

Monitoring of *Phytophthora ramorum* in the North Central United States¹

Frances S. Ockels², Pierluigi Bonello², and Manfred Mielke³

Abstract

Participating in the 2004 USDA Forest Service Sudden Oak Death (*Phytophthora ramorum*) monitoring program, our lab surveyed nursery perimeters and forest sites and processed samples from Ohio, Indiana, Illinois, Missouri, Iowa, and Wisconsin. As part of these protocols, samples were stored in an ice chest on sealed coolant and shipped to laboratory for detection of *P. ramorum* within 72 hours of collection, using PCR-based procedures. Results showed that 89 samples from Ohio, 100 samples from Indiana, 75 samples from Iowa, 75 samples from Missouri, and 219 samples from Wisconsin were free of the pathogen. During surveys, the process of storing the samples on coolant and shipping every two days became cumbersome in terms of expense and convenience. Thus, we explored the feasibility of desiccating the samples as a way of preserving tissues at ambient temperature. Symptomatic leaves were placed in a plastic bag in the presence of a sachet containing Drierite. Fungal DNA extracted from Drierite-desiccated samples was successfully amplified by PCR using universal ITS primers. However, further work is needed to show that *P. ramorum*-infected leaves can be desiccated and still allow for PCR-amplification of *P. ramorum* DNA. Currently, our lab is not permitted to work with *P. ramorum* infected material.

Key words: *Phytophthora ramorum*, monitoring, desiccate

¹ An abstract of a poster presented at the Sudden Oak Death Second Science Symposium: The State of Our Knowledge, January 18 to 21, 2005, Monterey, California.

² Department of Plant Pathology, The Ohio State University, Columbus, Ohio 43201; ockels.1@osu.edu

³ USDA Forest Service, 1992 Folwell Ave., St. Paul, Minnesota 55108