

A vertical bar on the left side of the slide, consisting of several colored segments: a white top section, a black section with three vertical white lines, a grey section, a yellow section, and a long pink section at the bottom.

Prepared by The Newtown Conservation Commission -

THE BARBERRY-TICK CONNECTION

Barberry: Conservation and Health Concerns.

- A seemingly benign ornamental plant which has escaped to natural habitats, not only is an invasive plant, but also poses health risks.



Studies have Established the Barberry/Tick Connection.

- Scientists at the Connecticut Agricultural Experiment Station have recently linked invasive Japanese barberry (*Berberis thunbergii*) to the prevalence of black-legged ticks – carriers of diseases such as Lyme disease.



You May be at Risk in Your Own Yard.

- Experts estimate that 75% of tick bites occur in one's own yard.



Barberry is a Non-Native Plant

- Japanese Barberry was introduced into the United States in the late 1800's for its colorful foliage in the fall and its bright red berries.
- It was often planted as a hedge to cordon off properties, its thorny branches forming an effective natural fence.



How does it Spread?

- The berries, a popular food for birds and small animals, hold seeds that are rapidly spread in animal waste.
- Additionally, barberry stems which touch the ground can root, spreading the plant even further.



Barberry Creates the Perfect Micro-climate for Young Ticks.

- Japanese barberry leafs out early in the spring, earlier than most other shrubs.
- The barberry creates a mid- to lower-level canopy that retains humidity throughout the day, providing the perfect conditions necessary for young ticks.



Barberry Spreads into Woodlands.

- Barberry thickets crowd out native species, becoming the dominant plant in the understory layer.
- Large thickets of barberry can be seen in many Newtown open space parcels.



The White-footed Mouse Finds Shelter and Food in the Barberry.

- This habitat also provides ideal cover and food for white-footed mice, the main carriers of Lyme disease.
- Ticks who feed on infected mice become infected themselves.



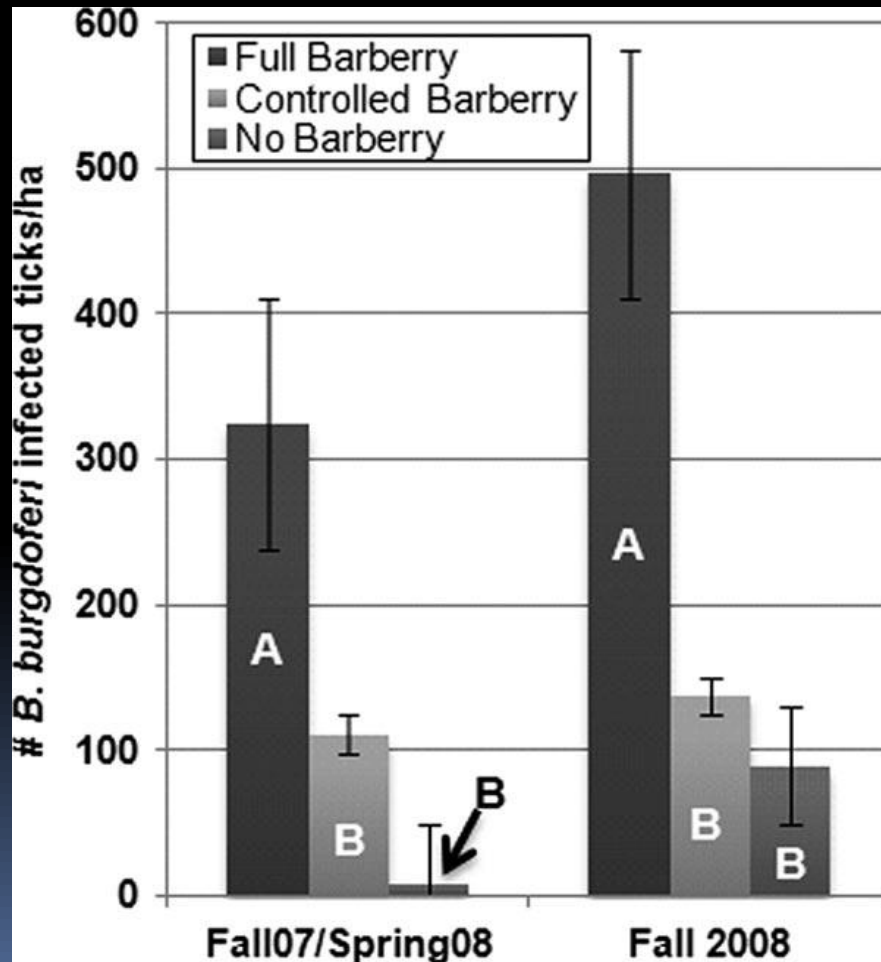
A Two-year Study was Done by CAES.

- A recent study done by Drs. Scott Williams and Jeffrey Ward monitored the number of mice, the number of ticks, the number of Lyme-infected ticks, and ground-level humidity in three geographic areas in Connecticut.
- In each area they tested plots of uncontrolled, controlled and no Japanese barberry.

Their Findings were Significant.

- The abundance of adult blacklegged ticks was greatest in areas dominated by Japanese barberry.
- Not only were there more ticks in the full barberry areas, but also these ticks had a higher infection rate than the ticks found in the no barberry area.
- This combination of high density of ticks and high infection rates of those ticks, poses a considerable threat to public health.

Where Barberry was Not Present, the Number of Infected Ticks was Minimal.



Identification is Key.


- Identification is the first step to reduction.
- Pictures are available through hand-outs, pamphlets, and the internet (the IPANE web site is a good resource).
- The Newtown Conservation Commission or Land Use (426-4276) will help you identify any barberry you may have.



TOWN OF NEWTOWN



Some Cultivars Look Different from Japanese Barberry.

- Many cultivars of barberry have been used for landscaping. Some are miniature, some are red or other colors year around.
 - Many or most of these cultivars will revert to the nuisance type of barberry given enough time.
 - Avoid planting any of the types still available at some nurseries.
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Why Is Barberry Still being Sold?



- It has been estimated that in Connecticut barberry accounted for \$4.9 million in sales in 2004.
- However, in 2010 the Connecticut Green Industry Council began a phase-out on sales of 25 varieties of barberry.
- Businesses now have until June 30, 2013 to sell off remaining inventory.
- However, barberry can still be ordered from out-of-state mail-order suppliers.

Removal of Individual Bushes



- Initial removal is easiest if done in spring or early summer.
- Cut back longest branches.
- Dig up around the plant, avoiding cutting the roots since these plants can re-sprout easily.

Removing Individual Bushes (con't.)

- Pull up plant and dispose of in waste bag, particularly if seeds are present.
- Check the area again in the next growing season for any roots that may have remained and re-sprouted.
- Always check yourself for ticks when working around barberry.

Got ticks???



Mechanical Removal of Hedges or Thickets

- Removing multiple barberry bushes becomes more complex.
- You may need mechanical cutting followed by the application of a chemical herbicide.
- Please consult with Land Use or a reputable nursery/applicationist for guidance.
- Continued monitoring will be needed to ensure that re-sprouting does not occur.


Use of Propane Torches



- Professionals are now using propane torches for larger infected open space areas and woodlots.
- Shown here is Dr. Jeffrey Ward, chief scientist at the Connecticut Agricultural Experiment Station's Department of Forestry and Agriculture.



Propane Torches (con't.)

- Torching the base of each shrub until the main stems begin to glow prevents nutrient transfer to the plant.
 - This method should be used only with great care and when the forest floor is damp enough to prevent spread of the burning.
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Our Parks and Recreation Personnel have been Trained.

- Dr. Thomas Worthley, UCONN, demonstrates the propane torch method to area Park and Recreation personnel.



Is Removing Barberry Worth the Effort?

- Scientists found that the use of mechanical control methods, herbicides, and propane torches all can be effective in controlling barberry.
- They also found dramatic reductions in both the number of blacklegged ticks and tick infection rates in post-treatment plots.
- “It’s a win-win situation and an admirable goal for any landowner.”

Alternative Plantings



- Many ornamental shrubs are available for replacing the barberry or for initial planting.
- Some that are recommended are bayberry, high-bush blueberry and winterberry.





The Barberry Blitz effort is supported
by the

Conservation Commission

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