CONTAINMENT AND ERADICATION OF *PHYTOPHTHORA CINNAMOMI* IN NATIVE VEGETATION IN SOUTH-WESTERN AUSTRALIA AND TASMANIA

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Phytophthora cinnamomi, and disease caused by it, is listed as one of five key threatening processes affecting biodiversity in Australia. Although infestations within the conservation estate are widespread and frequently extensive, large areas remain free of the pathogen and may be protectable, particularly if new, small spot infestations can be contained. The aim of our experiments is to develop protocols that can be used to contain and eradicate spot infestations of *P. cinnamomi,* nominally < 0.02 ha in extent. Treatment regimes were guided by two assumptions: 1. Within the selected sites, transmission of the pathogen is by root-root contact, and 2. The pathogen is a weak saprotroph. In Western Australia, treatment and control plots were set-up along an active disease front within scrub-heath vegetation dominated by *Banksia* spp.. Treatments, applied in combination, included: (1) removal of the largest plants to a distance of 10 m in front of the disease front, (2) removal of all plants to a distance of 4 m, (3) installation of root barriers to ca. 80 cm depth and subsurface irrigation for application of fungicide, and (4) surface applications of Terrazole (triadiazole) fungicide.

In the Western Australia experiment, recoveries of *P. cinnamomi* by soil baiting have shown no significant difference in numbers of recoveries, and in estimates of inoculum potential, between treated and control plots. However, recoveries of *P. cinnamomi* indicate no extension in the disease front in treated plots. Rainfall over the time of the experiment (one year) has been highly unfavourable for activity by *P. cinnamomi.* Further treatments, fungicides and fumigation, will be applied in the second season. An additional experiment will be set-up in Tasmania on a similar site, with the aim of assessing the efficacy of similar treatments, alone and in combination.