

An update of *Phytophthora ramorum*

(cause of Sudden Oak Death
and other plant diseases)

Janice Alexander

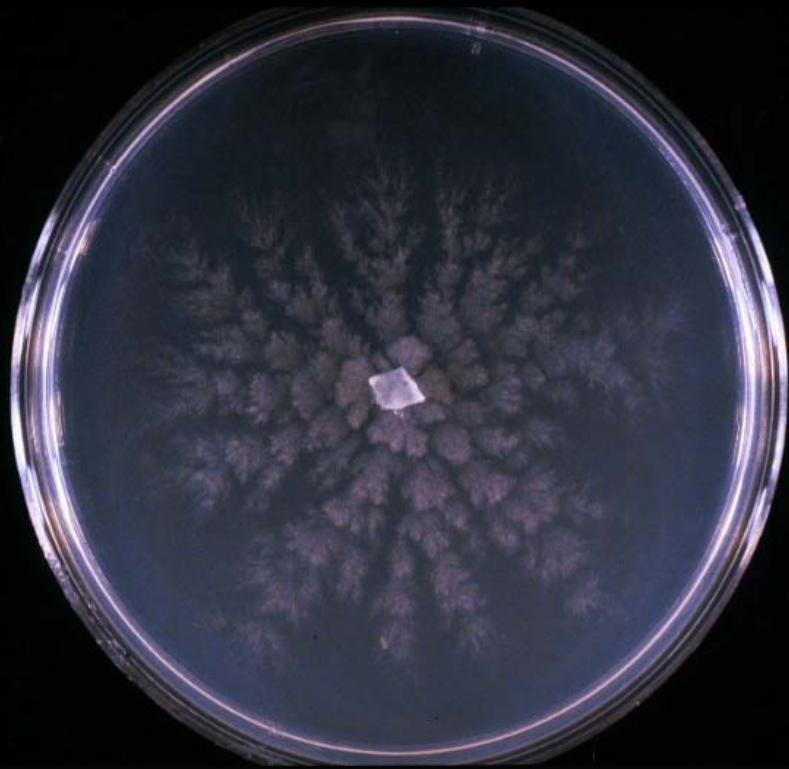
*University of California Cooperative Extension
California Oak Mortality Task Force*



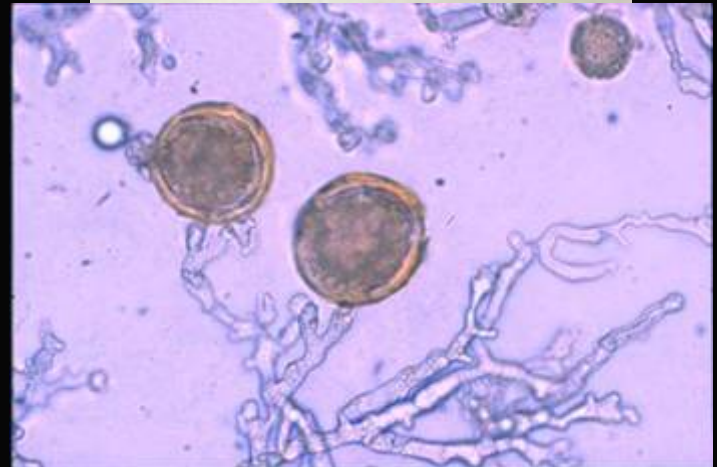
California
Oak Mortality
Task Force

Phytophthora ramorum

Sporangia releasing
zoospores



Phytophthora ramorum in culture



Chlamydospores



2005 Updates

- Host plants & symptoms
- Distribution
- Nursery industry
- Wildland management
- Research
- Outreach



Susceptible Species*

Andrew's clintonia bead lily	False Solomon's seal	Salmonberry
Bigleaf maple	Formosa firethorn	Scotch heather
California bay laurel	Goat willow	Shreve oak
California black oak	Grand fir	Southern red oak
California buckeye	Holm oak	Spicebush
California coffeeberry	Horse-chestnut	Strawberry tree
California hazelnut	Laurustinus	Sweet bay laurel
California honeysuckle	Lilac	Sweet chestnut
California wood fern	Madrone	Tanoak
Camellia species	Manzanita	Toyon
Canyon live oak	Mountain laurel	Viburnum varieties
Cascara	Northern red oak	Victorian box
Coast live oak	Pacific yew	Western starflower
Coast redwood	Pieris varieties	Winter's bark
Douglas fir	Poison oak	Witch hazel
Drooping leucothoe	Red tip Photinia	Wood rose
European beech	Rhododendron species	Yew
European turkey oak		
European yew		
Evergreen huckleberry		

Susceptible Species*

Andrew's clintonia bead lily
Bigleaf maple
California bay laurel
California black oak
California buckeye
California coffeeberry
California hazelnut
California honeysuckle
California maidenhair fern
California nutmeg
California wood fern
Camellia species
Canyon live oak
Cascara
Chinese witch-hazel
Coast live oak
Coast redwood
Douglas fir
Drooping leucothoe
European ash
European beech
European turkey oak
European yew
Evergreen huckleberry
Evergreen maple
False Solomon's seal
Formosa firethorn

Goat willow
Grand fir
Griselinia
Holm oak
Horse-chestnut
Laurustinus
Lilac
Loebner magnolia
Madrone
Maidenhair fern
Manzanita
Michelia
Mountain laurel
New Zealand Privet
Northern red oak
Oregon ash
Pacific yew
Persian Parrotia
Pieris varieties
Planetree maple
Poison oak
Red tip Photinia
Redwood ivy
Rhododendron species

Salmonberry
Saucer magnolia
Scotch heather
Sessile oak
Shreve oak
Southern or Roble beech
Southern red oak
Spicebush
Star magnolia
Strawberry tree
Sweet bay laurel
Sweet chestnut
Sweet Cicely
Tanoak
Toyon
Viburnum varieties
Victorian box
Western starflower
White fir
Winter's bark
Witch hazel
Wood rose
Yew



Distribution of Sudden Oak Death as of June 24, 2005



Map produced on 6/24/05 by UCB GIFF: <http://kellylab.berkeley.edu/SODmonitoring/>
For more information about Sudden Oak Death, please visit the California Oak Mortality Task Force website at <http://www.suddenoakdeath.org/>



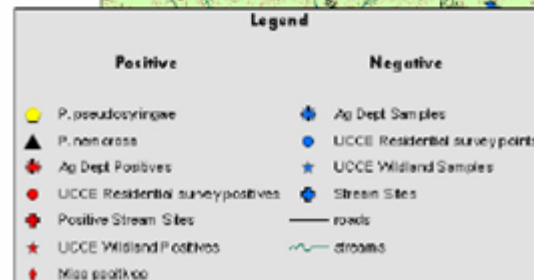
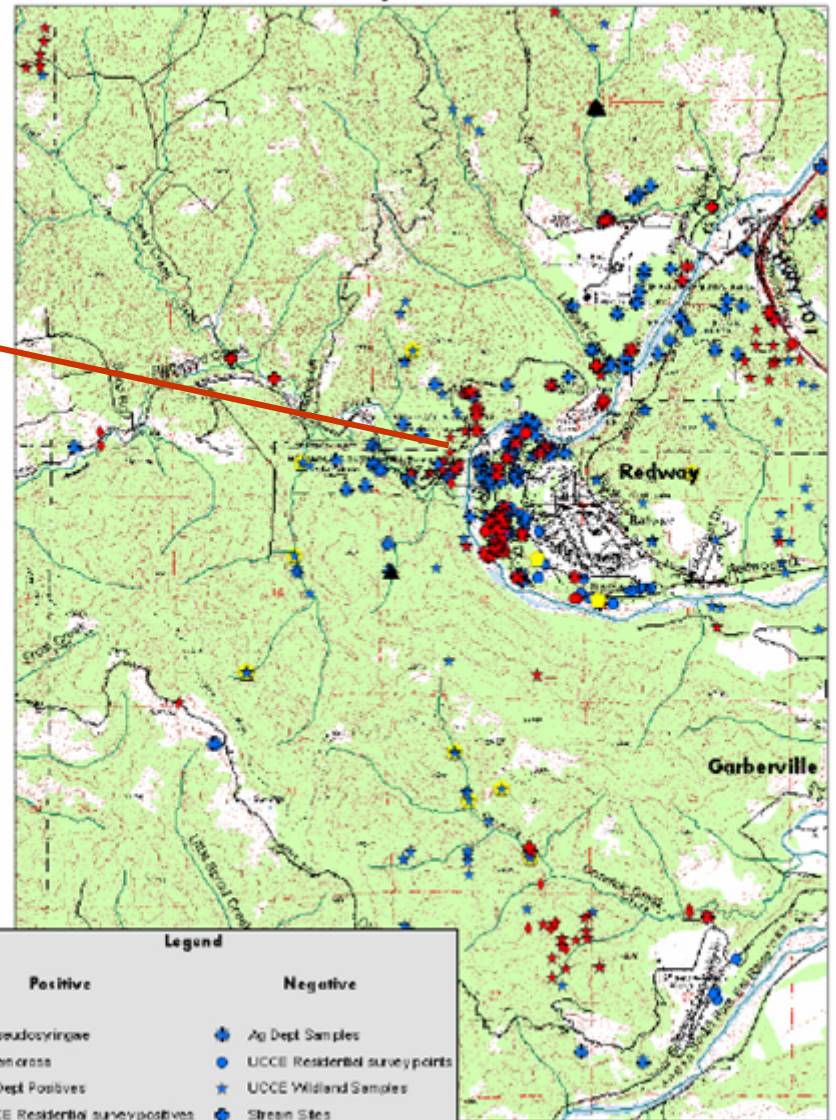
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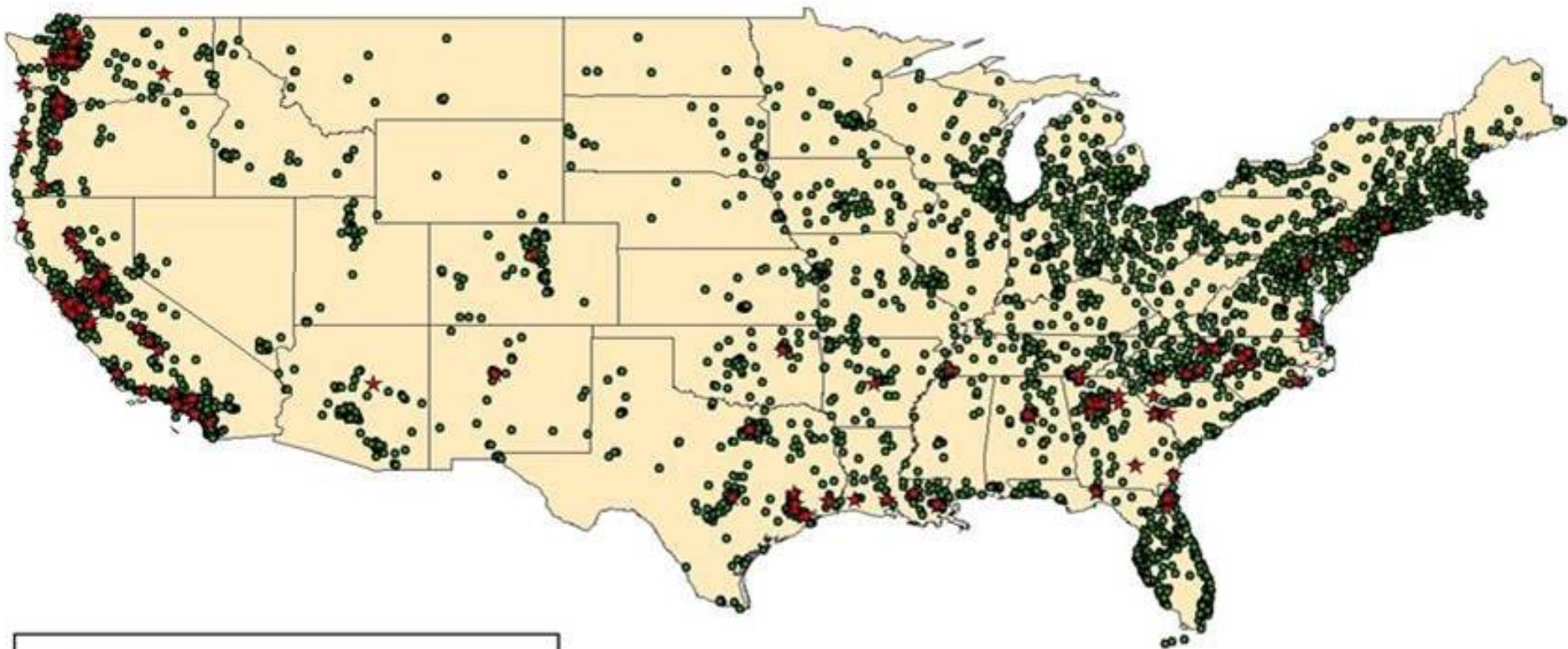
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Southern Humboldt County *P. ramorum* Survey February-June 2005



Trace-forwards & positive detections in 2004



Legend

- ★ Positive site
- All trace forward sites

Emergency federal order, January 2005



2005 nursery detections



99 sites
in 7 states

53 sites
in California

National Nursery Survey

National Survey of Forest Environments



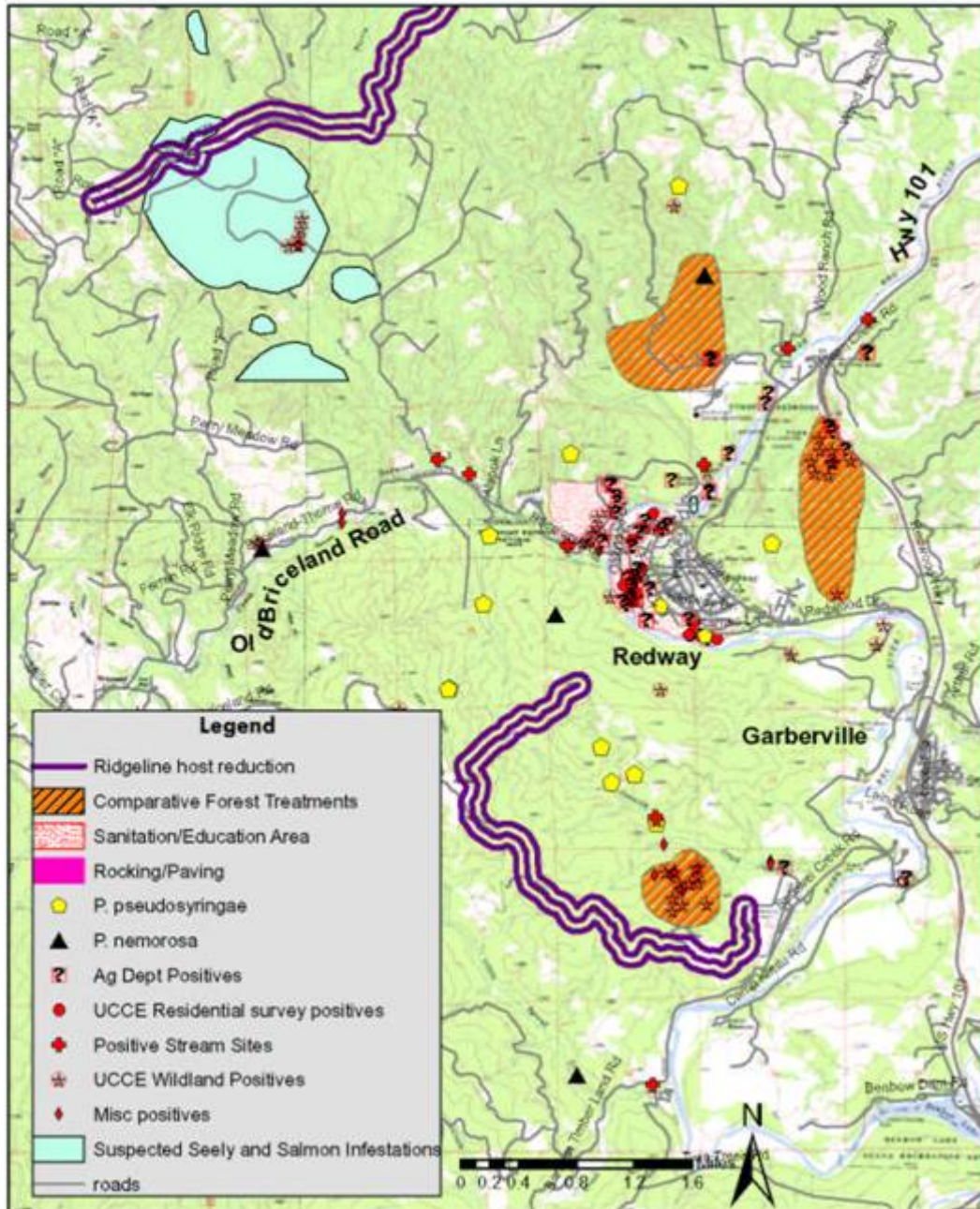
Sacramento retail nursery



El Dorado County residential find



Proposed Treatment Types, Redway/Garberville Area August 2005



Big Sur adaptive management project

- Establish a network of ecological monitoring plots across the Big Sur region.
- Evaluate impacts of sudden oak death on ecosystem composition and dynamics.
- Develop a science-based *P. ramorum*-management plan for the Big Sur region that compliments other landscape management goals.
- Test the efficacy of management actions in reducing the establishment and spread of *P. ramorum*.
- Develop an outreach program that involves local communities.



Funded Research FY 2005

\$1.5 million for 26 studies:

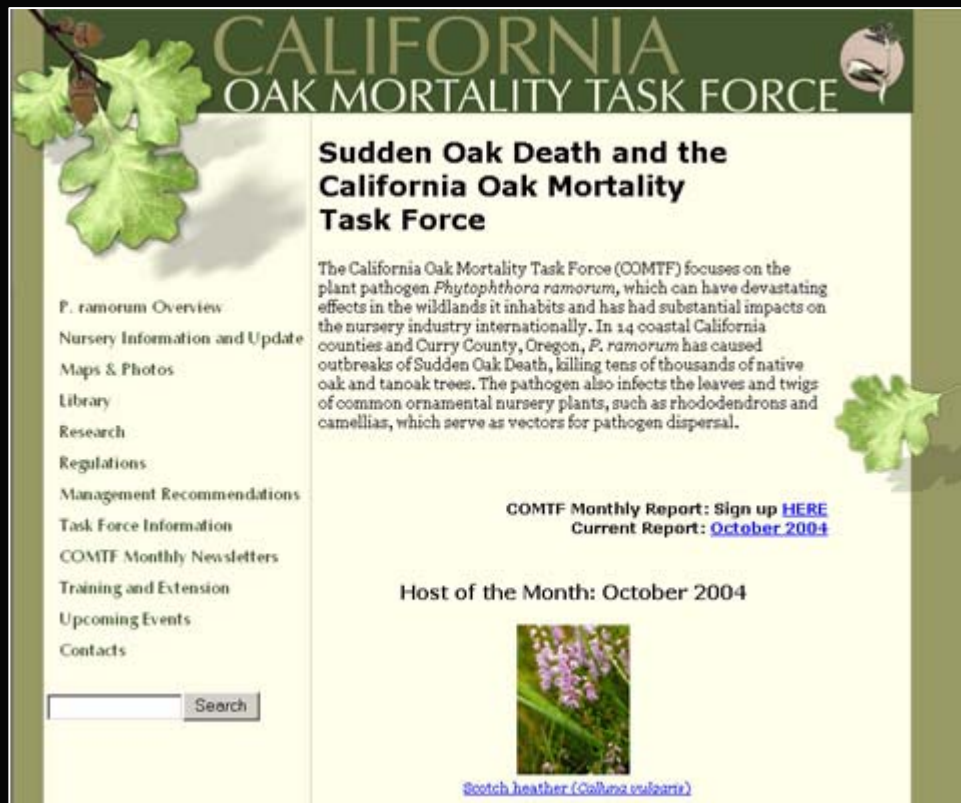
- \$800,000 for 12 new studies, from the USDA Forest Service Pacific Southwest Research Station's RFP
- \$755,000 in additional funding for continuing and other studies

\$2 million allocated for FY 2006

Sudden Oak Death Science Symposium II



California Oak Mortality Task Force



Website & listserv
Media relations
Training sessions
Presentations
Tribal Liaison
Spanish translations
Outreach survey

www.suddenoakdeath.org