Fifth Sudden Oak Death Science Symposium

Sheraton Sonoma County - Petaluma
June 19 – 22, 2012

MONDAY, JUNE 18, 2012

7:00 – 8:00 pm Registration

TUESDAY, JUNE 19, 2012

8:30 – 9:30 am Registration

9:45 Check In – Field Trip: Sudden Oak Death: Biosecurity Concerns and Forest Restoration

10:00 – 5:00 Field Trip

- Quarryhill Botanical Garden for an introduction to biosecurity risks, international plant hunters, and the rare Asian species on display
- Speaker: Global Forest Biosecurity: the Threat from Plant Hunting, Clive Brasier, emeritus, UK Forest Research
- Bouverie Wildflower Preserve for a hike through oak woodlands with SOD discussions regarding long-term system changes and restoration
- Matanzas Creek Winery and Lavender Farm for a tour of the lavender fields and wine tasting

WEDNESDAY, JUNE 20, 2012

7:00 – 8:00 am Registration

8:00 Welcome – Susan Frankel, USDA FS Pacific Southwest Research Station

8:10 – 9:30 North American Disease Status Updates
Moderator: Susan Frankel

8:10 – 8:30 Current Status of Sudden Oak Death in California Forests – Dave Rizzo, UC Davis

8:30 – 8:50 Managing Sudden Oak Death in Oregon Forests, 2001-2011
Alan Kanaskie, Oregon Department of Forestry

8:50 – 9:10 An Overview of *Phytophthora ramorum* in Washington State
Gary Chastagner, Washington State University

9:10 – 9:30 *Phytophthora ramorum* Regulatory Program: Present, Past, and Future Direction
Prakash Hebbar, USDA Animal and Plant Health Inspection Service

BREAK 9:30 – 10:00

10:00 – 12:00 International Updates

10:00 – 10:20 The New *P. ramorum* Dynamic in Europe: Spread to Larch
Joan Webber, Forest Research, UK

10:20 – 10:40 *Phytophthora ramorum* in Larch - Operational Experience from the UK
Ben Jones, Forestry Commission, UK

10:40 – 11:00 *Phytophthora ramorum* in Europe: A research update
Clive Brasier, Forest Research, UK

11:00 – 11:15 The Epidemiology of *Phytophthora ramorum* and *P. kernoviae* at Two Historic Gardens in Scotland – Matthew Elliot, Science and Advice for Scottish Agriculture

11:15 – 11:30 Genetic Diversity of *Phytophthora ramorum* in Nursery Trade and Semi-Natural Environment in Scotland
Alexandra Schlenzig, Science and Advice for Scottish Agriculture

11:30 – 11:45 Genotypic Diversity of European *P. ramorum* Isolates Based on SSR Analysis
Kurt Heungens, Institute for Agricultural and Fisheries Research, Belgium

11:45 – 12:00 Discussion

12:00 – 1:00 LUNCH

1:00 – 2:15 Review Papers
Moderator: David Rizzo, UC Davis

1:00 – 1:20 Beyond *P. ramorum* – The Other Phytophthoras in Western Forests
Everett Hansen, Oregon State University

1:20 – 1:40 Landscape Epidemiology of Emerging Infectious Diseases in Natural and Human-Altered Ecosystems – Ross Meentemeyer, University of North Carolina at Charlotte

1:40 – 2:00 Emergence of the Sudden Oak Death Pathogen *Phytophthora ramorum*
Nik Grunwald, USDA Agricultural Research Service

2:00 – 2:15 Questions and Discussion for Speakers

BREAK 2:15 – 2:30

2:30 – 3:15 Waterways and Monitoring
Moderator: Don Owen, California Department of Forestry and Fire Protection

2:30 – 2:45 New Insights into the Ecology of *Phytophthora ramorum* in Streams
Kamyar Aram, UC Davis

2:45 – 3:00 Eliminating *Phytophthora* spp. from Stream Water with Algaecides throughout the Year – Jaesoon Hwang, Clemson University

3:00 – 3:15 Comparison of In Situ and In Vitro Baiting Assays for *Phytophthora ramorum* Survey of Waterways in the Southeastern USA – Steve Oak, USDA Forest Service

BREAK 3:15 – 3:45

3:45 to 5:15 pm Concurrent Session: Nurseries

3:45 – 4:00 Pathways of Spread of *Phytophthora ramorum* in a Simulated Nursery Setting: An Update – Kurt Heungens, Institute for Agricultural and Fisheries Research, Belgium

4:00 – 4:15 Detection and Survival of *Phytophthora ramorum* in Rhododendron Root Balls and Survival in Rootless Substrates – Sabine Werres, Julius Kühn Institut–Federal Research Center for Cultivated Plants, Germany

4:15 – 4:30 Effect of Oomatistatic Compounds and Biological Control Agents on Production of Inoculum and Root Colonization of Plants Infected with *Phytophthora ramorum*
Nina Shishkoff, USDA Agricultural Research Service

4:30 – 4:50 A Technique for Determining Inoculum Threshold for the Spread of *Phytophthora ramorum* in Irrigation Water and Examining Fungicide Resistance and Pathogenicity Among Clonal Lineages in *Phytophthora ramorum*
Marianne Elliott, Washington State University

4:50 – 5:05 How does *Phytophthora ramorum* infect Rhododendron leaves?
Sabine Werres, Julius Kühn Institut–Federal Research Center for Cultivated Plants, Germany

5:05 - 5:15 Discussion

3:45 to 5:00 pm Concurrent Session: Fire Ecology
Moderator: Phil Cannon, USDA FS State and Private Forestry

3:45 – 4:00 Sudden Oak Death-Caused Changes to Surface Fuel Loading and Potential Fire Behavior in Douglas-fir-Tanoak Forests
Yana Valachovic, UC Cooperative Extension, Humboldt/Del Norte

4:00 – 4:15 Survival of *Phytophthora ramorum* Following Wildfires in the Sudden Oak Death-Impacted Forests of the Big Sur Region – Maia Beh, UC Davis

4:15 – 4:30 Collateral Damage: Fire and *Phytophthora ramorum* Interact to Increase Mortality in Coast Redwood – Margaret Metz, UC Davis

4:30 – 4:45 Dynamics of Dead Wood Following Emergence of Sudden Oak Death
Richard Cobb, UC Davis

4:45 – 5:00 Discussion

5:30 – 7:00 COMTF Nursery Committee Meeting (open to all)
Led by: Karen Suslow, Chairperson

National Ornamental Research Site at Dominican University of California (NORS-DUC) Update

NORS-DUC Researchers' Reports

Nursery Research Needs Survey - Results and Discussion

7:00 – 9:00 Poster Session with no host bar available

THURSDAY, JUNE 21, 2012

8:00 – 8:30 am Registration

8:30 – 10:00 Biology

8:30 – 9:00 Combining Field Epidemiological Information and Genetic Data to Comprehensively Reconstruct the Invasion Genetics of the Sudden Oak Death Agent
Matteo Garbelotto, UC Berkeley

9:00 – 9:20 Host Induced Phenotypic Diversification in *Phytophthora ramorum*
Takao Kasuga, USDA Agricultural Research Service

9:20 – 9:40 Susceptibility of Larch, Hemlock, and Sitka Spruce to *Phytophthora ramorum*
Gary Chastagner, Washington State University

9:40 – 10:00 Diagnosis and Management of *Phytophthora ramorum* Canker in Canyon Live Oak, an Atypical Bole Canker Host – Ted Swiecki, Phytosphere Research

BREAK 10:00 – 10:30

10:30 – 12:00 Biology, cont.
Moderator: Jack Marshall, California Department of Forestry and Fire Protection

10:30 – 10:50 Roads Are Not Significant Pathways for SOD Spread, in Oregon
Everett Hansen, Oregon State University

10:50 – 11:10 The Effect of *Phytophthora ramorum* on the Physiology and Xylem Function of Young Tanoak Trees – Elizabeth Stamm and Jennifer Parke, Oregon State University

11:10 – 11:25 Screening Gulf Coast Forest Species for Susceptibility to *Phytophthora ramorum*
Jason Pruett, Southern University

11:25 – 11:40 *Phytophthora ramorum* in Coast Live Oaks: Search for Resistance and Mechanisms – Brice McPherson, UC Berkeley

11:40 – 11:55 Metabolite Profiling to Predict Resistance to *Phytophthora ramorum* in Natural Populations of Coast Live Oak – Anna Conrad, Ohio State University

12:00 – 1:00 LUNCH

1:00 – 2:15 Diagnostics and Biology

1:00 – 1:15 Comparative Mitochondrial Genomics and the Development of a Genus and Species Specific Diagnostic TaqMan Assay for *Phytophthora*
Frank Martin, USDA Agricultural Research Service

1:15 – 1:30 Testing the Importance of Understory Infection as a Means of Primary Disease Establishment in Oregon Forests – Ebba Peterson, Oregon State University

1:30 – 1:45 Determining Landscape-scale Changes in Forest Structure and Possible Management Responses to *Phytophthora ramorum* in the Mt. Tamalpais Watershed, Marin
Janet Klein, Marin Municipal Water District

1:45 – 2:00 Long-Term Monitoring of Disease Progression and the Population Genetics of *Phytophthora ramorum* Within the SFPUC Watershed in San Mateo County
Melina Kozanitas, UC Berkeley

2:00 – 2:15 Population Dynamics of Aerial and Terrestrial Populations of *Phytophthora ramorum* in a California Watershed Under Different Climatic Conditions
Catherine Eyre, UC Berkeley

BREAK 2:15 – 2:45

2:45 – 4:45 Management
Moderator: Mark Stanley, California Department of Forestry and Fire Protection

2:45 – 3:05 Novel Approaches to SOD Management in California Wildlands: A Case Study of Eradication and Collaboration in Redwood Valley
Yana Valachovic, UC Cooperative Extension, Humboldt/Del Norte Counties

3:05 – 3:25 1) Suppression of *Phytophthora ramorum* Infections Through Silvicultural Treatment in California's North Coast, 2) Is Stump Sprout Control Necessary to Effectively Control *Phytophthora ramorum* in California's Wildlands?
Yana Valachovic, UC Cooperative Extension, Humboldt/Del Norte Counties

3:25 – 3:45 *Phytophthora ramorum* Managing Strategies for Disease Control, Species Conservation, and Restoration at the Stand and Watershed Scales – Insights from Epidemiological and Ecological Models – Joao Fillipe, University of Cambridge

3:45 – 4:00 Monitoring the Effectiveness of *Phytophthora ramorum* Eradication Treatments in Oregon Tanoak Forests – Ellen Goheen, USDA Forest Service

4:00 – 4:15 Effect of Phosphonate Treatments for SOD on Tanoaks in Naturally Infested Forests
Doug Schmidt, UC Berkeley

4:15 – 4:30 Long-Term Monitoring of *Phytophthora ramorum* Inoculum Identifies Spatio-Temporal Patterns of Pathogen Sporulation and Proves that Selective Bay Removal Reduces Risk of Oak Infection – Matteo Garbelotto, UC Berkeley

4:45 – 5:15 Meeting Summary and Future Needs
Ellen Goheen, USDA Forest Service, and Everett Hansen, Oregon State University

5:15 Meeting Adjourns

5:30 – 7:00 Ask the Expert Evening Session (for the general public)
Join several Sudden Oak Death experts to talk about management options, discuss ecology, and get answers to your questions. Led by Janice Alexander, UC Cooperative Extension, Marin County

FRIDAY, JUNE 22, 2012

8:30 am Sign in for participants only attending Tanoak session (open to general public)

9:00 am – 10:30 What are we trying to save? Tanoak History, Values and Ecology
The papers presented here will be published as a book on tanoak, a compendium of what we have learned about this important Sudden Oak Death host.
Moderator: Rick Standiford, UC Berkeley

9:00 – 9:10 Tanoak Wild: A Celebration
Introduction – Katie Palmieri, UC Berkeley and the California Oak Mortality Task Force

9:10 – 9:45 Tanoak Dreamtime: Safeguarding a Native Nut Tree
Frederica Bowcutt, Evergreen University

9:45 – 10:00 Tanoak as a Forest Product Resource: Past, Present, and Future
John Shelly, UC Cooperative Extension, Berkeley

10:00 – 10:30 Tanoak and California Tribal Culture – Pending

BREAK 10:30 – 11:00 Tanoak Show and Tell: Tanoak, California Bay Laurel, and Other Wild Foods to Sample; and Tanoak Flooring and Other Wood Products to View

11:00 – 12:30 What are we trying to save? Tanoak History, Values and Ecology, cont.
Moderator: David Lewis, UC Cooperative Extension, Marin County

11:00– 11:15 The Geographic Range of Tanoak and the Effects of Interacting Disturbances on the Spatial Distribution and Structure of Tanoak Communities
Whalen W. Dillon, University of North Carolina at Charlotte

11:15 – 11:35 Population Genetic Studies of Tanoak: An Overview of Current Knowledge and Its Applications to Conservation and Restoration – Richard Dodd, UC Berkeley and Jessica Wright, USDA Forest Service, Pacific Southwest Research Station, Davis

11:35 – 11:45 Insect Visitors to Tanoak Flowers: An Undocumented Casualty of Sudden Oak Death? – Jessica Wright, USDA Forest Service, Pacific Southwest Research Station

11:45 – 11:55 Using Genomics to Study Tanoak's Past, Present and Future
Katy Hayden, UC Berkeley

11:55 – 12:15 A Conservation Strategy for Tanoak to Protect Against Sudden Oak Death
Richard Cobb, UC Davis

12:15 – 12:30 Discussion and Wrap Up

12:30 Adjourn