Healthy Plants in a World with *Phytophthora*

The Seventh Sudden Oak Death Science and Management Symposium

Preliminary agenda – Subject to change

June 25-27, 2019
The Golden Gate Club – The Presidio
135 Fisher Loop
San Francisco, California 94129

Schedule overview

Tuesday, June 25
7:45 am    Registration – Check in
8:30 am    Research reports at the Golden Gate Club, The Presidio
12:00 pm   Lunch (provided)
1:00 pm    Research reports: *Phytophthora ramorum* management
4:30 pm    Field trip & Social – Tour of the Presidio Nursery

Wednesday, June 26
8:00 am    Registration
8:30 am    Indoor Sessions at the Golden Gate Club, The Presidio
12:15 pm   Lunch (provided)
1:15 pm    Panel discussion – Management
            Diagnosis of diseases of oaks, bays, etc
3:00 pm    7000 Marks. Interactive art and science
4:00 pm    Poster Session

Thursday, June 27
9:00 am    Optional field trip to Mt. Tamalpais
            (Pre-registration is required.)
            Departs from Main Post Parking Lot, The Presidio
5:00 pm    Return to Main Post Parking Lot, The Presidio
5:00 pm    Presidio Twilight. Off the grid – picnic (On your own)

Tuesday, June 25
8:30 am    Welcome to the Seventh Sudden Oak Death Science and Management Symposium - David Rizzo, Department of Plant Pathology, UC-Davis

Session 1  Sudden oak death in Oregon

**Moderator** – Blakey Lockman, US Forest Service, Pacific Northwest Region, Portland, OR

8:40    Slowing the Spread of Sudden Oak Death in Oregon Forests, 2001-2018
        - Sarah Navarro, Oregon Department of Forestry, Salem
9:00 Intensification of Sudden Oak Death in Oregon Forests in the Absence of Eradication Treatments
   - Alan Kanaskie, Oregon Department of Forestry, Salem

9:20 Efficacy of local eradication treatments against the SOD epidemic in Oregon tanoak forests
   - Everett Hansen, Oregon State University, Corvallis (retired)

9:40 Comparative epidemiology aspects of *Phytophthora ramorum* EU1 and NA1 in the field
   - Jared LeBoldus, Oregon State University, Corvallis

10:00 Break

Session 2 – *Phytophthora ramorum* in California
Moderator: David Rizzo

10:20 Over two decades of sudden oak death in California
   - Kerri Frangioso, Department of Plant Pathology, UC Davis

10:40 Impacts of and responses to sudden oak death on Marin watershed lands
   - Andrea Williams, Marin Municipal Open Space District

11:00 Status of the *Phytophthora ramorum* Epidemic across Forests of the East Bay Regional Park District, San Francisco Bay Area, California
   - Brice McPherson, Department of Environmental Science, Policy, and Management, UC Berkeley

Session 3 – *P. ramorum* management I
Moderator: Phil Cannon, US Forest Service, Pacific Southwest Region, Vallejo

11:20 Early host resistance selection and development should have been a primary management response to the sudden oak death epidemic
   – Enrico Bonello, Department of Plant Pathology, The Ohio State University

11:40 Incidence and distribution of resistance in a coast live oak/sudden oak death pathosystem
   – Anna Conrad, Department of Plant Pathology, The Ohio State University

12:00 – 1:00 Lunch (provided)
Session 4 – *P. ramorum* management II

**Moderator:** Gary Chastagner, Washington State University, Puyallup

1:00 Long-term Performance of Sudden Oak Death Management Treatments in Northern California Locations
– Ted Swiecki, Phytosphere Research, Vacaville

1:20 Selective thinning of California Bay Laurel is a cost-effective way to control SOD in Mixed-oak woodlands
- Doug Schmidt and Matteo Garbelotto, Forest Pathology and Mycology Lab, UC Berkeley

1:45 Yoga break led by Janice Alexander and Bonnie Nielsen, UC Cooperative Extension, Marin County

Session 5 - Diagnostics and Genetics

**Moderator:** Bruce Moltzan, US Forest Service, Forest Health Protection, Washington, DC

2:00 A high throughput DNA finger printing tool for biosurveillance of the sudden oak death pathogen, *Phytophthora ramorum*
- Resmi Radhamony, University of British Columbia, Vancouver, British Columbia

2:20 Dual transcriptome analysis reveals insights into innate and phosphite-induced resistance of tanoak to *Phytophthora ramorum*
– Takao Kauga, USDA Agricultural Research Service, Davis

2:40 Break

3:00 **Session 6 - Lightning talks.** 7 talks of 7 minutes + Q & A

Bark scribing as a treatment for sudden oak death: A case study in why controls matter
- Steven Swain, University of California Cooperative Extension, Marin & Sonoma Counties

*Phytophthora* species can be reliably detected by dogs both from infested substrates and infected plants
- Lauralea Oliver, H.T. Harvey and Associates and K9inSCENTive, LLC

Using citizen science and outreach education to reduce the risk of *Phytophthora ramorum* spread in Oregon forests
- Norma Kline, Oregon State University, Forestry and Natural Resource Extension, Myrtle Point, OR
The development and application of dynamic, geospatial *P. ramorum* spread models for Oregon
- Devon Gaydos, North Carolina State University, Center for Geospatial Analytics, Raleigh, NC

Insights into sudden oak death epidemiology following management
- Hazel Daniels, Department of Botany and Plant Pathology, Oregon State University

Fire and sudden oak death’s effect on species prevalence in Big Sur, California
- Jacqueline Rose, California Polytechnic State University, San Luis Obispo

Wildfire limits the occurrence, frequency, and impacts of *Phytophthora ramorum* in the coastal forests of Big Sur, CA
- Alison Simler, UC Davis, Rizzo lab

4:30 - 7:00 pm - Presidio Nursery native plant nursery tour and social

The tour will feature The Presidio Nursery *Phytophthora* prevention program. Walk or shuttle over to the Presidio Nursery – maps and guides will be available.

**Wednesday, June 26**

8:30 am Session 7. International management of Phytophthoras
Moderator: Matteo Garbelotto, Forest Pathology and Mycology Lab, UC Berkeley

Opening remarks – Matteo Garbelotto

8:35  Approaches to *Phytophthora* issues in New Zealand and Australia
      Nari Williams, Scion, Rotorua

8:55 Biosecurity and *Phytophthora* monitoring at the Royal Botanic Garden Edinburgh
      - Katy Hayden, Royal Botanic Garden Edinburgh

Session 8 - Focus on Phytophthoras in Restoration Areas I
Moderator – Janell Hillman, Santa Clara Valley Water District

9:15  Evaluating threats posed by exotic *Phytophthora* species to sensitive plant communities in the Santa Clara Natural Community Conservation Plan area
      - Ted Swiecki, Phytosphere Research

9:35  Exotic *Phytophthora* species are being systematically introduced in California wildlands during restoration projects
      - Laura Sims, UC Berkeley, Forest Pathology and Mycology lab, now at Louisiana Tech University, Ruston, LA
9:55  Ten new provisional species of *Phytophthora* and *Nothophytophthora* from California  
- Tyler Bourret, UC Davis, now at Washington State University, Puyallup

**10:15 Break**

**Session 9 - Focus on Phytophthoras in Restoration Areas II**  
Moderator: Jennifer Parke, Oregon State University

10:30  Assessing the incidence and diversity of *Phytophthora* species occurring in planned restoration areas of the Angeles National Forest  
- Sebastian Fajardo, UC Davis, Rizzo Lab

10:50  Soilborne *Phytophthora* spp. at restoration sites in the Midpeninsula Regional Open Space District  
- Ebba Peterson, Oregon State University

11:10  Understanding metabarcoding benefits and limitations for analysis of *Phytophthora* communities  
- Neelam Redekar, Oregon State University

**Session 10 - Nurseries**  
Moderator: Alisa Shor, Golden Gate National Parks Conservancy

11:30  Determining the minimum treatment area and importance of soil moisture for effective soil solarization in nurseries  
- Logan Bennett, Oregon State University

11:50  Accreditation to Improve Restoration program shows promise for pathogen prevention  
- Diana Benner, The Watershed Nursery, Richmond, CA

12:00  Approaches to protect against Phytophthoras at the Presidio  
- Christa Conforti, The Presidio Trust

**12:15 – 1:15  Lunch** (provided)

1: 15  **Managing tree mortality, forest diseases and Phytophthoras – panel discussion**  
Moderator: Chris Lee, CALFIRE, Fortuna
-- Details to follow.

**2:00 Session 11 - Focus on wildland tree diseases**  
Moderator: Kim Corella, CALFIRE, Los Osos

2:00 *Phytophthora* species associated with decline and mortality of native vegetation in California Wildlands  
– Chris Lee, California Department of Forestry, Fortuna

2: 20 Common and uncommon diseases of oak, tanoak, redwood and bay  
– Cheryl Blomquist and Suzanne Latham,  
  California Department of Food and Agriculture

**2:40 Break**

**3:00 7000 Marks**  
- Amber Ginsberg, Department of Visual Arts, University of Chicago and  
  Sara Black, Department of Sculpture, School of the Art Institute of Chicago

In March 2016, Amber Ginsberg and Sara Black arranged to fell a tanoak tree infected with *P. ramorum* on the Big Creek Reserve. Working with scientists and sawyers, they milled and kiln dried the tree so the wood could be shipped to Chicago and made into 7,000 pencils. The 7000 Marks project reflects on Joseph Beuys’s 7000 Oaks, plantings of oak trees that started in 1982 ([https://www.diaart.org/visit/visit/joseph-beuys-7000-oaks](https://www.diaart.org/visit/visit/joseph-beuys-7000-oaks)), but this time with new questions. The project brings people together to ask, what does it mean to be native to a place, whether human, plant, animal or fungus?  
(Includes audience participation.)

**4:00 to 5:00 pm – Poster Session**
Thursday, June 27  Optional field trip. Pre-registration required. Space is limited.

Sudden oak death and other Phytophthora concerns on Mt. Tamalpais, Marin County

Meet at 8:45 for 9:00 am departure from The Presidio Main Post parking lot, 122 Anza Ave, San Francisco, CA to ride in vans. Return about 5 pm to the Main Post parking lot, The Presidio.

This field trip includes some walking on a narrow trail. Please wear boots and long pants. There may be poison oak and ticks in the area. Long-sleeve shirts are recommended. Check the weather forecast for the possibility of rain. Bring sunscreen and water. Lunch will be provided.

Due to limited parking at Mt Tamalpais field stops, personal cars cannot be accommodated; van transportation will be provided.

Sanitation supplies will be available to clean your boots at the conclusion of the trip.

For special needs or more information contact Chris Lee, christopher.lee@fire.ca.gov.

Preliminary Agenda – field trip

Departs at 9:00 am. (Please plan to arrive at 8:45 am.)
All day parking will be available for a fee in The Presidio, Main Post parking lot.

Field trip will depart in vans from Presidio Main Post parking lot, 122 Anza Ave, San Francisco, CA 94129 (approximately 0.03 miles from the Golden Gate Club).

The field trip will visit the following locations but due to space limitations, the group will be divided and visit them in various orders.

10:00 am  View symptoms and recently recognized P. ramorum hosts

Mountain Home Inn, Mill Valley, CA 94941

Development of P. ramorum symptoms on Mt Tamalpais in recent years—appearance on new hosts and in drier areas

Dispersal and management of P. cinnamomi along trail networks

P. ramorum symptoms - bleeding cankers, shepherd’s crooks, symptoms on manzanita
12:00 noon to 1:30 pm  Field stop “Dealing with Sudden Oak Death” and lunch (provided), Mt. Tam

Welcome to Mt. Tamalpais
– Alison Forrestel, Chief of Natural Resource Management and Science, Golden Gate National Recreation Area, San Francisco

One Tam Health Assessment
– Janet Klein, One Tam, Golden Gate National Parks Conservancy

1:45 pm  Field stop “Marin Municipal Water District SOD mitigation”

Introduction  – Shaun Horne, Marin Municipal Water District

Resilient forests project - Vegetation management overview

Sudden oak death in the context of global tree mortality and regional efforts to limit carbon emissions
– Richard Cobb, CAL-Poly San Luis Obispo

What species should we plant to create a new forest?

Water yield in sudden oak death impacted forests
– Peter Hartsough, UC Davis, Dept. of Land, Air, and Water Resources

3:30 pm  Depart for return to Presidio, Main Post parking lot

4:30 pm  Sanitation – footwear cleaning

5:00 pm  The end

5:00 pm  Check out “Presidio Twilight” an off the grid picnic at the Main Parade Ground, near the Presidio Visitor Center. (On your own).