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# **WHITE FRINGETREE, *CHIONANTHUS VIRGINICUS*, AS A NOVEL LARVAL HOST FOR EMERALD ASH BORER**

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## **ABSTRACT**

Emerald ash borer is an invasive Asian pest of ash species in North America. All North American species of ash tested so far are susceptible to it, but there are no published reports of this insect developing fully in non-ash hosts in the field in North America. I report here evidence that EAB can attack and complete development in white fringetree, *Chionanthus virginicus* L., a species native to the southeastern U.S. that is also planted ornamentally. Four of 20 mature ornamentally-planted white fringetrees examined in the Dayton-Springfield, Ohio area in the summer and fall of 2014 showed external symptoms of emerald ash borer attack, including the presence of adult exit holes from the current and past years, canopy dieback, bark splitting and other deformities. Removal of bark from one of these trees yielded evidence of at least three generations of usage by emerald ash borer larvae, several actively feeding live larvae, and a dead adult confirmed as emerald ash borer. These findings indicate that emerald ash borer adults are capable of detecting and ovipositing on white fringetree in the field, larvae are able to feed and survive to the adult stage, and that adults can emerge from this tree. In turn, while white fringetree appears to have a strong wound healing response, attacked stems and heavily attacked trees show substantial dieback. These findings suggest that white fringetree is an acceptable alternative host for emerald ash borer in the field, and that the vigor and survival of this species may be threatened by emerald ash borer. These findings also indicate that wild and ornamental relatives of white fringetree are worthy of further scrutiny as potential hosts for emerald ash borer.