

Are novel congeneric hosts facilitating the invasion of exotic woodboring insects?

Henri Vanhanen^a and Eckehard Brockerhoff^b

^aMTT Agrifood Research Finland, FINLAND

^bScion - New Zealand Forest Research Institute Limited, NEW ZEALAND

The role of ancestral hosts or close generics and their abundance has been argued to be one of the main factors for a successful invasion of wood boring insects to novel environment. Invasive species have been hypothesized to follow their native host plant, especially among those feeding on conifers. We tested the preference of *Hylastes ater* and *Hylurgus ligniperda* to different ancestral and close generic coniferous hosts of Eurasian and North American origin as breeding material. Both of the species are of European origin that have become established and invasive in New Zealand. These species are successful invaders that are now also found in several other countries e.g. South Africa, Chile, and Uruguay. *H. ater* can cause mortality of seedlings and both of the species cause sap stain of logs. Main host for both of the species in New Zealand is Monterey pine (*Pinus radiata*), but it is not known yet whether it is only because of the availability of the species as breeding material, since it is by far the most planted coniferous tree species in New Zealand. The host use preference and performance of *H. ater* has been studied by choice test in the laboratory with different coniferous and angiosperm hosts, but no large scale choice test has been made in situ. The purpose of this study was to study host preference of *H. ater* and *H. ligniperda* in situ with set up of bolts from various ancestral and novel hosts.

Corresponding Author:

Principal Scientist Eckehard Brockerhoff
Scion (New Zealand Forest Research Institute)
University of Canterbury
PO Box 29237, Fendalton,
8540 Christchurch, New Zealand
e-mail: eckehard.brockerhoff@scionresearch.com