

VIBURNUM LEAF BEETLE: UPDATE ON A RECENTLY ARRIVED LANDSCAPE PEST

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Abstract

Viburnum leaf beetle, *Pyrrhalta viburni* (Paykull), is a European pest that was first detected in the U.S. in Maine in 1994. Since that time, it has spread through much of New England and New York, and is poised to invade much of the eastern half over the country over time. An additional, isolated invasion of the U.S. occurred in 2004 in Washington State, the result of spread from a separate population established in British Columbia, Canada. I present updated information on recent spread of the pest in New York and adjacent states, a revised list of species susceptibility to *P. viburni*, and results of laboratory testing of thermal requirements for egg hatch and immature development.

Eggs require a prolonged chilling period followed by warm temperatures for hatching; we have found the chilling period to be approximately 5 months at 5 °C.

As expected, larval development was greatly accelerated with temperature between 17 and 22 °C, but then levelled off at 27 °C. Temperatures of 27 °C or higher are likely above the threshold for normal development because larval survival decreased and physical abnormalities were observed in resulting adults at this temperature.

Owing to the prolonged chilling requirement and abnormal larval development at 27 °C, it is likely that warm winter and spring temperatures will limit southern range expansion of *P. viburni* in the U.S. Availability of host material will not likely limit expansion because members of the arrowwood complex (one of the most suitable hosts for the pest) are distributed throughout nearly all of the eastern half of the country. Westward spread will likely be determined largely by distribution of native hosts, which become less common in the Great Plains.