



News & Views

for New Hampshire's Green Industry

October-December, 2004

On the Lookout for Sudden Oak Death

Many of you may have seen or heard recent news reports about Sudden Oak Death (SOD) caused by the fungus *Phytophthora ramorum*. SOD is a severe disease of oak and tanoak in certain Pacific Northwest fog forest areas. *Phytophthora ramorum* was first discovered in Germany and the Netherlands in 1984. In the US, symptoms of SOD were first observed in Marin County, CA in 1995 and positively identified by Berkley scientists in 2000 (the European and US isolates of *P. ramorum* however, are different). In March 2004, *P. ramorum* was found in two large ornamental nurseries, Monrovia Nursery and Specialty Plants Inc., in southern California. Monrovia Nursery shipped potentially infected nursery stock to 39 states before the problem was identified at their Azusa, CA facility. As a result of these shipments, USDA/APHIS-PPQ initiated a trace-forward survey of all nurseries that received shipments from the nurseries. New Hampshire did not receive any suspect shipments from Monrovia, and Specialty Plants shipped primarily single bonsai camellia plants during the holiday gift season in 2003, none of which required testing in NH. The trace forward surveys revealed that 72 nurseries in 17 states had received infected material.

Two additional surveys were conducted in NH, The National Nursery Survey, funded by USDA APHIS-PPQ and the Nursery Perimeter and General Forest Survey, funded by the USDA Forest Service. The Perimeter survey concentrated on forests adjacent to nurseries that may have received infected CA nursery plants.

The UNH Diagnostic Lab tested 153 samples from NH for the National Nursery Survey (samples were collected by Tom Durkis and John Weaver from the NHDA). Samples for the Nursery Perimeter and General Forest Survey were collected by Jennifer Bofinger (NH Div. Forests and lands), and were tested by the regional Diagnostic center at Cornell University. All samples collected in NH were negative for *P. ramorum*. So, to date, *Phytophthora ramorum* has **not** been found in New Hampshire. Due to our environmental conditions, New Hampshire, Maine and Vermont are considered to be in the 'low risk' category for establishment of SOD.

Hosts and symptoms:

Phytophthora ramorum has a wide range of host plants, including rhododendron, viburnum and camellia, which are potential "carriers" of the fungus when plants are transported. Two types of symptoms are caused by *P. ramorum*, 'sudden oak death' and ramorum foliar blight. 'Sudden oak death' symptoms are stem lesions beneath the bark of red oak and related hosts (*Quercus*, *Castanea*, and *Lithocarpus* in CA and *Fagus* in Europe). The stem lesions may bleed or ooze (Fig. 1). Ramorum foliar blight causes spots or brown to black blotches on leaves (Fig 2), or twig



Figure 1



Figure 2

dieback (Fig. 3). Ramorum blight can occur on a wide range of non-oak hosts (*Rhododendron*, *Pieris*, *Pyracantha*, *Kalmia*, *Camellia* and others). Ramorum blight may kill juvenile plants and occasionally mature plants. It is important to remember that a wide range of other pathogens (including other *Phytophthora* species), insects and environmental factors can cause these same symptoms. Positive identification of the causal agent is achieved through a combination of serological testing, culturing and DNA analysis. It is impossible to identify SOD by symptoms alone. Suspect plants should be tested by a diagnostic laboratory.

National picture:

The USDA APHIS-PPQ National Nursery Survey activities are complete in 38 states and Puerto Rico. As of 10/14/04, participating states throughout the US have surveyed 3,095 sites and have collected 50,820 samples. To date, the US Forest Service Nursery Perimeter and General Forest Survey has sampled 620 nursery perimeter locations in 32 states. Of the 2,454 samples submitted, all were negative for *P. ramorum*. In addition, 404 general forest locations in 18 states have also been surveyed, with 1,249 samples submitted. Only two samples, (from CA's Golden Gate Park) tested positive. Currently there are 164 USDA-APHIS confirmed positive *P. ramorum* sites in 21 states from trace-forward, national, and other surveys. The breakdown per state is: AL (3), AR (1), AZ (1), CA (53), CO (1), FL (6), GA (16), LA (5), MD (2), NC (9), NJ (1), NM (1), NY (1), OK (1), OR (18), PA (1), SC (4), TN (2), TX (11), VA (2) and WA (25). Additional surveys are planned for 2005 both nationally and in NH.

NOTE:

There has been a recent find in Connecticut (November 22, 2004). I spoke with Sharon Douglas, the Diagnostician with the CT Agricultural Experiment Station, and received the following information. The confirmed positives (4 positives and one pending) were on rhododendrons shipped from a nursery in Oregon to 54 locations in CT. The shipments occurred from February through September (2004). Although most of the plants had been sold by the time the



Figure 3

survey was conducted (early Nov), 60 plants were sampled and DNA from 14 plants were sent to the USDA lab in Beltsville, MD for confirmation. There is a possibility that shipments were also made to locations in NH from the same Oregon Nursery. Regional APHIS-PPQ and NHDA officials are following up on the matter. Refer to Fig. 2 for an example of foliar symptoms on rhododendron.

If you suspect a potential SOD problem, please call Cheryl Smith (603-862-3841) at the UNH Plant Diagnostic Lab or Tom Durkis (603-271-2561) with the NHDA before sending samples for testing (there are very specific steps for submitting samples).

For additional information on Sudden Oak Death visit the following web sites:

www.suddenoakdeath.org or <http://www.na.fs.fed.us/SOD/>. If you would like a copy of the National Pest Alert on Sudden Oak Death please call 603-862-3841.

Cheryl Smith

Info-Line Volunteers Log 35,000 Calls

UNH Cooperative Extension's Family, Home & Garden Education Center Info Line answered 35,000 calls in the last five years! The Education Center volunteers, highly trained Master Gardeners, provide research-based information on a wide variety of questions from homeowners. In those five years, 221 Education Center Master Gardeners volunteered a total of 13,418 hours.

Categories range from annuals to wildlife and include questions about child development, food safety, backyard livestock, ponds, vegetables and weeds, to name a few. There are 24 categories of questions, and the top five remain constant. The most frequently asked questions focus on trees and shrubs, household insects, annuals and perennials, lawns and wildlife. More and more fact sheets are available on our web site, providing instant information to callers who are on-line. The center can also provide information to callers without web connections through their home fax machines.

This fall a presentation about Urban Pest Control updated Master Gardener trainees about new control methods for termites, ants and household pests. IPM, pond maintenance, water quality, mold and mildew, new insects to New Hampshire, and forest entomology are other topics covered in the expanded training schedule.

Education Center Director Margaret Hagan's topical shows on WMUR-TV generated 445 calls this year for further information, indicating the public's interest. The center also provides classroom space for unique and interesting evening workshops taught by Master Gardeners.

Anne Krantz, involved since the Center opened, says, "The Center opened just five years

ago and undergoes constant tuning to provide even faster and more efficient answers to ever tougher questions. From our humble start with a class of 30 recruits, we have become a state-of-the-art operation, respected by other states. We who were in the first class remember our anxiety about our ability to do such sophisticated work—to simultaneously use the computers to quickly enter information and to do searches while talking to the callers.

In class we worried about the Y-2K scare and anticipated questions about disasters—how long could water be kept in plastic jugs? When we graduated and began to staff the Ed Center we were swamped! I remember having six or seven pending questions, and fearing that I would get the answer to the wrong client. But it was so exciting—it seems like another century now! We expected calls about gardening topics that we were comfortable with—what flowers to plant where. But as Ed Center volunteers now know, that hardly ever happens, the questions are usually very difficult."

As more and more people become aware of the resources offered by the Family, Home & Garden Education Center, its outreach efforts grow. It's a winner for all involved, including the volunteers who gain knowledge, satisfaction and self-esteem; the staff, who can now focus on program impacts elsewhere; New Hampshire residents, who gain valuable information; the garden centers who can refer their customers to the Info Line and UNH Cooperative Extension, which gains as a whole through increased visibility.

Margaret Hagen

Info Line Toll-Free Number

1-877-398-4769

What's New on the Web?

Have you looked at our website lately? This past year we underwent a complete redesign of the site, to make it easier to navigate and find what you need. The home page is updated frequently with current topics. Make sure you bookmark this page and check it frequently:

<http://ceinfo.unh.edu>

From there, use the search feature or click on "Agriculture", then "Landscape, Nursery & Turf". At

the bottom of this page are links to current newsletters, fact sheets, and research reports such as:

Production Systems for Small Trees & Shrubs Fertilizing Trees and Shrubs Growing High Quality No-Pinch Mums

Greenhouse growers should check the Greenhouse & Floriculture page for info on greenhouse technology, crop nutrition, graphical tracking, and more. In addition, you can easily access 'Home Horticulture' info for your customers. Visit soon and come back often!

Non-invasive Alternative Plant Posters Available

Help educate your customers about selecting alternative plants for Japanese Barberry and Burning Bush, which will be phased out of production and sales in N.H. during the next two years. These color posters (partially shown below) measure 11x17" and are perfect for laminating and posting in your garden center or nursery. To request a free copy of each, email cathy.neal@unh.edu or call 603-862-3208.



Events

- Dec. 15-16 NE Fruit & Vegetable Conference & Trade Show.** Center of NH Radisson Hotel, Manchester. Includes a half-day program on cut flowers. For details, see program at www.massfruitgrowers.org.
- 2005**
- Jan. 5, 6 & 7 Tri-State IPM Program** – Manchester, ME; Durham, NH; and Burlington, VT, respectively. Enrollment is limited—pre-registration required. For information contact Margaret Skinner at 802-656-5440, or miskinner@uvm.edu
- Jan. 20 Joint Winter Meeting of the NH Plant Growers Association and the NH Landscape Association,** Manchester, NH. For info, contact nhpga@totalnetnh.nh or call 292-5238.
- Feb. 1-3 New England Grows!** at the new Boston Convention & Exhibition Center. For program and registration info: www.NEGrows.org.
- Feb. 4-5 Farm and Forest Expo.,** Center of NH—Radisson Hotel Manchester, 700 Elm St. \$3.00 admission/under 15 Free. For information contact Expo Coordinator at 603-271-3788 or visit <http://www.nhfarmandforestexpo.org/>

This newsletter is a cooperative effort of the Ornamentals Extension Educators and Specialists at the University of New Hampshire. It is published quarterly. Its purpose is to inform and update industry members on issues and research relevant to the production, use and maintenance of ornamentals and turf in New Hampshire. Contributors for this issue:

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Comments and questions are welcome... please call Cathy Neal at 603-862-3208. Address corrections, additions and deletions should be faxed to 603-862-2717 or phoned in to Cheryl Estabrooke at 603-862-3200.

The use of trade names in this newsletter is for information purposes only and does not constitute endorsement of the product names or discrimination against products not specifically mentioned.