



AUSTRALASIA IS AT HIGH RISK OF A *PHYTOPHTHORA RAMORUM* EPIDEMIC

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With an increase in global trade of plants and plant products it is important to identify emerging plant diseases, carriers of these diseases, and the role of hosts in the transmission of disease. *Phytophthora ramorum* causes widespread damage in nurseries and private estates of Europe and is now devastating coastal forest ecosystems of western USA. Knowledge of potential hosts and therefore carriers of the pathogen, will provide data for the establishment of robust quarantine practices and help prevent the inadvertent introduction of *P. ramorum* into Australasia. It is a pathogen that the region cannot afford as the threat and management implications of this pathogen on natural ecosystems, agriculture and horticulture of this region may potentially be far worse than that currently posed by *P. cinnamomi*.

An inoculation study using excised branches and leaves of 17 endemic New Zealand plants and three commercial species (*Eucalyptus globulus*, *Pinus radiata* and *Acacia melanoxylon*) was conducted. In branch inoculations, *Nothofagus fusca* and *Pinus radiata* were identified as susceptible, while *Fuchsia excorticata* was extremely susceptible in foliage inoculations. Additionally, *F. excorticata* was the only species that supported high foliar sporulation. *Pinus radiata*, *N. fusca*, and *F. excorticata*, should be added to the potential host list for *P. ramorum*. They should be monitored carefully in New Zealand for symptoms in high risk incursion areas as well as within gardens and nurseries in the USA and Europe for symptoms and/or sporulation. These results will be highly beneficial in creating risk maps of any incursion in New Zealand.

Similarly for Australia, an intensive screening of indigenous plants located in regions identified as highly conducive to disease using a CLIMEX model will be conducted. Initial screens will assess susceptibility to the pathogen using detached tissue after which further work focusing on whole plant tissue is expected to be performed to give a more accurate assessment of natural infection potential. Studies of the sporulation potential and asymptomatic transmission of these species will also be conducted.