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# THE Colebrook Land Conservancy NEWSLETTER

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"Keeping the Country in Colebrook"

Spring 2023



Japanese Knotweed, a member of the buckwheat family, was introduced to the United States as an ornamental plant in the late nineteenth century. It can grow ten to fifteen feet high, and creates thickets like this, crowding out native plant life.

## Marauders In Our Midst

**I**n past centuries, horticulturalists traveled the world in search of new and exotic plants and brought home specimens for their gardens and for scientific, medicinal and botanical study. That same desire for novelty and variety in our garden plantings continues today. Horticulturalists, nursery owners and gardeners are on the lookout for interesting plant species from other countries, choosing them for their beauty, their exotic appeal, their environmental value and even their medicinal use. Importing plants is a major business today.

While there are undoubtedly some benefits to adding new species to our gardens, some imported plants have morphed from interesting newcomers into serious pests. Once established in a new ecosystem, a small number of these (approximately 1 in 1,000) non-native plants begin to grow without restraint in their newly adopted environment, reproducing quickly and wreaking havoc like some monster in a horror movie, killing every living plant in their way. Along some highways in New York and Connecticut, there is tragic evidence



From left to right: Porcelain Berry vines strangle and smother trees and shrubs; Thickets of Japanese Barberry provide a favorable habitat for white-footed mice and ticks; Buckthorn up close, showing its distinctive, football-shaped leaves and reddish stems and roots; Multiflora Rose bushes produce an average of one million seeds a year.



of what invasives such as the porcelain berry have done, strangling trees with their vines and creating an impenetrable mass of leaves that kills anything trying to grow underneath.

There are a number of hypotheses for why some plants suddenly begin to proliferate unchecked once they establish themselves in a new environment. One is that they are better adapted than native species to thrive in diverse landscapes. Some invasives have much larger fruit and seed production and dispersal mechanisms than the native plants around them, allowing them to spread more quickly and widely. Others have rapid vegetative growth and reproduction because their leaves emerge earlier in the spring and remain viable longer than those of native species and therefore get more nutrients. Another is the fact that there are no biocontrol mechanisms for these plants in their new environment, nor are they attractive as food to native species of insects and animals, so are left to grow unhindered. Their roots and leaves can crowd out and overwhelm native plants, thereby ensuring their dominance. Another hypothesis that is gaining currency is that invasive plants can actually produce a substance that allows them to outcompete or even poison native plants, and sometimes even humans. Two examples of the latter are Garlic mustard, which produces cyanide, poisonous to animals and humans, and Giant Hogweed, which burns the skin and can even cause blindness on contact.

When invasives gain the upper hand, the damage to an ecosystem is extensive. Native birds and other creatures who have adapted to eat the fruits of specific plants lose their source of food when invasives crowd out those native plants. This has directly contributed to the further depletion of bird and animal populations in the Northeast and across the country. As Allyson Muth, Forest Stewardship Program Associate,

Penn State Department of Ecosystem Science and Management noted in an article posted on the Penn State College of Agricultural Sciences website, “Unfortunately when invasive plants outcompete our native plants, we tend to lose specialist herbivores (and sometimes whole ecosystems) that have co-evolved with given plants: specific biochemistry that is the only thing edible to a specific insect.”

Perversely, when birds and small animals do adapt to eating the fruits of invasive plants, the seeds from those fruits are carried in their feces and deposited elsewhere, contributing to further spreading. Japanese Honeysuckle, Autumn Olive, Japanese Barberry and a number of other invasives have proliferated in this way. Human beings have also helped spread other invasives. Japanese stiltgrass, which has been identified on roadsides in Colebrook, can have its seeds transported in the mud on the tires of industrial vehicles such as graders or logging equipment, or in loads of soil, and often germinate in areas where the ground has been disturbed.

In the case of Japanese barberry infestations, an entirely new ecosystem is created, which radically changes our native forest landscape. Researchers at the University of Connecticut have observed that barberry thickets create an ideal humid environment for ticks and a safe harbor from predators for mice. Mice, like deer, are hosts for ticks and help to spread them. In an article in UConn Today, researcher Scott Williams observed, “When we measure the presence of ticks carrying the Lyme spirochete (*Borrelia burgdorferi*) we find 120 infected ticks per acre where Barberry is not contained, 40 ticks per acre where Barberry is contained, and only 10 infected ticks where there is no Barberry.” In addition, the humid leaf refuse under barberry thickets attracts earthworms, who consume large amounts of it, changing the soil chemistry and creating erosion.

The damage wrought by invasive plants has come at a high cost to the American economy. Although the estimates vary, they are in the tens of billions per year for management or removal of harmful vegetation. And there are other economic impacts, as well, such as on farmers losing valuable pasture land that has been taken over by invasives.

For all these reasons, it is essential to recognize and eliminate invasives when they are first identified, while there is still an opportunity to beat them back before they take hold. When they are left to proliferate, the task of eradicating them becomes overwhelming and even more costly, and the damage to our fields, woodlands and wetland ecosystems is nearly irreversible.

Even in as naturally pristine a town as Colebrook, there are invasives in our woodlands, wetlands and fields. Some are easily observable, like phragmites, or rosa multiflora. Others, like coltsfoot or buckthorn, blend in at first with the landscape. But make no mistake, these silent invaders will multiply, and eventually choke out native plants and disrupt fragile ecosystems, with long-term negative consequences.

Given the damage invasives can cause, landowners should do everything possible to eradicate them. But first, being able to identify invasive plants by sight is crucial. If not, some very beneficial native plants could be mistaken for non-native invasive look-alikes, and be thrown away instead.

The Colebrook Land Conservancy is compiling a list of some of the most common invasive plants in our area that should be entirely eradicated if possible, or at least carefully contained, in order to allow our native species, both flora and fauna, to thrive unhindered. More details about these invasives and how to get rid of them will be posted on the Colebrook Land Conservancy website: [www.colebrooklandconservancy.org](http://www.colebrooklandconservancy.org).

—By Amy Bernstein

## Creating Pollinator Habitats:

Talk on April 16th at 4 pm  
Colebrook Town Hall

Over the past thirty years or more, scientists and ecologists have become increasingly concerned about the precipitous decline in the populations of pollinators such as bees, butterflies, moths, birds and bats. Threatened by predators, invasive pests and diseases, such as mites and viral and fungal pathogens, they also suffer from exposure to pesticides and other chemicals, habitat fragmentation and climate change. The reasons for concern about their disappearance are many, including the loss of biodiversity, but the most important is that without pollinators, many food crops cannot grow.

What can we do to help reverse the decline in these essential members of our natural world? To answer this question, the Colebrook Land Conservancy will host a talk by **John Markelon**, President of the Litchfield Land Trust and a former high school Environmental Science Teacher. Markelon has become a passionate and well-informed advocate for pollinators, recognizing their crucial role in our lives. The talk will take place on Sunday, April 16, at 4 pm in the Colebrook Town Hall.

Markelon will describe the steps we can take to improve the chances of survival for pollinators and will offer helpful ideas on how to transform any garden into a pollinator paradise. As part of his talk he will discuss ideas for Pollinator Pathway initiatives, including native plant propagation, community organizing, volunteer engagement, and other topics.





## Some Common Invasives in Connecticut

**Asian Honeysuckle** (*Lonicera* spp.)

**Autumn Olive** (*Elaeagnus umbellata*)

**Burning Bush** (*Euonymus alatus*)

**Common Reed** (*Phragmites australis*)

**European and Glossy Buckthorn**  
(*Rhamnus cathartica* & *Frangula alnus*)

**Fig Buttercup** (*Ficaria verna*)

**Garlic Mustard** (*Alliaria petiolata*)

**Goutweed** (*Aegopodium podagraria*)

**Japanese Barberry** (*Berberis thunbergii*)

**Japanese Knotweed**  
(*Polygonum cuspidatum*)

**Japanese Stiltgrass** (*Microstegium vimineum*)

**Mile-a-Minute Vine**  
(*Polygonum perfoliatum*)

**Mugwort** (*Artemisia vulgaris*)

**Oriental Bittersweet**  
(*Celastrus orbicularis*)

**Porcelain Berry**  
(*Ampelopsis brevipedunculata*)

JOIN US FOR A TALK ON

# Creating Pollinator Habitats

April 16  
at 4 pm

COLEBROOK TOWN HALL

The Colebrook Land Conservancy  
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