

ENGLISH IVY

Hedera helix

English ivy (*Hedera helix*) and Irish ivy (*H. hibernica* or *H. helix hibernica*) are very similar plants in the Ginseng family (*Araliaceae*), and both are referred to as English ivy in this bulletin.

THE IMPACTS

When English ivy escapes from landscaped plantings it often establishes and spreads in shaded forested lands or natural areas. There it can impact all three zones of a deciduous or conifer plant community — the forest floor, the shrub layer, and the canopy.



English ivy covering a mature tree in the UK. (Photo by Gilbert Addison.)

- English ivy reaches the tree canopy and shades out deciduous foliage during summer months, suppressing the host tree.
- Dense ivy cover deprives the bark of normal contact with air and microorganisms.
- English ivy adds substantial weight to a tree. The estimated weight of ivy removed from a single tree in Olympic National Park (Washington) was 2,100 pounds.
- Mature trees covered with ivy are top-heavy and more likely to blow down.
- Thick ivy mats can accelerate rot and deteriorate structures.
- English ivy changes the natural succession patterns of forests.



Ivy quickly begins to create thick mats that smother understory plants and tree seedlings.

- Ivy limits understory regeneration by blocking sunlight and shading out plants.
- The fast-growing ivy competes for water and nutrients.
- The shallow mat-like root system make it a poor choice for erosion control, and contributes to erosion in some cases.
- English ivy provides hiding areas for rats and other vermin.

IVY CULTIVARS

More than 400 different English ivy cultivars vary in leaf shape, size, color, and growth form. While many cultivars are sold as ornamental plants, recent research indicates that several cultivars are invasive and should be avoided as landscape plants.

The U.S. Forest Service, National Park Service, Fish and Wildlife Service, and Environmental Protection Agency (EPA) have all identified English ivy as an invasive species in the Mid-Atlantic States that should be avoided to prevent its escape and infestation.

WHAT IS A WEEDY CULTIVAR?

- English ivy is invasive when growing in areas where it was not planted.
- It is invasive when thick mats or vines inadvertently cover plants, trees, or structures.
- It is invasive when producing flowers and seeds, then rapidly spreading on its own.



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 Harpers Ferry, West Virginia

WHAT IS ENGLISH IVY?

This woody, evergreen perennial grows as a vine (climbing or creeping) or as a shrub. English ivy can photosynthesize year-round, and is capable of growth for 9 to 10 months of the year. Older vines can grow over 90 feet long with stems reaching one foot in diameter. English ivy is long-lived, with reports of one plant over 400 years old.

Adventitious roots are formed at the leaf nodes of immature plants, and they help ivy climb by adhering or anchoring to surfaces — they do not penetrate the surface. Ivy tolerates a wide range of light conditions, but growth is stimulated by light.

The entire plant contains slightly toxic compounds. Berries and leaves are toxic to people or livestock if eaten in large quantities. The sap can cause dermatitis and blistering.

Hedera is native to Europe and Asia, and was widely introduced into temperate parts of the world. It has a long history as a garden plant.

There are two distinct forms and growth stages of English ivy — the juvenile and mature forms.



Leaves of juvenile English ivy plants (left) and mature plant (right).

Juvenile form

- Leaves are deeply 3- to 5-lobed, light green, and alternately arranged.
- Young shoots and leaves are hairy.
- Stems produce adventitious roots at the nodes.
- Immature plants do not produce flowers.
- Juvenile stage lasts about 10 years.

Mature form

- Leaves are unlobed or slightly lobed, dark green, and leathery, and spirally arranged.
- English ivy matures to produce flowers when it begins to grow vertically.
- Mature plants do not produce adventitious roots.

REPRODUCTION AND DISPERSAL

During the juvenile stage ivy only spreads vegetatively. Any stem fragments in contact with the soil can regenerate growth. Mature plants continue with a slower vegetative spread, but they also produce flowers and spread by seed. Clusters of small greenish-white flowers are usually produced in the fall.

The fruits are high in fat, and they are available in early spring when food is still scarce. Many birds, including blackbirds, European starlings, and American robins, disperse the seeds.



When these ivy drupes (berry-like fruits) mature in spring, they will turn black or a dark purplish color. (Photo by Black Cat Ivy, Washington, D.C.)

CONTROL REQUIREMENTS

English ivy is an “Undesirable Species” in Harpers Ferry, meaning it is not recommended for planting on private property and cannot be planted on public property. The Harpers Ferry Tree Committee recommends control and containment of existing populations and discourages new plantings.

PREVENTION

When planting an area, consider alternative ground covers. Alternatives include, but are not limited to, the following native plants: wild strawberry (*Fragaria vesca*), bunchberry (*Cornus canadensis*), woodsorrel (*Oxalis spp.*), kinnikinnick (*Arctostaphylos uva-ursi*), wild ginger (*Asarum canadense*), and others. **NOTE:** Although some genera contain native species that may be recommended, they may also contain other species that are considered invasive. Please contact local nurseries or native plant societies for more suggestions.

PRIORITIZE YOUR CONTROL PLAN

Consider the amount of ivy to be removed and the site you are working on. Also consider the on-site vegetation you want to keep, the time frame for removal, and the labor force. Be persistent with your control plan and with follow-up.

- First remove the vertical growing plants to stop flower production and further spread by seed.
- When working in steep areas, the site needs to be considered for slope and any surface erosion.

MANUAL CONTROL

Even though it is labor intensive, the most effective control method is manual removal. Depending on the site, several other manual control options are also effective. **NOTE:** *Remove all cut stems from soil contact.*

Wear gloves and protective clothing. The sap can cause a reaction in some people.

- Remove flowers or seed heads you can reach.
- Hand pull or dig out accessible plants.
- Mowing is effective in areas that are mowed regularly. Clippings need to be removed.
- Apply an 8" (20 cm) thick layer of mulch. The plants can be cut or removed, then mulched, or a mulch layer can be directly applied on top of plants. This is not an option in steep areas.



Cut the vines or pry them off of trees with the aid of a tool at a comfortable height. This will kill the upper vines, but the lower, rooted plant needs to be removed. (Photo by Jen Fariello.)



Old arborized vines can be up to 6" (15 cm) in diameter and are challenging to remove without damaging the tree's bark. (Photo by Black Cat Ivy, Washington, D.C.)

CHEMICAL CONTROL

Controlling established English ivy with herbicides is not very successful because of the waxy leaves. There is also a risk to non-target plants from runoff of the waxy leaves. English ivy is considered tolerant of many commonly used herbicides. Some success has been achieved by carefully selecting herbicides and focusing applications on young, actively growing plants. If herbicides are used, make sure their use is allowed at your site. Certain herbicides can not be used in aquatic areas or their buffers. When using an herbicide, follow all label directions.



This pine was being smothered (left), but after removal of the ivy, it is now free to breathe (right). (Photo by Black Cat Ivy, Washington, D.C.)

DISPOSAL — FOR SMALL AMOUNTS

Remove and dispose as yard waste. Backyard composting is only recommended when the rootlets and the cut stems are dead. Otherwise, the ivy stems will root in the other material as it decomposes.

English ivy clippings will break down to 1/5 of their size when left to dry out and die.

- Expose the stems and rootlets to the air for 6-7 days until they desiccate.
- Pile the clippings under a covered area, then cover the clippings with a tarp.
- Pack the ivy in black plastic bags and leave in a sunny spot, rotating to heat all the plants.

DISPOSAL — FOR LARGER AMOUNTS

For large projects where the removed ivy can remain on site and out of sight, the cut stems can be balled or stacked on top of itself and left on site. Lift the ivy piles to keep the cut stems and rootlets from soil contact, or regularly turn the clippings to keep exposing the rootlets to the air.

- Pile the ivy and let it dry out or decompose. Cover the piles to speed the process.
- Wrap the pulled vines into medium-sized bundles, then leave them on-site to dry up and die.



Although English ivy can be an attractive plant, it can also be a nuisance. Consider alternative native groundcovers instead. *(Photo by International Environmental Weed Foundation, Sydney, NSW, Australia.)*

For more information on English ivy and other invasive species, visit these websites:

Mid-Atlantic Exotic Pest Plant Council

<http://www.ma-eppc.org>

National Invasive Species Information Center

<http://www.invasivespeciesinfo.gov>

Plant Conservation Alliance — Alien Plant Working Group

<http://www.nps.gov/plants/alien>

United States National Arboretum: Invasive Plants

<http://www.usna.usda.gov/Gardens/invasives.html>

West Virginia Division of Forestry

<http://www.wvforestry.com>

West Virginia Native Plant Society

<http://www.wvnps.org>

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