## REFERENCES

Miller, James H.; Manning, Steven T.; Enloe, Stephen F. 2010. A management guide for invasive plants in southern forests. Gen. Tech. Rep. SRS–131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 120 p.

Swearingen, J., B. Slattery, K. Reshetiloff, and S. Zwicker. 2010. Plant Invaders of Mid-Atlantic Natural Areas, 4th ed. National Park Service and U.S. Fish and Wildlife Service. Washington, D.C. 168pp.