



REPORT TO THE CALIFORNIA OAK MORTALITY TASK FORCE FEBRUARY 2003

MONITORING

A review of California's 2002 monitoring program for *Phytophthora ramorum* was held January 27, 2003 in Monterey in conjunction with the national meeting for the USDA Forest Service, Forest Health Monitoring Program. Oral and written presentations of methods and results were given for all *Phytophthora ramorum* monitoring projects funded in 2001-2002 by the USDA Forest Service, California Department of Forestry and Fire Protection, and California Department of Food and Agriculture. The USDA Forest Service, Forest Inventory and Analysis group presented preliminary results that indicate between 5 and 12 percent of California's redwood/tanoak and coast evergreen forests are infested with *Phytophthora ramorum*. Final results will provide a more specific and statistically-based model of *Phytophthora ramorum*'s impact and distribution in California. Ross Meentemeyer, Sonoma State University, presented his risk model for *Phytophthora ramorum* in California, which indicates that the North Coast is at the greatest risk for infection. In another presentation on pathogen status in the Sierra Nevada foothills, Susan Frankel, USDA Forest Service, reported that *Phytophthora ramorum* was not found after conducting a roadside survey of the area. For more information on California's *Phytophthora ramorum* monitoring program, or to obtain a summary, go to www.suddenoakdeath.org.

EDUCATION

The "Sudden Oak Death – How Concerned Should You Be?" International On-line Discussion Symposium will be held April 21 - May 4, 2003 at: <http://sod.apsnet.org/>. This global, on-line Sudden Oak Death symposium is free and open to anyone interested in participating. On-line sessions will provide a forum for interactive discussions on various aspects of the disease. Topics to be addressed include: fungal identification, the role of plant species in disease spread, impacts on forest ecosystems and urban/wildland interfaces, Sudden Oak Death surveys, management and control, silviculture, industry implications, policy and regulations, and citizen concerns. The symposium is sponsored by the American Phytopathological Society, the USDA Forest Service, and the USDA Animal and Plant Health Inspection Service. To receive an email reminder when the symposium goes live in April, go to <http://sod.apsnet.org/>.

The COMTF is planning three training sessions on "Recognition, Sampling, and Regulations for *Phytophthora ramorum*." Sessions are tentatively scheduled for March 19 – southern region; April 30 – northern region; and May 29 – Bay Area. March training details will be emailed out to the list serve and posted to the website. Details on the other training sessions will be provided in the March report.

RESEARCH

The January – March 2003, Vol. 57 Number 1 issue of California Agriculture features a research update on treatments and genetic resistance for Sudden Oak Death. In addition, an article entitled, "Non-oak native plants are main hosts for sudden oak death



pathogen in California” by Matteo Garbelotto and others, provides the research basis for the 13 non-oak hosts of *Phytophthora ramorum*. Both reports are available at <http://danr.ucop.edu/calag/>.

The website for the Sudden Oak Death Science Symposium that was held in Monterey December 16 – 18, 2002, has been updated. Abstracts for over 80 papers and posters that were presented as well as a general summary of the Symposium can be found along with information on the upcoming "Sudden Oak Death – How Concerned Should You Be?" International On-line Discussion Symposium at <http://danr.ucop.edu/ihrmp/sodsymposium.html>.

TASK FORCE BUSINESS

The next full COMTF meeting is tentatively scheduled for Wednesday, May 28, 2003 in the Bay Area. The first half of the day will be for committee meetings, followed by an afternoon focus session for arborists. Further details will be forthcoming.

DATES TO REMEMBER

- 2/12 – “SOD Mitigations for Foresters and Loggers” presentation; Forest Forum, Bellotti Inn, Sutter Creek; contact Dan Stapleton (530) 644-2311
- 2/13 – “Managing Foothill Oaks and Sudden Oak Death – A State and Local Overview” workshop; American River Meeting Room, Placer County Water Agency; contact Roger Ingram (530) 889-7385
- 3/19 - Training session in Santa Cruz on “Recognition, Sampling, and Regulations for *Phytophthora ramorum*,” details forthcoming
- 4/30 – Training session in the northern SOD region on “Recognition, Sampling, and Regulations for *Phytophthora ramorum*,” details forthcoming
- 4/21 – 5/4 - “Sudden Oak Death – How Concerned Should You Be?” International On-line Discussion Symposium at: <http://sod.apsnet.org/>
- 5/28 – Next COMTF meeting; Arborist focus; details forthcoming
- 5/29 - Training session in the central SOD region (Bay Area) on “Recognition, Sampling, and Regulations for *Phytophthora ramorum*,” details forthcoming
- 6/28 – 29 – Jepson Herbarium weekend workshop; Sudden Oak Death weekend workshop with Dr. Matteo Garbelotto and Dr. Ellen Simms at the UC Botanical Gardens, Berkeley and five regions in the greater Bay Area; limited to 20 participants; contact Anneke Swinehart, Jepson Herbarium, (510) 643-7008

THE LEARNING CURVE

***Phytophthora ramorum* in Europe**

On November 1, 2002, the European Union adopted regulatory measures against *Phytophthora ramorum*. For export of susceptible plants from the United States to member countries in the European Union (EU), plants must originate from a *Phytophthora ramorum*-free area or from a place of production which has been inspected by US authorities and found free from symptoms. A plant passport is required for



movement within Europe, acting as an official certificate verifying that the plants have had the required statutory inspections and have been found free from quarantine pests (including *Phytophthora ramorum*). All EU member states are required to carry out national surveys for the presence of disease. If *Phytophthora ramorum* is found, then all susceptible plants within 2 meters are destroyed, as are all susceptible plants within 10 meters. Any additional plants in the lot are held for a period of 3 months, with at least 2 additional inspections before being released. The rest of the facility is intensively re-inspected before allowing plants to be moved.

The pathogen has been found in nurseries and public gardens on *Rhododendron* and *Viburnum* throughout much of Europe. The United Kingdom (UK) also reports it on *Pieris* and *Camellia*. To date, the pathogen has NOT been found on oaks or other forest trees in Europe.

The following are summaries of survey results as well as governmental responses from several European countries.

Discovery of *Phytophthora ramorum* in France on *Rhododendron* spp. and *Viburnum* spp.

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The first detection of *Phytophthora ramorum* in France was on *Rhododendron* spp. in several garden centres in April 2002. The parasite was isolated from leaves and twigs necrosis by the INRA Unit of Forest Pathology. Infected plants were found in the centre, the north-east and the south-west of France but were originating from other geographical areas.

The Unit of Mycology of the French Plant Protection Service carried on a national survey in nurseries between May and December 2002. *P. ramorum* was detected in 68 out of 292 samples of leaves or twigs: 61 from *Rhododendron* (*R. ponticum* and *Rhododendron* sp.) and 7 from *Viburnum* (*V. bodnantense*, *V. tinus* and *Viburnum* sp.). Finally, 28 out of 99 geographically distinct locations (30%) were positive for *P. ramorum*, scattered all over the French territory. The fungus was detected both on plants produced in French nurseries (mainly in Brittany) and on plants imported from other European countries and grown in French nurseries.

New surveys should be carried on during spring 2003 in natural sites (public gardens, forest) in the geographical areas where infected plants were found and where the climate could be favourable to the development of *P. ramorum*. Some reported hosts will



particularly be observed, such as *Rhododendron* spp., *Vaccinium* spp., as well as plants which have shown to be susceptible after artificial inoculations, such as *Fagus sylvatica*, *Quercus rubra*.

With respect to the provisional emergency phytosanitary measures within the European Union (directive 2002/757/EC), susceptible plants may only be introduced from the USA into the E.U. if they are inspected on entry for the presence of *P. ramorum* and found free from it. In addition, plants of *Rhododendron* spp. and *Viburnum* spp. may only be moved within the European Union if they are accompanied by a plant passport.

***Phytophthora ramorum* in The Netherlands,**
Plant Protection Service, Wageningen, The Netherlands

Since 1993, a new *Phytophthora* species, in 2001 described as *Phytophthora ramorum*, has been found on *Rhododendron* and *Viburnum* in the Netherlands. In the period 1993-2000, infected *Rhododendron* plants, showing leaf spots and twig blight, were found on 15 locations of public green and some nurseries. A single finding had been made on *Viburnum* (*x bodnantense* 'Dawn', stembase rot, on a nursery in 1998. At that time, this new disease was not considered very harmful. However, after the report of large scale oak mortality in California end of 2000, we did a risk assessment and implemented a survey in 2001. In this survey, 214 locations with *Rhododendron* or *Viburnum* were checked. Infestations were found on *Rhododendron* in natural environment and on *Rhododendron* and *Viburnum* in nurseries. In the survey, potential host plants including *Quercus*, *Fagus*, and *Castanea* approximately 100 m around infected *Rhododendron* and *Viburnum* plants were inspected for symptoms of *P. ramorum*. In none of the cases symptoms suggesting *P. ramorum* were encountered. Measures have been taken to eradicate the infestations in the nurseries and to contain them in the natural environment. The organism is considered a large potential threat for the forests, parks and landscape.

In 2002, all 760 nurseries have been inspected, according to the EU directives. *P. ramorum* was found on 5 % of the nurseries on mainly *Viburnum* (esp. *V. x bodnantense* 'Dawn') and *Rhododendron*.

Measures according the EU Commission decision were executed to eradicate the infections. Furthermore, an extensive survey of 2000 locations in the natural environment designed around *Rhododendron* started. Other potential host plants in the surrounding are inspected thoroughly if *Rhododendron* is found infested. The results until now are in line with those of the survey of 2001; so far, infections were observed at 5% of the sites, only in *Rhododendron*. At the end of 2001 as well as at the end of 2002 some large infestations were found in the natural environment.

The Secretary of Agriculture decided, awaiting the results of the survey of 2002/2003, not to remove infestations by force, but to advise strongly to the eradication. He also decided that the communication around *P. ramorum* has to be intensified. The



implementation of containment measures in the natural environment will start beginning of 2003.

June 2003, the survey and research results will be evaluated and the pest risk assessment updated. At that moment sufficient data concerning spread, host plants, means of dispersion and effectiveness of control measures should be available to make more definitive decisions on the control of *P. ramorum*.

Status of *Phytophthora ramorum* in Belgium - 2002

Kurt Heungens (1), Daphné De Merlier (2), and Vera Huyshauwer (3)

In Belgium, *Phytophthora ramorum* was first isolated in late spring of 2002 in the Walloon area (southern part of Belgium) from imported *Viburnum x bodnantense* (4). At about the same time it was diagnosed on *Rhododendron* in Flanders (northern part of Belgium). Since then, several more positive diagnoses have been made on *Rhododendron* and *Viburnum* plants. So far, no other host plants have been identified and detection has been restricted to nurseries. To our knowledge, research on *P. ramorum* in Belgium is conducted by a limited number of people in the two main governments agricultural research centres and focuses on detection, biology, host range, and control.

In the fall of 2002 the Belgian Plant Protection Service conducted a first survey of *Rhododendron* and *Viburnum* plants at over 200 nurseries. Plants with suspicious symptoms were examined at the CLO research centre using PARP plating or PCR detection. Sixteen percent of 112 *Rhododendron* plants and 55% of 31 *Viburnum* plants tested positive for *P. ramorum*. These positive samples found their origin in nine *Rhododendron* and in eight *Viburnum* nurseries. Positive samples were reported back to government services so that the EU-prescribed control measures could be implemented.

Growers were informed about the pathogen and control measures through extension services and a publication. Feedback from growers indicates a high level of awareness and strict execution of sanitation measures.

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4) D. De Merlier, A. Chandelier, and M. Cavelier (2003). First Report of *Phytophthora ramorum* on *Viburnum bodnantense* in Belgium. Plant Disease 87(2): in press.



***Phytophthora ramorum* in the United Kingdom (UK).**

Report provided by Steve Ashby, DEFRA

A January 2003 report on *Phytophthora ramorum* in the UK is available from Department for Environment, Food & Rural Affairs (DEFRA) at

<http://www.defra.gov.uk/planth/publicat/sudden.pdf>

Since April 1, 2002, over 6500 inspections have been made at over 3000 premises. To date, *Phytophthora ramorum* has been found at 130 sites in England and Wales, as well as over 20 sites in Scotland and the Channel Isles. The total includes six findings on established plants growing outside in soil. In addition to *Rhododendron* and *Viburnum*, there have been two findings on *Pieris* and one on *Camellia*. So far there have been NO findings on oak or on any other trees. All findings of the disease are eradicated.