Distribution and Pathogenicity of *P. nemorosa* and *P. pseudosyringae* in California's Coastal Forests

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Phytophthora nemorosa and *P. pseudosyringae* are two recently described species that have been recovered during studies of *P. ramorum* (cause of sudden oak death). The distribution of *P. nemorosa* and *P. pseudosyringae* was compiled from a number of surveys of coastal California and Oregon. *P. nemorosa* was isolated from *Umbellularia californica*, *Sequoia sempervirens* and *Lithocarpus densiflorus* in redwood and mixed evergreen forests from Monterey Co., CA to Coos Co., OR. *P. pseudosyringae* was isolated from *U. californica* and *Quercus agrifolia* in mixed-evergreen forests and coast live oak woodlands from San Luis Obispo Co. to Humboldt Co. CA. Inoculation experiments were conducted to satisfy Koch's postulates and verify pathogenicity of *P. nemorosa* and *P. pseudosyringae* on these tree species. Based on re-isolation of the pathogen and lesion lengths significantly different than controls ($P<0.05$), *S. sempervirens*, *Q. agrifolia, L. densiflorus*, and *U. californica* were confirmed as hosts of *P. nemorosa* and *Q. agrifolia* and *U. californica* as hosts of *P. pseudosyringae*. The ecology of *P. nemorosa* and *P. pseudosyringae* is very similar to *P. ramorum*, however, these species do not cause landscape level tree mortality.