The Connecticut Agricultural Experiment Station

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PRESS RELEASE

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CONNECTICUT AGRICULTURAL EXPERIMENT STATION SCIENTISTS REPORT ON A DECADE'S WORTH OF DATA LINKING INCREASED ABUNDANCES OF BLACKLEGGED TICKS WITH THE INVASIVE SHRUB, JAPANESE BARBERRY.

New Haven, CT – In the most recent issue of the journal *Environmental Entomology*, The Connecticut Agricultural Experiment Station's (CAES) Dr. Scott Williams, Ms. Megan Linske, and Dr. Jeffrey Ward linked increased abundances of blacklegged (aka "deer") ticks (*Ixodes scapularis*) with the invasive shrub Japanese barberry (*Berberis thunbergii*). Japanese barberry was brought to the eastern United States in the late 1800s as a replacement for common barberry (*Berberis vulgaris*) in landscape plantings. Unfortunately, it escaped from cultivation and now grows wild throughout Connecticut's woodlands. Its dense thickets prevent native trees and wildflowers from regenerating and also create a humid environment under which ticks thrive. The CAES research team discovered there are significantly higher abundances of ticks infected with the causal agent of Lyme disease, *Borrelia burgdorferi*, in Japanese barberry-infested forests than in forests without barberry. The team also found that managing barberry can significantly reduce tick abundances for up to 5 years.

The implications of this research are that this invasive plant is altering native Connecticut ecosystems and perpetuating populations of blacklegged ticks which harbor disease agents that can have negative consequences on the health of the Connecticut public. Information on Japanese barberry management can be found at:
http://www.ct.gov/caes/lib/caes/documents/publications/special_bulletins/special_bulletin_feb_2013_ward.pdf

If you find a tick feeding on you or a family member, it can be submitted to the CAES Tick Testing Laboratory where it will be tested, free of charge, for the pathogens that cause Lyme disease, anaplasmosis, and babesiosis. See: http://www.ct.gov/caes/cwp/view.asp?a=2837&q=378220.

The best way to avoid tick-borne disease is prevention. Do a tick check every night. While bathing won't wash feeding ticks away, it does provide the opportunity to search for ticks. After coming inside from tick-infested forests, tumbling clothing in the dryer on high heat for 10 minutes will dry out and kill any ticks that may be attached. The Centers for Disease Control and Prevention recommend using permethrin or at least 20% DEET for repelling ticks. For more information see: https://www.cdc.gov/lyme/prev/on_people.html.

Reference:

Williams, S. C., M. A. Linske, and J. S. Ward. 2017. Long-term effects of *Berberis thunbergii* (Ranunculales: Berberidaceae) management on *Ixodes scapularis* (Acari: Ixodidae) abundance and *Borrelia burgdorferi* (Spirochaetales: Spirochaetaceae) prevalence in Connecticut, USA. doi: 10.1093/ee/nvx146. https://academic.oup.com/ee/article/doi/10.1093/ee/nvx146/4159248/Long-Term-Effects-of-Berberis-thunbergii

Japanese barberry (*Berberis thunbergii*) - Photo credit: Dr. Jeffrey Ward, CAES

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