

Using Citizen Science and Outreach Education to Reduce the Risk of *Phytophthora ramorum* Spread in Oregon Forests¹

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Abstract

Sudden oak death (SOD), caused by a non-native pathogen *Phytophthora ramorum* has killed hundreds of thousands of tanoak (*Notholithocarpus densiflorus*) trees in Curry County, Oregon since it was first detected in 2001. With the expansion of the *Phytophthora ramorum* state quarantine in 2015, more landowners in Curry County are now under regulations to slow the spread of sudden oak death. Some landowners are under a state quarantine for the first time and in some cases are unaware of the state sudden oak death quarantine regulations. Since 2015, the European lineage (EU1) of *P. ramorum* has been detected in 19 infested areas within the SOD quarantine boundary. In Europe, the EU1 lineage kills or damages several conifer tree species and is considered more aggressive than the North American lineage (NA1). These two developments have brought to light an increased need for outreach education of local landowners about SOD, state quarantine regulations, and the new EU1 lineage in southwestern Oregon forests. Additionally, the EU1 lineage has become the highest priority for multiple state and federal agencies, which has led to the opportunity for increased monitoring near the EU1 infestations. Oregon's SOD Program would greatly benefit from a coordinated outreach effort to train citizen scientists about the importance of early detection in order to slow the spread of the disease (Meentemeyer and others 2015). We focused on communities along the leading edge of the disease, and held workshops to teach local residents about disease recognition, early detection methods, and effective treatment options. A citizen science project was piloted and focused on training residents to conduct multiple early detection methods for sudden oak death and to coordinate landscape-level sampling for new SOD infestations. Additionally, focusing on potentially resistant tanoak, we are training residents to identify and report healthy tanoak in infested areas. We will present project design and first year results.

Literature Cited

Meentemeyer, R.K.; Dorning, M.A.; Vogler, J.B; Schmidt, D. and Garbelotto, M. 2015. Citizen science helps predict risk of emerging infectious disease. *Frontiers in Ecology and the Environment*. 13(4): 189–194.

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