



CALIFORNIA OAK MORTALITY TASK FORCE REPORT SEPTEMBER 2004

MONITORING

The California Department of Food and Agriculture (CDFA) announced the confirmation of two *Phytophthora ramorum*-infected coast live oak trees in Golden Gate Park, making San Francisco County the 14th California county regulated for the pathogen. As a regulated county, San Francisco will be required to follow State and federal quarantine guidelines for *P. ramorum*.

The positive confirmations were identified in the eastern portion of the park, in the AIDS Memorial Grove. Less than 10 percent of the park's forest canopy is comprised of oaks, and the vast majority of those oaks are located in the eastern portion of the park, in a small area of native vegetation. The infected trees were found on a ridge, next to a trail, among other plants susceptible to *Phytophthora ramorum*. The detections were made during a survey conducted by the California Department of Forestry and Fire Protection as part of a national effort to determine where the pathogen is throughout the US. Surveying efforts in the area are ongoing; results from other symptomatic oak, California bay laurel, and camellia are pending. Golden Gate Park plans to implement a *P. ramorum* management plan once the scope of the disease in the park is understood. For more information, contact Tomas Pastalka, California Department of Food and Agriculture at tpastalka@cdfa.ca.gov.

Extensive follow-up surveying of the PCR-positive *Phytophthora ramorum* sample taken from a red oak tree at Tiffany Creek Preserve in Nassau County, NY, has been conducted by the USDA Forest Service, USDA Animal and Plant Health Inspection Service (APHIS), the NY Department of Agriculture and Marketing, and the NY Department of Environmental Conservation. To date, foliar symptoms have not been found on any of the host plants at the Preserve. Hundreds of official samples have been taken of the tree and surrounding hosts since the initial sample; all results have been negative. Soil and nearby available standing water have also been sampled and baited with negative results. The Preserve remains under an APHIS Emergency Action Notice while APHIS and NY continue to discuss an appropriate response.

REGULATIONS

On August 5, 2004, the USDA Animal and Plant Health Inspection Service (APHIS) added four new species to the list of *Phytophthora ramorum* associated host plants, and de-listed one species. *Calluna vulgaris* – Scotch Heather (Ericaceae), *Drimys winteri* – Winter's-bark (Winteraceae), *Laurus nobilis* – Sweet bay laurel (Lauraceae), and *Salix caprea* – Kilmarnock willow (Salicaceae) were found infected with the pathogen in Europe, and are now listed as regulated articles. *Vaccinium vitis-idaea* (lingonberry) was removed from the *P. ramorum* associated host plant list because the Plant Protection and Seed Service of Poland was unable to validate their original association of lingonberry with *P. ramorum*. For more information, see "Hosts of the Month" below. A complete list of associated and host plants can be found at www.suddenoakdeath.org.



The Oregon Department of Agriculture (ODA) lifted its quarantine of Columbia County nurseries and compost production facilities on 8/18/04 after determining that the pathogen has not spread beyond the initial confirmation location. With the removal of the quarantine, ODA is declaring that the disease is not established in Columbia County. Following an extensive survey, the state determined the infestation was limited to two blocks of plants in the infested nursery, and that infected plants in the neighboring landscape originated from those infested blocks. All infected plants in the identified blocks and the neighboring landscape were incinerated. Follow-up monitoring has not detected any additional infection.

ODA is continuing to inspect and test all Oregon nurseries with hosts as part of its statewide *P. ramorum* nursery certification program. For more information, contact Gary McAninch, ODA, at (503) 986-4785 or via email at gmcaninc@oda.state.or.us.

On September 1 – 2, the California Department of Food and Agriculture (CDFA) held a Sudden Oak Death [*Phytophthora ramorum*] Science Advisory Panel meeting at the CDFA Plant Pest Diagnostics Center in Sacramento. The panel provided CDFA with scientific information relative to Sudden Oak Death and its causal agent, *Phytophthora ramorum*, as well as recommendations that would enable CDFA to best engage in regulatory discussions with cooperating agencies, the regulated industry, and other interested stakeholders. For information on the meeting, contact Kathy Kosta, CDFA, at (916) 262-0855 or via email at kkosta@cdfa.ca.gov.

RESEARCH

The Joint Genome Institute (JGI) hosted a Phytophthora Genome Sequence Annotation Jamboree, August 15-20, 2004 at its Walnut Creek, California production sequencing facility. The Jamboree brought together 40 Phytophthora genomics experts to compare the genomes of *P. ramorum* and *P. sojae* (*P. sojae* causes over \$1 billion annually in soybean damage.). From the meeting, the identification of large numbers of sequence variations and repeats were found in the *P. ramorum* genome, which should enable better DNA fingerprinting for pathogen tracking and more sensitive PCR- (Polymerase Chain Reaction) based diagnostic tests. It was also confirmed that *P. ramorum* is not a new hybrid between two other species, as most genes do not occur in two copies. As *P. ramorum* turns out to be very similar to *P. sojae*, chemical treatments developed for other Phytophthora species are expected to be effective. For more information, contact Jeffery Boore, JGI Evolution Genomics, at jlboore@lbl.gov or (925) 296-5691.

NURSERIES

Trace-forward nursery surveys and the national survey are still ongoing. To date, the USDA Animal and Plant Health Inspection Service (APHIS) reports 157 sites in 21 states have had *P. ramorum* detections. Positive findings by state are: AL(3), AR(1), AZ(1), CA(53), CO(1), FL(6), GA(18), LA(5), MD(2), NC(9), NJ(1), NM(1), NY (1), OK(1), OR(10), PA(1), SC(3), TN(2), TX(11), VA(2), and WA(25). Of the confirmed positives nationwide, 128 have been identified through trace-forwards, 3 through trace-



backs, 19 through the National Survey, 2 through compliance agreements, 3 residential sites, and 1 through other surveys. The states of IA, ID, MO, NE, ND, and MT recently completed National Surveys activities. In all, 13 states have completed their *P. ramorum* National Survey sampling.

WEBSITE

The redesign of the California Oak Mortality Task Force (COMTF) website is complete and available at www.suddenoakdeath.org. New features include an image library, virtual training session, and user-friendly drop-down menus. Additional information and site populating will continue over the next several months; updates will be ongoing.

CALENDAR OF EVENTS

10/1/04 – Submission deadline for second Sudden Oak Death Science Symposium abstracts of proposed papers or posters. For more information, contact Joni Rippee, UC Berkeley Center for Forestry, at rippee@nature.berkeley.edu or <http://nature.berkeley.edu/forestry/sodsymposium>.

1/18 – 21/05 - Second Sudden Oak Death Science Symposium, Marriott Hotel, Monterey, CA. For Symposium program content, contact Rick Standiford, UC Berkeley Center for Forestry, at standifo@nature.berkeley.edu or Pat Shea, USDA Forest Service Pacific Southwest Research Station, at pjshea@davis.com. Updates on the meeting will be posted at <http://nature.berkeley.edu/forestry/sodsymposium>.

PERSONNEL

The California Oak Mortality Task Force (COMTF) Coordinator Lucia Briggs left the Task Force on August 20, 2004 for a position in the UC Berkeley Chemistry Department. Her position will not be filled. Any inquiries should be directed to Janice Alexander, COMTF Outreach Coordinator, at (415) 499-3041 or jalexander@ucdavis.edu, or Katie Palmieri, COMTF Public Information Officer, at (510) 847-5482 or palmieri@nature.berkeley.edu.

HOSTS OF THE MONTH

Three plant species, recently added to the list of *Phytophthora ramorum*-regulated host plants, are featured this month: Winter's-bark, Sweet bay laurel, and Goat willow.

[Drimys winteri \(Winter's-bark\)](#)

Native to Argentina and Chile, Winter's-bark is an evergreen tree that can grow to a height of 50 ft. Its mildly fragrant flowers bloom from late winter to mid-spring, are white with yellow centers, and are found in clusters on branch tips. Its leathery aromatic leaves have a peppery smell when crushed, and the aromatic bark is used to treat certain stomach ailments. Winter's-bark grows best in full sun to light shade, and prefers moderate temperatures in addition to well-drained soil.



Phytophthora ramorum-infected Winter's-bark was found in Southwest England, December 2003. The plant was a large bush shape, and exhibited foliar blight as well as shoot dieback. Numerous infected rhododendrons were also found in the vicinity. To date, Koch's postulates have not been completed, as the host was originally thought to be a rhododendron, so the isolate was discarded.

Resource:

- University of Oklahoma, Department of Botany and Microbiology
<http://www.plantoftheweek.org/week071.shtml>

Laurus nobilis (Sweet bay laurel)

Sweet bay laurel is an evergreen shrub or small tree, native to Mediterranean region woodlands. It can grow 12 – 15 ft. tall and equally as wide, or it can be clipped and shaped as a shrub. It is adaptable to sun or shade, and while it requires well-drained soil, it is drought tolerant once established. The dark to bright green leaves are very fragrant, and after drying can be used for culinary flavoring. Leaves and branches are also used for garlands and wreaths. As a medicinal plant, bay leaves and berries have been used for rheumatism, skin rashes, earaches, and insect repellent.

Phytophthora ramorum-infected Sweet bay laurel was identified in a Southwest England nursery, May 2004. The infested plants were container grown and exhibited foliar blight symptoms. Other infected container-grown plants were also identified at the nursery. Koch's postulates have been completed. Once the UK reports its completed findings to APHIS, and APHIS reviews and accepts the information, *Laurus nobilis* will be moved from the associated host list to the host list.

Resource:

- Simon, J.E., A.F. Chadwick and L.E. Craker. 1984. Herbs: An Indexed Bibliography. 1971-1980. The Scientific Literature on Selected Herbs, and Aromatic and Medicinal Plants of the Temperate Zone. Archon Books, 770 pp., Hamden, CT.

Salix caprea cv *Kilmarnock* (Goat willow)

Goat willow is a small, deciduous tree (15 – 25 ft.), native to Europe and northeastern Asia. Newer bark is yellowish-brown in color, while older bark is dark brown. Goat willow leaves are dark green, oblong in shape with serrated edges, and range from 2 – 4 inches. Fall foliage is yellow. Its showy white bottle-brush flowers range from 1 – 2 inches and bloom in April. It is fast growing, prefers moist soil, and full sun.

Phytophthora ramorum-infected Goat willow was found in container-grown plants in Northwest England, July 2004. Symptomatic plants exhibited foliar blight and aerial dieback. Koch's postulates have not yet been completed.

Resource:

- University of Connecticut, "UConn Plant Database"
<http://www.hort.uconn.edu/plants/s/salcap/salcap1.html>