

Forest Health



One of Kentucky's Least Wanted Weeds: Winter Creeper

By Joyce Bender

Kudzu may be known as “the vine that ate the South,” but here in Kentucky a very aggressive evergreen vine called winter creeper or climbing euonymus, *Euonymus fortunei*, is devouring our woodlands. The plant is particularly noticeable in the Inner Bluegrass region, with scattered populations observed throughout central Kentucky and west to McCracken County. You can expect this plant to appear in a woodland near you if it is not there already.

Winter creeper was introduced from China in the early 1900s as an ornamental. Unfortunately, it escaped the confines of the garden and now outcompetes native vegetation for space, light, nutrients, and moisture. The plant is well suited for invasion as birds spread its seeds, and it can also reproduce vegetatively. It forms a very dense ground cover that eliminates native wildflowers. Its thick carpet of leafy vines impedes recruitment of trees and shrubs as well. Winter creeper can grow as a shrub to about three feet. As a vine it can climb vertically for 40 to 70 feet into trees and can overtop small ones, causing decreased vigor or death. Winter creeper is a perennial and can tolerate a wide variety of growing conditions from full sun to deep shade and acidic to basic soils.

Winter creeper is fairly easy to identify. The plant's leaves are opposite, broadly oval, thick, and shiny dark green with very fine teeth on the leaf margins. The veins are often white, and some plants have a light variegation on the leaves. Only the climbing stems produce flowers, and these appear as small clusters of inconspicuous yellow-green blooms in June and July. In the fall, the ripe fruits are reddish capsules hanging at the ends of Y-branched stems. Another plant that might be mistaken for it is periwinkle (*Vinca* spp.) because it too has opposite, glossy leaves. However, periwinkle leaves are more elliptic, and the leaf margins are entire. When periwinkle is in flower, it is unmistakable; its petals are lavender.

Openings in the forest canopy from disturbances such as windfalls, ice storms, or mechanical removal of the overstory can hasten the spread of this vigorous invader. Many folks removing dense thickets of bush honeysuckle have reported a rapid increase in winter creeper stem densities as more sunlight reached the forest floor after the brush clearing. Often, winter creeper is already present as scattered individuals in the low light conditions, seemingly biding its time for its “moment in the sun.” As a cautionary note, scout your woodland for winter creeper prior to initiating any forest management practices. That way you will be prepared to respond to a potential release before it gets out of hand.

There are a number of ways to control winter creeper on your property. 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. If you have an extensive infestation and still don't want to use herbicides, the staff at the University of Kentucky Arboretum has had success using heavy black plastic sheeting to smother solid mats of winter creeper where there is no chance of harming any native vegetation. The plastic must be kept on the patch for two years to ensure success.

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



Winter creeper

Photo courtesy: James H. Miller,
USDA Forest Service,
www.forestryimages.org



Immediately following treatment with a string trimmer, apply two percent solution of glyphosate or triclopyr for best results. Photos courtesy: Kentucky State Nature Preserves Commission.



Winter Creeper

Kentucky Forest
Health Task Force



Using a string trimmer over leaves and stems can increase herbicide absorption. Photo courtesy: Laurie Thomas, Lexington-Fayette Urban County Government McConnell Springs

cut vines. Once the threat of seeding has been eliminated, concentrate on the viney mats. Winter creeper is almost overwhelming for staff and volunteers at McConnell Springs in Fayette County. Techniques for containment of large areas there include mowing accessible patches with a sicklebar and raking up and disposing of the cut material. Re-sprouts can be treated with foliar applications of two percent solutions of glyphosate or triclopyr. Another method showing good results is to run a string trimmer over the leaves and stems so that the leaf surface is injured and its waxy covering is broken open. Absorption of herbicide is greatly increased across the cut surfaces.

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 year because it is hard to get complete coverage with the stem densities typically encountered. If you follow these guidelines, you may be successful in curtailing the spread of this serious threat to Kentucky's forests.

Table 1. List of Some Commonly used Herbicides for Winter Creeper. ¹

Active Ingredient	Common Brands	Treatment	Cautions
glyphosate	Roundup, Accord, and others ²	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 winter creeper, allow to resprout and spray new foliage with 2% solution. Or weed eat mats and apply herbicide to damaged foliage.	Winter creeper, 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.
triclopyr - amine	Garlon 3a	Weed eat or mow ground mats of winter creeper, allow to resprout and spray new foliage with 2% solution. Or weed eat mats and apply herbicide to damaged foliage.	Make sure that you follow label directions. Mix and apply the chemical in the proper manner and at the recommended times.
triclopyr - ester	Garlon 4	Volatilization is a serious problem for foliar applications of the ester in summer. Use a 25% solution on the cut stumps during the summer.	Protect your eyes during mixing and application (where necessary) and check label for personal protective equipment and other precautions.
picloram/ 2,4-D	Pathway	On uncut foliage July to October apply 3% solution with surfactant. Repeat applications may be necessary. ³	

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

² There are currently a large number of brand names for glyphosate herbicides. Many are for use in fields or fence rows. Few such as Accord are labeled for use inside a forest (see Kentucky Woodlands Magazine Vol.1 Issue 1 for more information on glyphosate herbicides.)

³ From Nonnative Invasive Plants of Southern Forests, USDA Forest Service, SRS GTR-62 by James H. Miller.

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