

How to Identify Invasive Species on NIH Campuses

In our “Featured Article,” we discussed the impact of invasive species and mentioned four invasive plants species that can be found on the NIH Bethesda campus. Below, we provide information to aid in the identification of these species. Although these species present the biggest problem to the Bethesda campus, they are certainly not the only invasive species. If you identify any invasive species on the Bethesda campus, please notify [Mr. Brandon Hartz](#) with as much detail as possible on the species location.

Canada thistle (*Cirsium arvense*)

[Canada thistle](#), also referred to as creeping thistle and field thistle, is an aggressive weed that has spread across most of the continental U.S. (except a few states in the far south, such as Texas, Georgia and Florida).¹ This plant is most commonly found on campus in full sun planting beds and natural meadows. Canada thistle spreads mainly through seed distribution or buds on its root system, which can stretch 15 feet or more horizontally and typically run just beneath the soil surface.² These extensive roots and rapid growth allow Canada thistle to outcompete native plant species.² The plant can also spread from broken root fragments, so it is crucial to remove the entire root system when dealing with this species.³ The control strategy for Canada thistle in a meadow is to simply perform mowing, whereas in a planting bed the strategy is to hand-pull the plant and root system.



Identifying Characteristics: Canada thistle has prickly stems and leaves, similar to most thistle plants, but also features a long stem that can grow up to five feet tall.³ The plant will flower in late spring or early summer with small purple flower heads.² If left unmanaged, there will likely be additional shoots nearby that have sprouted from the same root system.³

Porcelain berry (*Ampelopsis brevipedunculata*)

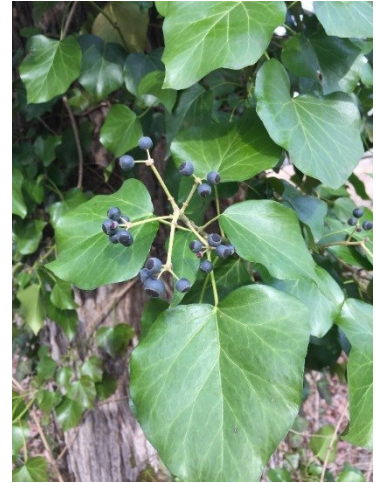
[Porcelain berry](#) is a deciduous vine of the grape family (Vitaceae).⁴ This plant has spread through most of the Northeastern U.S. and has been found as far west as Wisconsin.⁵ The vine grows well in most soils and sunlight exposures, which makes it adaptable to many ecosystems.⁵ It is most likely to be on campus along forest lines and growing on fences. Porcelain berry spreads through the local environment using tendrils to new areas through birds distributing seeds, either the berry directly or through their droppings.⁵ The best control technique for this plant is to remove it before it can produce berries and to regularly “chop it” to ground level, which is performed annually on the Bethesda campus in November.⁵

Identifying Characteristics: Porcelain berry is a vine with broad heart-shaped leaves and colorful fruit resembling grapes.⁵ The plant will have greenish-white flowers from June through August and the fruit will range in color from green to blue to purple from September through October.⁵ Key differences

between porcelain berry and grapes are the stem pith (porcelain berry is white, grape is brown) and the bark (porcelain berry bark does not peel, whereas grape bark does).⁵

English ivy (*Hedera helix* L.)

[English ivy](#) was introduced to the U.S. by European colonists in the early 1700's and then several decades ago to the NIH Bethesda campus as an ornamental source of groundcover and erosion control.⁶ This plant is an evergreen vine that has spread throughout most of the Eastern half of the U.S. and the states forming the Western coastline.⁷ English ivy is most likely to be encountered on campus in ornamental planting beds and forest areas. The vine grows along the ground, in addition to climbing nearby trees and structures.⁶ English ivy will seek to grow over trees and cover them, preventing photosynthesis and causing the tree to slowly die.⁶ Distribution to new areas is largely through birds, which spread seeds through their droppings.⁶ Since the plant only produces berries while it is climbing vertically, control methods include targeted cutting of vines imposing on buildings and trees, along with strategic removal whenever possible.⁶



Identifying Characteristics: English ivy is a vine with waxy dark green leaves that vary in shape.⁶ Flowers are typically small and greenish-yellow and present from late summer through early fall.⁶ Berries are a deep purple or black color with stone-like seeds.⁶ This vine can be distinguished from deciduous vines, like poison ivy, through its retention of leaves year-round.⁶

Amur (Bush) honeysuckle (*Lonicera maackii*)

[Amur \(Bush\) honeysuckle](#) was first introduced to the U.S. in the late 1800's as a decorative bush to assist with erosion control.⁸ This invasive plant has since spread throughout most of the eastern half of the United States.⁸ In February of 2018, the Maryland Department of Agriculture classified Amur honeysuckle as a [Tier 1 invasive plant in Maryland](#), meaning it cannot be purchased, sold, transported or introduced within the state.⁹ Amur honeysuckle is capable of growing in a variety of ecosystems, but is most likely to be found on campus in forested areas and along the forest edge.⁸ These bushes can grow up to 30 feet tall and leaf out very early in the spring, blocking sunlight from reaching other plants.¹⁰ This plant spreads mainly through transmission of its berries, so current control techniques focus on cutting back the plant before it can produce fruit.⁹

Identifying Characteristics: Amur honeysuckle is a deciduous shrub with small spade-shaped leaves that are 2-3 inches long.⁸ Flowers will appear in late spring with thin, white petals up to an inch long.⁸ The flowers tend to be very fragrant and will turn yellow as they mature.⁸ Fruit tends to be very abundant from late summer through fall and are bright red.⁸ One method for distinguishing amur honeysuckle is to look for hollow stems, which are not shared by native honeysuckle variants.¹⁰

If you are interested in reporting invasive species off-campus, there are many resources available for identifying these species. The [Invasive.org website](#) (a collaboration between the University of Georgia and various government bodies) and the [Maryland Department of Natural Resources website](#) (or respective state DNR site) are excellent sources for invasive species identification. If you are interested in groups that focus on invasive species, please read our article on "[Volunteer Programs for Controlling Invasive Species](#)."