From the Natural Resources Stewardship Cm.

The Prickly Truth about Japanese barberry

By Mary Freudenberg for the NRSC

How an Invasive Shrub Fuels Tick Populations in Our Woods—and What We Can Do About It

If you've spent any time walking in the woods, you're likely familiar with Japanese barberry (Berberis thunbergii). With its dense, spiky branches and decorative red berries (which develop in late summer and early fall), this dense spiky shrub was originally introduced in the late 19th century as a hardy, deer-resistant ornamental. However, behind its pleasant garden appearance lies a growing ecological and public health concern.

Over the past decade, long-term studies conducted by researchers at the Connecticut Agricultural Experiment Station, along with wildlife ecologists across the Northeast and Appalachia, have uncovered a striking connection: forests infested with Japanese barberry harbor significantly higher populations of blacklegged ticks (deer ticks)—the primary vector for Lyme disease, Anaplasmosis, and Babesiosis.

> **KEY RESEARCH FINDING**
> *Researchers found that areas dominated by Japanese barberry carried up to 120 Lyme disease-infected ticks per acre, compared to fewer than 10 infected ticks per acre in woodland areas managed without barberry.*

Why Barberry Creates the Perfect Tick Haven

To understand why this plant is such a magnet for ticks, it helps to look at the environment it builds beneath its branches. Japanese barberry doesn't just grow; it alters the microclimate of the forest floor in three key ways:

- **High Humidity Microclimate:** Ticks are extremely sensitive to desiccation (drying out). Japanese barberry (JBB) forms a thick, canopy-like dome near the ground that traps moisture. Measurements show that humidity levels under a barberry canopy stay consistently around 80% or higher day and night, allowing ticks to stay active and hunt (or 'quest') for longer hours without risking dehydration.
- **Ideal Habitat for White-Footed Mice:** White-footed mice are the primary reservoir host for the Lyme disease bacterium (Borrelia burgdorferi). The dense, thorny structure of barberry offers mice protection from predators like hawks, owls, and foxes. As mice nest and forage beneath the thorny shelter, larval and nymphal ticks get easy access to their primary host and blood meal.
- **Protection from Browsing Deer:** White-tailed deer find barberry unpalatable due to its sharp spines. While deer avoid eating the plant, they still brush past it, dropping adult ticks off to reproduce in an ideal, highly protected incubator.

What We Can Do About It

The good news is JBB was found only in three areas in Connestee (at the Lake Wanteska dam and on two holes on the golf course). The even better good news is that a crew from EcoForesters came in on August 10th and removed all the JBB from the property. However, invasive species removal is a lot like weeding in that you're never really done and the plants can grow back, so the NRSC and CF Maintenance will be checking these areas regularly for regrowth.

According to these studies, when Japanese barberry is removed, tick populations in the area drop dramatically within one to two seasons. Controlling this invasive shrub on our personal property and in our common areas is one of the most effective habitat management steps we can take for tick control.



Japanese barberry, photo courtesy of iNaturalist

If you see JBB or any other invasives either on your property or in any common areas around Connestee, please do not try to remove it yourself. Instead, report it to the NRSC by visiting our webpage at: Home | Connestee Falls Natural Resources Stewardship Committee and clicking the "CONTACT US" button at the bottom of the page. Also check out our website for more information about other invasives to look for: Invasive Species Control | Connestee Falls Natural Resources

Keeping our forest healthy is a team effort—and every plant removed helps keep our community safer!

Connestee's Most Wanted:
Our Most Destructive Invasive Plants

by Abby Braman for the Natural Resources Stewardship Committee



On August 10, a five-person EcoForesters restoration crew demonstrated invasive plant control at several locations, including Lake Wanteska Dam, the Equestrian Trail/Dog Park, Ogana Trail, and the Golf Course/Clubhouse area. The crew used targeted methods, including foliar herbicide and cut-stem treatment, while training CF Natural Resource Stewardship Committee (NRSC) members to identify and treat invasive plants.

In total, the crew treated 5.67 acres. EcoForesters noted that Connestee Falls is relatively free of large-scale infestations and that regular maintenance will help protect our forested Common Natural Areas.

How can you help?

- Learn to identify invasive plants using this guide, Google Lens, or a free app such as iNaturalist.
- Report invasive plants to the CF NRSC so they can be assessed for removal. Use the CONTACT US button on the NRSC website here: https://www.connesteefallsnrs.com/



MULTIFLORA ROSE: Thorny, arching shrub with clusters of small white flowers. Forms dense thickets that crowd out native plants.



ASIATIC BITTERSWEET : Woody vine with round leaves and red berries in yellow capsules. Girdles trees and smothers vegetation.

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CHINESE PRIVET: Shrub with opposite leaves and clusters of white flowers. Forms dense understory thickets that displace natives.



JAPANESE STILTGRASS: Annual grass with a silvery stripe. Carpets ground and suppresses natives.



PRINCESS TREE: Fast-growing tree with huge leaves and showy purple flowers.



CHINESE SILVERGRASS (Miscanthus): Tall, clumping grass with feathery plumes. Spreads along roadsides and forest edges.



JAPANESE HONEYSUCKLE: Twining vine with fragrant white-to-yellow flowers. Smothers shrubs and young trees with dense growth.



JAPANESE BARBERRY :Thorny shrub with small leaves and red berries. Dense stands harbor ticks.