Creating a national phytosanitary pest trapping network to monitor export wood species

Jessica Kerr *[1], Stephen Pawson [1], Duncan Harrison [2]

[1] Scion - Forestry Road, Ilam, Christchurch, New Zealand
[2] Scion - 49 Sala St, Rotorua, New Zealand

New Zealand currently exports $4.7 billion of wood products, including more than 12.7 million m^3 of logs. At present all logs undergo mandatory treatment, at the request of our trading partner, to eliminate infestation by phytosanitary pests. We believe such endpoint treatments should not be mandatory and that an ecologically based assessment of phytosanitary risk can determine the need for treatment. The concept uses ecological information, e.g. pest phenology, habitat requirements, developmental biology, and dispersal capabilities, to determine if the potential pest pressure at a given time and place warrants the need for end point disinfestation treatments. A key aspect of this research is to quantify and validate the phytosanitary pest pressure within the landscape. Fundamental to ecology is the concept that population abundance is constrained by the availability of resources and the suitability of the local environmental conditions, particularly the composition and arrangement of habitat types and climatic variation. To quantify how such factors influence pest abundance, we will establish an experimental Quarantine Pest Trapping Network (QPTN) to produce a comprehensive seasonal pest pressure map. The aim is to establish a nationwide network of flight intercept traps to monitor the seasonal phenology of key quarantine species, *Hylastes ater, Hylurgus ligniperda, Arhopalus ferus, Prionoplus reticularis*, and *Sirex noctilio*. Traps will be placed to provide structured information on abundance by region, to identify times when the concept of pest free areas of production could be applied to the export of *Pinus radiata* logs from New Zealand. This poster is in support of a presentation that gives an overview of the research programme: Developing an ecological risk based approach to manage phytosanitary pests risks on export logs from New Zealand. Accompanied by a complimentary poster presentation: Thermal development models of key quarantine species to predict adult phenology.