(01/02/2020)

LOWER HUDSON PARTNERSHIP FOR REGIONAL INVASIVE SPECIES MANAGEMENT

BEST MANAGEMENT PRACTICES

Winter creeper

Regulated Invasive Species (*6 NYCRR § 575.3(d)(2)(lx)*)

Winter creeper (Fortune's spindle, climbing euonymus)
Euonymus fortunei (Turcz.) Hand.-Maz (*Cassine fortunei* (Turcz.) Kuntze, *Elaeodendron fortunei* Turcz. *Euonymus australoliukiuensis* Hatus., *Euonymus fortunei var. fortunei* (Turcz.) Hand-Maz., *Euonymus fortunei var. radicans* (Siebold ex Miq.) Rehder, *Euonymus gracilis* Siebold, *Euonymus hederaceus* Champ. ex Benth., *Euonymus kewensis* (Bean) Hesse, *Euonymus kiautschovicus* Loes., *Euonymus patens* Rehder, *Euonymus radicans (*Miq.) Siebold ex Miq., *Euonymus repens* Carrière, *Euonymus wensiensis* J.W.Ren & D.S.Yao, *Masakia radicans* (Miq.) Nakai)

REGIONAL STATUS

Winter creeper is a Tier 3- Established invasive species in the Lower Hudson PRISM. These species are common or abundant through most of the Lower Hudson valley but not in most of the surrounding regions.

New York State law prohibits knowingly introducing Winter creeper into a free-living state, or introducing it by a means that one should have known would lead to such an introduction. It is legal to possess, sell, buy, propagate and transport this species as long as these activities are not likely to cause its spread into public lands, public waters or natural areas.

Lower Hudson PRISM recommends:
Focus on containment and spread prevention with special attention to borders with areas uninvaded by this species and threatened conservation targets. Surveys should focus on detecting this species to help prevent spread. Target strategic management to slow the spread, as the species is likely too widespread for eradication, but many surrounding regions could be at risk if left unattended.

INVASIVENESS

New York State has assessed this species' invasiveness as H-High

IMPACTS OF THIS SPECIES

Winter creeper is tolerant of both full sun and full shade, and capable of adapting to a variety of soil conditions. Due to its rapid vegetative growth this species can quickly cover large areas, outcompeting understory competition, and smothering trees and shrubs. [(2)] This perennial groundcover also alters soil nutrients and microbiota, driving ecosystem change and paving the way for further invasion. [(5)]

BACKGROUND INFORMATION

History of Introduction

Winter creeper was introduced to North America as an ornamental around the turn of the twentieth century. [3] It is now extant in at least 24 states. [4]

Description

• Winter creeper is a member of the Bittersweet family (*Celastraceae)*

• Winter creeper is a mostly evergreen vine or sub-shrub. Stems are narrow and covered in rooting nodes which make the plant 'warty' in appearance. Most conspicuous in winter, the glossy leaves of this sprawling woody vine remain dark green and generally attached to the plant throughout the year. [5]

- **Leaves:**
  - Leaves are simple, glossy dark green, ovate in shape, and 1.5 to 2.5 inches long. Color variations exist and range from white-green to gold-green. Leaf margins are minutely toothed. Foliage generally remains on the plant unless temperatures are extremely cold. [4]

- **Flowers:**
  - Inconspicuous, four-petaled, yellow-green flowers bloom in June at the ends of branchlets. Flowers generally only develop on climbing plants. [7]

- **Fruit/Seed:**
  - Fruits are small pink-red capsules that open to reveal orange fruit conspicuously divided into four sections. [7]

Key identifying characteristics: It may be possible to confuse Winter creeper with native members of the same genus, although these species are not common in New York. Strawberry bush (*Euonymus americanus*) is somewhat sprawling when young, but matures into an upright, deciduous bush. Furthermore, this native species' flowers and fruits are five-parted, as opposed to Winter creeper's four-parted flowers and fruits. Running strawberry bush (*Euonymus obovatus*) as the name suggests may remain a procumbent vine, or mature into a small upright shrub, however, this native also has five parted flowers and fruits. [7]

Reproduction and Spread

- Winter creeper reproduces both sexually and asexually, via vegetative growth from abundant nodes along its stems. This invasive does not generally flower unless it is able to climb and access ample sunlight. Its fruit, though sparse, may be carried long distances by birds. [2]

- **Vectors:** Birds, small mammals. [2]

Habitat

• Winter creeper is most commonly reported as occurring near old home sites and disturbed areas. In the Hudson Valley it can be found at the fringes of disturbed woodlands and in waste spaces, often near seed sources such as gardens.[4]

Likelihood of naturalization: Moderate. Although Winter creeper is tolerant of a wide range of conditions, low fruiting levels may limit its spread. Furthermore, studies suggest the species is highly disturbance dependent, with most Winter creeper populations occurring near old home sites or gardens, waste spaces and the margins of disturbed natural areas. [5]

CONTROL INFORMATION

Biological Control

No biological control option is currently available.

Manual or Mechanical Control

Pulling / Digging Up: Hand pulling or digging small seedlings or plants is possible, but care must be taken to remove all the root. Winter creeper has a tendency to re-sprout from any remaining roots. (8)

Mowing: Mowing or weed whacking can prevent plants from climbing and flowering. This control method will suppress but not eradicate infestations. (8)

Girdling: Not applicable

Prescribed Fire: Low to moderate burns only top kill Winter creeper. (2)

Torching: Torching is effective in small populations or in areas where winter creeper has been treated with herbicide and re-sprouting is occurring. (2)

Prescribed Grazing: Although winter creeper is palatable to a number of wildlife species, including deer and rabbits, herbivory rarely results in plant mortality. (7)

Soil Tilling: Not advisable. Winter creeper strongly re-sprouts from the root crown or root fragments when disturbed. (9)

Mulching: Some community groups report success at killing small populations of Winter creeper with two years of thick cardboard mulching. (9)

Solarization: No information available

Hot Foam Spray: No information available

Chemical Control

The pesticide application rates and usage herein are recommendations based on research and interviews with land managers. When considering the use of pesticides, it is your responsibility to fully understand the laws, regulations and best practices required to apply pesticides in a responsible manner. At times, the pest you seek to treat may not be on a pesticide label, requiring a 2ee exemption from NYSDEC. Always thoroughly read the label of any pesticide and consult the NYSDEC or a licensed pesticide applicator with questions.

Foliar Spray: Foliar spray is very successful when used in combination with mowing or weed whacking. Weed whack plants to cut the leaves' waxy cuticle and immediately apply a 2% solution of glyphosate or triclopyr during the growing season. (8)

Cut Stump: Larger stems can be effectively controlled by cutting in spring and immediately applying a 20% solution of glyphosate or triclopyr. All treated plants should be monitored for re-sprouting in 2-3 weeks and in the following growing season. (8)

Basal Bark: Not applicable

Stem Injection: Not applicable

Pre-Emergent Spray: Not applicable

SUMMARY OF BEST MANAGEMENT PRACTICES

As with any other invasive infestation complex, large aggregations of Winter creeper are best managed via a combination of mechanical and chemical means. Hand pulling of seedlings and small plants should be accompanied by weed whacking and herbicide application of larger vines and shrubs in order to attain good control. All managed infestations should be monitored to ensure adequate revegetation of the controlled area and that re-invasion does not occur. Any new seedlings can be hand pulled.

Post treatment monitoring: Controlled populations should be revisited at least once the following season to ensure no root sprouting has occurred. As Winter creeper has the capacity to disperse over long distances, care should be taken to ensure reinvasion does not occur.

Disposal Methods

• All populations should be managed prior to seed set to reduce likelihood of regeneration. Managed material should be chipped and, once thoroughly dried, can be composted, provided no viable seed is present on plant material.

REFERENCES

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This project was contracted by the Lower Hudson Partnership for Regional Invasive Species Management using funds from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.