

FOR-180

Woodland Invasive Plant Management Series: Wintercreeper

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Wintercreeper was introduced from China in the early 1900s as an ornamental plant, valued for its evergreen leaves and vigorous growth. Unfortunately, it easily escapes the confines of the garden and outcompetes native vegetation for space, light, nutrients, and moisture in woodland settings. Wintercreeper is highly adaptable to its environment and the same plant can grow in several different forms. As a vine it can climb vertically into trees and can overtop small ones, causing decreased vigor or death. It can also grow in a shrub-like form, especially when growing over things such as an old fence or stump. Wintercreeper can also grow along the ground, forming a dense carpet that inhibits growth of other plants. Once established, wintercreeper can be hard to eradicate and management of small patches is much easier than waiting until the infestation has spread.

IDENTIFICATION

Form:

- Wintercreeper has several growth forms and can look different depending on how it is growing:
 - It can grow as a vine, capable of growing 40 to 70 feet high up trees and into canopies (Fig. 1).
 - It can form a dense groundcover, excluding the growth of other species (Fig. 2).
 - It can grow as a small shrub, up to 3 feet in height, or appear to grow as a larger shrub or small tree if growing over something that is obscured by its leaves, such as a dead tree or fence.

Leaves:

- Wintercreeper's leaves are evergreen, opposite, about 1-2½ inches long, broadly oval, thick, and shiny dark green with very fine teeth on the leaf margins (Fig. 3).
 - Wintercreeper leaves can look different depending on the growth form, even on the same plant. When growing as a vine or shrub, leaves are typically larger, thinner, and lighter in color. When growing as a ground cover, leaves are typically smaller, thicker, and darker in color.
- Leaf veins are often white, and some plants have a light variegation on the leaves.
- There are many commercially available cultivars of

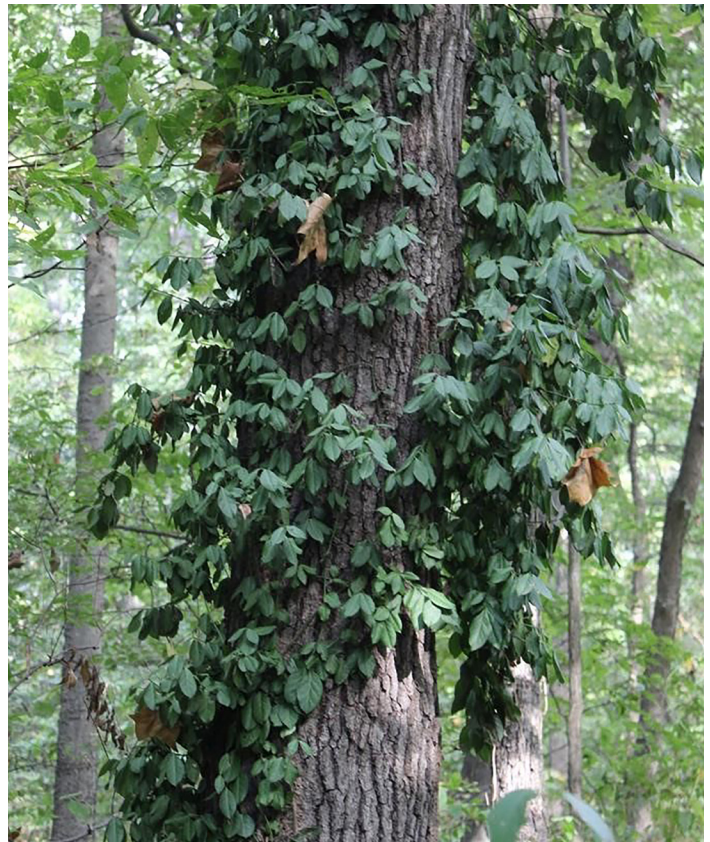


Figure 1. Wintercreeper growing as a vine up a tree.
Photo credit: Chris Evans, University of Illinois, [Bugwood.org](https://bugwood.org)



Figure 2. Wintercreeper growing as a ground cover, carpeting the forest floor.
Photo credit: Ellen Crocker, University of Kentucky



Figure 3. An inflorescence of wintercreeper flowers, each small and with green-white petals. Photo credit: Ansel Oommen, Bugwood.org



Figure 4. Fruits of wintercreeper, outer layer cracks open to reveal seeds covered with bright orange fleshy arils. Photo credit: James H. Miller, USDA Forest Service, Bugwood.org



Figure 5. Fruits of wintercreeper, outer layer cracks open to reveal seeds covered with bright orange fleshy arils. Photo credit: James H. Miller, USDA Forest Service, Bugwood.org

wintercreeper covering a wide range of variation in leaf form, size, and color.

Fruit and flowers:

- Wintercreeper produces inconspicuous green-white four-petaled flower blooms in mid-summer, typically June to July (Fig. 4).
- Only the climbing vine-like stems produce flowers, not wintercreeper growing as a ground cover.
- In the fall, the fruits develop and split open when ripe to expose seeds with a fleshy orange seed coat, hanging at the ends of Y-branched stems (Fig. 5).

Similar plants:

- Periwinkle (*Vinca* spp.), also invasive, has glossy leaves and is evergreen. However, flowers are purple, leaf-shape is more elliptic, and leaves are not toothed.
- There are several other species of plants in the genus *Euonymus* (both native and invasive) that occur in the region. However, these do not have a vine or carpeting growth form or evergreen leaves.

RANGE AND HABITAT

While wintercreeper is scattered throughout the eastern United States, in Kentucky it is particularly noticeable in the Inner Bluegrass region (Fig. 6). However, given its ornamental ubiquity in the landscape setting, it is likely to become problematic in many other areas. Wintercreeper is a perennial and can tolerate a wide variety of growing conditions, from full sun to deep shade and acidic to basic soils. It takes advantage of openings in the forest canopy from disturbances such as windfalls, ice storms, harvest, or even management of another invasive plant, such as bush honeysuckle. It commonly proliferates in the conditions created from removing dense thickets of bush honeysuckle as more sunlight reaches the forest floor. Often, wintercreeper is already present as scattered individuals in the low light conditions, seemingly biding its time for its “moment in the sun.”

THREAT

Wintercreeper has a range of negative impacts that vary by its growth form. When growing as a dense ground cover, it can eliminate native wildflower species from the understory. Its thick carpet of leafy vines impedes recruitment of trees and shrubs as well. When growing as a vine, it can overtop trees, decreasing their vigor, and making them more susceptible to windthrow.

SPREAD

Spread through the ornamental trade and widespread use as a landscape plant are likely the most significant factors in wintercreeper introduction to new areas. Once established, and when growing as a vine, wintercreeper produces abundant seeds that are eaten by birds and other small animals and can be spread long distances. Locally, wintercreeper can also rapidly spread as a groundcover via a system of trailing roots.

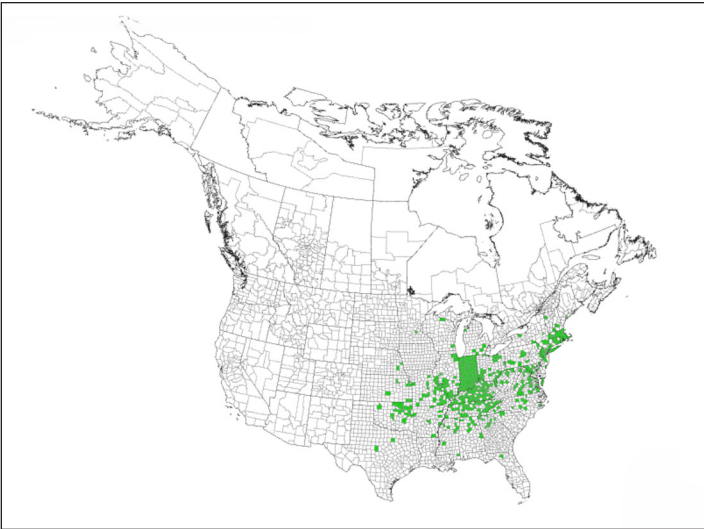


Figure 6. Map of wintercreeper distribution. Photo credit: EDDMapS. 2024. Early Detection & Distribution Mapping System. The University of Georgia Center for Invasive Species and Ecosystem Health. Available online at <http://www.eddmaps.org/>; last accessed December 20, 2024.

MANAGEMENT

There are a number of ways to control wintercreeper on your property depending on its growth form, location, and extent of infestation (see Fig. 9 and Table 1).

Vines growing up trees and shrubs:

Cut stump herbicide application:

- The first order of business with large-scale infestations is to cut all stems that are climbing into trees so that flowering and seed production are eliminated. Glyphosate or triclopyr in a 25 percent solution is effective for preventing resprout of the cut vines. Once the threat of seeding has been eliminated, concentrate on the vine mats. A cut stump herbicide application (cutting vines and treating the cut surface with concentrated herbicide) can be performed throughout much of the year, avoiding spring when wintercreeper puts out a flush of new leaves.

Follow-up:

- Patience is needed to see results from herbicide treatments. The effect is not immediately noticeable and may take months to appear. Retreating will be necessary in the following several years because it is hard to get complete coverage with the stem densities typically encountered. In addition, seed remains viable in soil for many years and

Figure 7. Timeline for wintercreeper management practices.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hand Pulling												
Foliar Application												
Cut Stump												
Solarization (2 years)												

*A note that this is a general calendar of recommended wintercreeper management practices based on plant development at different times of year. Since timing varies in different locations (and in different years), it may not apply precisely to wintercreeper in your specific location.

Ground cover:

Mechanical removal:

- If the infestation is small and you don’t wish to use herbicides, hand-pulling or grubbing with a mattock may be suitable, especially for environmentally sensitive areas. Be sure to remove the entire plant because any portion of the root left behind can resprout. For large accessible patches, mowing with a sicklebar and raking up and disposing of the cut material. Re-sprouts can be treated with foliar applications of glyphosate or triclopyr.

Herbicide application:

- Because of wintercreeper’s waxy leaves, foliar herbicide (Fig.8) solutions typically also benefit from the addition of surfactant and seed oil. Application is typically conducted in the late fall or winter, when other plants have dropped their leaves and wintercreeper remains leafed out, to minimize potential non-target damage.

Solarization:

- Heavy black plastic sheeting may be used to smother solid mats of wintercreeper. However, keep in mind that plastic must be kept on the patch for two years to ensure success and will also kill over vegetation if there is any intermixed.

Other:

- Other alternatives to herbicide treatment have been tested include burning (typically conducted with a propane torch during the winter months when other plants are dormant) and steam treating (with a large-scale professional steamer as smaller individual units have proven to be ineffective). However, these are typically less effective and do not kill roots which will send up new shoots if not managed repeatedly. Because of this, consider these approaches for small-scale experimental settings rather than large scale field implementations.

Table 1. Commonly Used Herbicides for Wintercreeper¹

Active Ingredient	Common Brands	Treatment
glyphosate	Roundup™, Accord™, and others	Cut vines growing up trees allow to resprout and spray new foliage with 25% solution of concentrate (40-50% active ingredient). Weed eat or mow ground mats of wintercreeper, allow to resprout and spray new foliage with 2% solution. Or weed eat mats and apply herbicide to damaged foliage.
triclopyramine	Garlon 3a™	For foliar application of ground covering vines, consider a 3% rate with methylated seed oil and a non-ionic surfactant also added (following label directions). Weed eat or mow ground mats of wintercreeper, allow to resprout and spray new foliage with 2% solution. Or weed eat mats and apply herbicide to damaged foliage. This formulation is approved for use in aquatic areas.
triclopyrester	Garlon 4™	For foliar application of ground covering vines, consider a 3% rate with methylated seed oil and a non-ionic surfactant also added (following label directions). Volatilization is a serious problem for foliar applications of the ester in summer. Use a 25% solution on the cut stumps during the summer.
triclopyrcoline	Vastlan™	This newer formulation of triclopyr is approved for use in aquatic areas.
picloram/ 2,4-D	Pathway™	On uncut foliage July to October apply 3% solution with surfactant. Repeat applications may be necessary. ²

Cautions:

- Wintercreeper, typical of many vines, is difficult to control and may require more than one application. The waxy nature of mature leaves is one factor that must be addressed either by adding surfactant or by treating newly formed leaves or damaging older leaves prior to application.
- Make sure that you follow all label directions. Mix and apply the chemical in the proper manner and at the recommended times. Protect your eyes during mixing and application (where necessary) and check label for personal protective equipment and other precautions.

¹ Other herbicide brands can be used for wintercreeper control. The herbicides that are listed are those that have been commonly used or recommended.

² From Nonnative Invasive Plants of Southern Forests, USDA Forest Service, SRS GTR-62 by James H. Miller.

birds will readily reintroduce seeds from any neighboring populations. When managing bush honeysuckle or other invasive shrubs, also scout your woodland for wintercreeper as it can respond rapidly to fill in the light gaps left by the removal of these shrubs. Retreating will be necessary in the following several years because it is hard to get complete coverage with the stem densities typically encountered. In addition, seed remains viable in soil for many years and birds will readily reintroduce seeds from any neighboring populations. When managing bush honeysuckle or other invasive shrubs, also scout your woodland for wintercreeper as it can respond rapidly to fill in the light gaps left by the removal of these shrubs.

NATIVE ALTERNATIVES TO WINTERCREEPER:

Ground covers:

- Wild ginger, *Asarum canadense*: Dense, low-growing, dark green, native ground cover.
- Native sedges (e.g. *Carex pensylvanica*): Dense, low-growing, good choices for dry, shady locations.
- Native strawberry, *Fragaria virginiana*: Low-growing ground cover with flowers and edible fruit.
- Allegheny pachysandra, *Pachysandra procumbens*: Low-growing ground cover native to the southeastern U.S

Vines:

- Pipevine, *Aristolochia macrophylla*: Deciduous climbing vine with attractive leaves and interesting flowers.
- Crossvine, *Bignonia capreolata*: Large climbing woody vine with attractive trumpet-shaped flowers.
- Coral honeysuckle, *Lonicera sempervirens*: Climbing woody vine, semi-evergreen leaves, attractive trumpet-shaped flowers.
- Purple passionflower, *Passiflora incarnata*: Herbaceous vine with attractive flowers (can be aggressive in the garden).



Figure 8. Foliar spray
Photo credit: Jess Slade, Kentucky Natural Lands Trust

RESOURCES

If you have questions on invasive plant identification or management, contact:

- Your local Kentucky Division of Forestry forester: <https://eec.ky.gov/Natural-Resources/Forestry/Documents/2018%20reorg%20field%20office%20contact.pdf>
- Your county extension agent: <http://extension.ca.uky.edu/county>
- Kentucky Invasive Plant Council: <https://kyinvasiveplants.wildapricot.org/>

If you are looking for assistance in managing your invasive plants, contact:

- A consulting forester: <https://kacf.org/>
- A technical service provider: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/ky/technical/cp/tsp/>
- The Natural Resource Conservation Service has several cost-share programs that support invasive plant management, contact your local agent for more information: <https://offices.sc.egov.usda.gov/locator/app>

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This series is edited by Drs. Ellen Crocker and Jacob Muller, University of Kentucky, Forestry and Natural Resources.

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