

Invader of the Month

Are Invasive Plants "Bugging" You?

Japanese barberry and bush honeysuckle - *Berberis thunbergii* and *Lonicera maackii* | [May 01, 2018](#) | [Maryland Invasive Species Council](#)

Contact: Marc Imlay, Maryland-National Capital Park and Planning Commission | ialm@erols.com

ANNAPOLIS, MD (May 1, 2018) - Many shrubs first introduced as desirable landscape species have been found to take over the understory of woodlands and greatly impact native forest regeneration. The invasive properties of both Japanese barberry (*Berberis thunbergii*) and Bush honeysuckle (*Lonicera maackii*) have been understood for quite some time. Recently, studies have emerged that indicate reasons for concern in addition to their competition with native plants. Both species have been linked to an increase in ticks and tick borne illness in areas where the shrubs are prevalent. As the weather warms up and more of us head out into the natural areas around Maryland the thought of ticks is often on our minds. This is why Japanese barberry, bush honeysuckle, and their connections to tick populations were chosen as the MISC May Invaders of the Month.

Japanese barberry, with its clustered paddle-shaped, alternate leaves and needle-like thorns leaf out early and retain leaves longer than most natives. This species has several cultivars with leaf colors ranging from blue-green to reddish. The shrub forms dense infestations preferring partial shade but tolerating prolonged shade as well. Their spring flowers give way to dangling red berries that persist through the winter months each containing one seed which remains viable for up to a decade. Deer generally do not browse this species giving it an advantage over more deer susceptible natives.

Studies at the University of Connecticut show that barberry creates ideal habitat for the humidity-loving ticks such as the black-legged tick (deer tick). White-footed mice are also drawn to the protective cover of the barberry, and are a vector for the bacteria that cause Lyme disease. Mice are a



Adult black-legged tick (deer tick), *Ixodes scapularis*.
Photo: Scott Bauer, USDA Agricultural Research Service



What dangers may lurk in these invasive shrubs? Photo:
Leslie J. Mehrhoff, University of Connecticut,
Bugwood.org

host for the black-legged tick, which can then transmit the disease from mice to humans. Mice also provide free transportation to the tick. Combine the two and a perfect partnership is formed between vector and host.

Bush honeysuckle, also known as Amur honeysuckle, seems to support ticks in a slightly different way. Like barberry, honeysuckle originates in Asia and forms dense thickets. It has opposite ovate leaves tapering at the tip and red glossy berries in pairs along the leaf axils. The shelter that these shrubs create has been noted by researchers to be preferred protection for white-tailed deer, which are the major host for adult lone star ticks. A study published by the Proceedings of the National Academy of the Sciences of the USA (PNAS) in 2010 indicates that the lone star tick is found in much higher densities in these thickets. This study also looked at clearing areas of honeysuckle and observed what effect that had on tick populations. It found that where honeysuckle was eradicated, there was a significant reduction in the densities of lone star nymphs, and that these results were most likely connected to the reduced usage by deer in those areas as opposed to the physical changes of removing the shrubs.

If there weren't already enough compelling reasons to control barberry and bush honeysuckle for the damage they do to native plant communities, there is now increasing evidence to support the goal of eradication to benefit human health. Both the black-legged and lone star ticks are vectors for human disease such as Lyme and others associated with the black legged ticks, and *ehrlichiosis* and the creation of a red meat allergy associated with the lone star ticks. Neither plant is easy to eradicate once it is established. Pulling young sprouts (removing the roots), prescribed burns, and foliar glyphosate applications have been proven effective on barberry and honeysuckle. Goats will eat barberry but do not prefer honeysuckle. When controlling for these species take care with identification as both have native look-alikes.



Japanese barberry invasions in Maryland can disrupt healthy forest habitat, leading to unbalanced ecological conditions.

Photo: Michael Ellis, M-NCPPC.



Amur Honeysuckle. Photo: Richard Gardner, UMES, Bugwood.org

For more information on these topics:

Invasive honeysuckle eradication reduces tick-borne disease risk by altering host dynamics - <http://www.pnas.org/content/107/43/18523>

Not So Merry Exotic Barberry - <http://mdinvasives.org/iotm/dec-2006/>

Controlling Japanese Barberry Helps Stop Spread of Tick-Borne Diseases - <https://today.uconn.edu/2012/02/controlling-japanese-barberry-helps-stop-spread-of-tick-borne-diseases/>

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◀ The cherry blossoms have arrived! Some good, some bad.