Analysis of Populations of the Sudden Oak Death Pathogen in Oregon Forests[1]

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Abstract

Sudden oak death, caused by the oomycete *Phytophthora ramorum*, was first discovered in California toward the end of the 20th century and subsequently emerged on tanoak forests in Oregon before its first detection in 2001 by aerial surveys. The Oregon Department of Forestry has since monitored the epidemic and sampled symptomatic tanoak trees from 2001 to the present. Populations sampled over this period were genotyped using microsatellites and studied to infer the population genetic history (Kamvar and others 2015). To date, only the NA1 clonal lineage is established in this region, although three lineages exist on the North American West Coast. The original introduction into the Joe Hall area eventually spread to several regions: mostly north but also east and southwest. A new introduction into Hunter Creek appears to correspond to a second introduction not clustering with the early introduction. Our data are best explained by both introductions originating from nursery populations in California or Oregon and resulting from two distinct introduction events. Continued vigilance and eradication of nursery populations of *P. ramorum* are important to avoid further emergence and potential introduction of other clonal lineages.

Literature Cited

Kamvar, Z.N.; Larsen, M.M.; Kanaskie, A.M.; Hansen, E.M.; Grunwald, N.J. 2015. Spatial and temporal analysis of populations of the sudden oak death pathogen in Oregon forests. Phytopathology. 105: 982-989.

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