

## **2018 Accomplishments**

The Phytophthoras in Native Habitats Work Group aims to minimize *Phytophthora* pathogen spread to native vegetation, especially sensitive, threatened and endangered plant species and natural communities.

### **Publications**

Alexander, J. and Frankel, S.J. 2018. Buying healthy plants: What to look for at a nursery. Guidance for California Native Plant Society Chapters. Posted at [www.calphytos.org](http://www.calphytos.org). 12 pgs.

Frankel, S.J.; Alexander, J.A.; Benner, D.; and Shor, A. 2018. Responding to inadvertent *Phytophthora* introductions in California restoration areas. *California Agriculture*. 72(4): 205-207. October – Dec issue.

Garbelotto, M.; Frankel, S.J.; Scanu, B. 2018. Soil- and water-borne *Phytophthora* species linked to recent outbreaks in Northern California restoration sites. *California Agriculture*. 72(4):208-216. October – Dec issue.

Swiecki, T.J.; Bernhardt, E.A.; Frankel, S.J. 2018. *Phytophthora* root disease and the need for clean nursery stock in urban forests. Part 1. *Phytophthora* invasions in the urban forest and beyond. *Western Arborist*. Fall 2018. Pgs. 54-62.

### **Presentations**

Frankel, S.J. 2018. How to diagnose plant diseases. Emerging Insect Pests of Native Trees Training. CA Native Plant Society 2018 Conference, Los Angeles, January 31 - February 3, 2018. Los Angeles.

Frankel, S.J., Benner, D.; Shor, A.; Alexander, J.; Bourret, T.; Rizzo, D.M.; Garbelotto, M.; Swiecki, T. and Bernhardt, E. 2018. Why are wildland plant pathologists fixated on native container stock? CA Native Plant Society 2018 Conference, Los Angeles, January 31 - February 3, 2018. Los Angeles.

Frankel, S.J. 2018. Phytophthoras in California native plant nurseries and restoration areas: An update. National Ornamental Research Site at Dominican University (NORS-DUC) Annual Steering Committee meeting. Dominican University of California. March 14, 2018.

Frankel, S.J.; VinZant, K.; Swiecki, T.; Bernhardt, E. 2018. Are Phytophthoras a Threat to Arid Southern California Restoration Sites? 2018 California Society for Ecological Restoration, San Diego, May 9 -11.

Frankel, S.J. 2018. An Update on *Phytophthora ramorum*, *P. tentaculata* and other species of regulatory concern in the USA. 6th International Oomycetes Workshop, American Phytopathological Society/International Plant Pathology Congress. Boston, July 28.

Garren, J.; McClain, C.; Hillman, J.; Roessler, C. and Frankel, S.J. 2018. Guidelines to reduce the risk of *Phytophthora* (Pythiaceae) introductions and *Phytophthora*-induced mitigation failure in restoration projects. CA Native Plant Society 2018 Conference, Los Angeles, Feb 1-3, 2018.

Hillman, J. 2018. Protecting California's native flora: Practical guidance to reduce the introduction and spread of *Phytophthora* during restoration, Pathogens and Pests: 2018 CNPS Conservation Conference, Los Angeles, CA, Feb 1-3, 2018.

VinZant, K.; Frankel, S.J.; Swiecki, T. 2017. Exotic root-rotting *Phytophthora* species detected in restoration plantings and nursery stock. Southwest SER conference, Albuquerque, New Mexico, December 6-8, 2017.

VinZant, K.; Frankel, S.J.; Swiecki, T.; Bernhardt, E.; Nickerman, J. 2018. Exotic root-rotting *Phytophthora* species detected in restoration plantings on the Angeles National Forest have implications for chaparral health. California Native Plant Society 2018 Conference, Los Angeles, Feb 1-3.

VinZant, K. and Frankel, S.J. 2018. Implications for chaparral restoration from exotic root-rotting *Phytophthora*. Chaparral Conference. Angeles National Forest, Arcadia, May 9-11.

## Posters

Frankel, S.J., Swiecki, T.; Bernhardt, E.; Blumquist, C.; Latham, S.; and VinZant, K. 2018. *Phytophthora* species introduced to Southern California restoration plantings on the Angeles National Forest threaten rare species habitat. APS/IPCC. Boston, July 29 – August 2.

Frankel, S.J.; Alexander, J.; Hillman, J.; Benner, D.; Shor, A. 2018. Rare plants and Phytophthoras Don't Mix. The Phytophthoras in Native Habitats Work Group. APS/IPCC. Boston, 6<sup>th</sup> International Oomycetes Workshop. July 28.

Frankel, S.J.; Alexander, J.; Hillman, J.; Benner, D.; Shor, A. 2018. Working toward clean and safe nursery plants to restore California habitats: The Phytophthoras in Native Habitats Work Group. CA Native Plant Society 2018 Conference, Los Angeles, January 31 - February 3, 2018.

Hillman, J. 2018. Assisted migration of an endangered chaparral shrub is confounded by exotic root-rotting *Phytophthora* species, SERCal Conference, San Diego, CA, May 9-11, 2018.

## Events

Tour of Sanitation Practices at Restoration Nurseries - San Francisco. Literacy for Environmental Justice Native Plant Nursery & Fort Funston Native Plant Nursery. January 26, 2018.

2018 CA Native Plant Society conference. Session chair, presentations, posters, exhibit table, forest pathogen training session, joint meeting of the Phytophthoras in Native Habitats Work Group and CA Native Plant Society Ad Hoc *Phytophthora* Committee, Los Angeles, Feb. 1 - 2, 2018.

Meeting of the Phytophthoras in Native Habitats Work Group. USDA Forest Service, Pacific Southwest Research Station, Albany, June 21.

Phytophthoras sessions, SERCAL 2018. Society for Ecological Restoration, Annual meeting, May 9-11, 2018, San Diego.

Tour of Sanitation Practices at the USDA Forest Service Placerville Nursery and Institute of Forest Genetics. April 19, Placerville area.

Oak health panel for 9th International Oak Symposium, International Oak Society. UC Davis. October 22-24, 2018.

California Invasive Plants Council (Cal-IPC) 2018 symposium, *Phytophthora* threats to native vegetation and land manager response. Training, discussion and plenary talks. Monterey, November 7 to 9, 2018.

### **Education & outreach resources**

Website ([www.calphytos.org](http://www.calphytos.org)) and associated e-mail list.

### **Technical Guidance**

SB 287, Dodd, Habitat Restoration: Invasive species: *Phytophthora* pathogens. Provided technical guidance for proposed legislation to prevent *Phytophthora* introductions via restoration plantings.

On-going technical guidance is provided to the California Native Plant Society, Phytophthoras Ad hoc Committee.