

Anatomical Examination of *Phytophthora ramorum* Infection in *Camellia*¹

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Abstract

In spring 2004 *Phytophthora ramorum* infection of *Camellia* plants was reported at multiple nursery sites in California. Our research was initiated to examine the mode of infection of *Camellia* plants with *P. ramorum* at the whole plant and cellular level. *Camellia* leaves were infected with *P. ramorum* via zoospores or plug inoculation. Leaf samples were harvested 3 hours and 1, 2 and 4 days after infection and fixed immediately for light and electron microscopy. Examination with light and scanning electron microscopy indicated that possible anatomical pathways for infection of *Camellia* leaves include stomates and large sub-epidermal oil glands located on abaxial surfaces of leaves. Preliminary scanning electron microscopy in our laboratory indicates that stomates are the most likely site of initial infection.

Key words: *Phytophthora ramorum*, electron microscopy, camellia leaf

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