

EVALUATION OF POTENTIAL HOST TREES FOR *ANOPLOPHORA GLABRIPENNIS* (COLEOPTERA: CERAMBYCIDAE)

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Abstract

We have been evaluating oviposition by *Anoplophora glabripennis* (Motschulsky) offered a selection hardwood tree species, four species at a time, and performance of the resulting larvae, using living trees under greenhouse conditions.

Significantly greater numbers of oviposition sites were found on sugar maple (*Acer saccharum* Marshall) than on red maple (*Acer rubrum* L.), green ash (*Fraxinus pennsylvanica* Marshall), or red oak (*Quercus rubra* L.), with no significant differences among the latter three tree species. Similarly, significantly greater numbers of living larvae were found in sugar maple than in the other tree species; however, mean mass of living larvae did not differ significantly among the four tree species 90 days after removal of the adult beetles.

Significantly greater numbers of oviposition sites were found on golden-rain tree (*Koelreuteria paniculata* Laxmann) than on London planetree (*Platanus x acerifolia* (Aiton) Willdenow) or on callery pear (*Pyrus calleryana* Decaisne), with river birch (*Betula nigra* L.) intermediate. Similarly, significantly greater numbers of living larvae were found in golden-rain tree and in river birch than in callery pear, with London planetree

intermediate. No larvae were found alive in callery pear and, despite the high rate of oviposition in golden-rain tree, mean mass of living larvae was significantly lower in golden-rain tree than in London planetree, which was in turn significantly lower than in river birch.

Significantly greater numbers of oviposition sites were found on gray birch (*Betula populifolia* Marshall) than on honeylocust (*Gleditsia triacanthos* L.), with cockspur hawthorn (*Crataegus crus-galli* L.) and littleleaf linden (*Tilia cordata* Miller) intermediate. No evidence of oviposition was found on honeylocust and no living larvae were found in either honeylocust or littleleaf linden. Numbers of living larvae did not differ significantly between gray birch and cockspur hawthorn; however, mean mass of living larvae was significantly greater in gray birch than in cockspur hawthorn.

Numbers of oviposition sites and of living larvae did not differ significantly among silver linden (*Tilia tomentosa* Moench), common hackberry (*Celtis occidentalis* L.), Japanese zelkova (*Zelkova serrata* (Thunberg) Makino), and European hornbeam (*Carpinus betulus* L.). Mean mass of living larvae also did not differ significantly among these four tree species and was very low in all cases.