

# Pacific Yew as a Host for *Phytophthora ramorum* in California Forests<sup>1</sup>

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## Abstract

English yew (*Taxus baccata*) has been reported as a host of *Phytophthora ramorum* in nurseries in Great Britain. In 2004, branch dieback was observed on Pacific yew (*T. brevifolia*) in a Mendocino County, California, forest and *P. ramorum* was recovered. Symptoms on Pacific yew, similar to those reported for English yew, included discolored needles and shoot dieback. The Pacific yews were found in the understory of a Douglas-fir/tanoak forest associated with *P. ramorum* infected bay (*Umbellularia californica*) and tanoak (*Lithocarpus densiflorus*). Other *P. ramorum* hosts (e.g., *Vaccinium ovatum*, *Lonicera hispidula*) were present and yielded cultures of the pathogen. A survey of the area resulted in the detection of three *P. ramorum* infected yew shrubs. Disease progression resulted in branch dieback, but death of individuals was not observed.

Pacific yew is the only plant species known as a natural host for both *P. ramorum* and *P. lateralis*. *Phytophthora lateralis* is the closest known relative to *P. ramorum*. It causes Port-Orford cedar root disease and has been reported as a root pathogen of Pacific yew. Pacific yew twigs and seedlings were inoculated with both *Phytophthora* species to investigate symptom expression, potential interactions between these two pathogens, and to demonstrate Koch's postulates.

*Key words:* *Phytophthora ramorum*, sudden oak death, Pacific yew, *Taxus brevifolia*

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