

Foliage consumption of the Honshu white admiral *Limenitis glorifica* Fruhstorfer, 1909 (Lepidoptera: Nymphalidae) on Japanese honeysuckle *Lonicera japonica* Thunb. (Dipsacales: Caprifoliaceae) in Aotearoa / New Zealand

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#### Abstract

Aotearoa / New Zealand harbours more naturalised non-native plant species than almost any other island group in the world, some of which are serious threats to indigenous biodiversity. Japanese honeysuckle (*Lonicera japonica*), a non-native climbing vine, is widespread across the country, and is considered a serious threat due to the nature of its growth habits and smothering effects upon indigenous flora. In 2014, the Honshu white admiral butterfly (*Limenitis glorifica*) was released in Aotearoa / New Zealand as a biological control agent, as this species has been shown to be narrowly oligophagous to Japanese honeysuckle. It is believed that the larva of this butterfly could cause substantial feeding damage; sufficient to reduce the plants' fitness. However, the amount of foliage that could be consumed by Honshu white admiral larvae is unknown. This study monitored 30 larvae from egg to pupation, and found that a single larva could consume 2.13g of Japanese honeysuckle foliage before pupating. This equates to approximately 5.6 leaves (based on the mean weight of a mature honeysuckle leaf). These findings give an insight into the defoliation potential this biocontrol agent could have upon Japanese honeysuckle, although further research is needed to determine the physiological response of the invasive plant based on this level of herbivory.

Keywords: Biocontrol, invasive plant, Aotearoa / New Zealand, biodiversity, Lepidoptera, Nymphalidae, Dipsacales, Caprifoliaceae, *Lonicera japonica*, *Limenitis glorifica*

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