PHYTOPTHTORA RAMORUM IN OREGON FORESTS: SIX YEARS OF DETECTION, ERADICATION, AND DISEASE SPREAD

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Phytophthora ramorum was first discovered in Southwest Oregon forests in 2001, where it was killing tanoak (*Lithocarpus densiflorus*) and infecting Pacific rhododendron (*Rhododendron macrophyllum*) and evergreen huckleberry (*Vaccinium ovatum*). At that time there were nine infested forest sites totaling 16 ha. *P. ramorum* probably was present at one forest location as early as 1998. Treatments to eradicate the pathogen from infested sites began in the fall of 2001 and involve cutting, piling and burning infected plants and all nearby host vegetation. On private lands all tanoaks are injected with herbicide prior to cutting in order to prevent stump-sprouting following cutting and burning. Follow-up treatments often are necessary to destroy residual host material and stump sprouts that may harbor the pathogen. Upon completion of burning most sites are planted with non-host or conifer seedlings. Eradication treatments have been completed or are underway on approximately 440 ha of forest land, at a cost of $1.6 million dollars. Nearly all of the costs have been paid by federal and state agencies. There is no compensation to landowners for the value of timber or other values lost as a result of the eradication treatments.

Early detection surveys are conducted year-round using a combination of aerial surveys, ground surveys, nursery perimeter surveys, and stream water sampling. Between 2001 and 2004 the number of new infected trees discovered in surveys decreased, suggesting modest success at containment and eradication. In 2005 and 2006 the number of new infected trees increased considerably, possibly the result of two consecutive years of unusually wet spring weather which apparently favored spread of the pathogen. All surveys to date have failed to detect the pathogen anywhere in Oregon forests except in or near the 65 km^2 Curry County quarantine area. We report here on the effectiveness of the eradication program and the spread of *P. ramorum* in Oregon forests during the eradication effort.