



Ecological Genomics and Forest Health in the Western US

Meeting Place: University of California, Davis, Buehler Alumni and Visitor Center, Founders Room (see map)

Meeting Date: March 4, 2008

Meeting Time: 12:00 - 5:00 (lunch will be provided)

Meeting Organizers: David B. Neale, Patricia E. Maloney, Detlev R. Vogler

Regional Scientists: Michael Barbour, Tom Blush, Michael Bohne, Phil Cannon, Donna Dekker-Robertson, Joan Dunlap, Susan Frankel, David Fournier, Brian Geils, Kathie Jermstad, Mike Landram, Duane Nelson, John Pickett, Kevin Rice, David Rizzo, Hugh Safford, Sheri Smith, Tom Smith, Scott Stephens, Phil van Mantgem

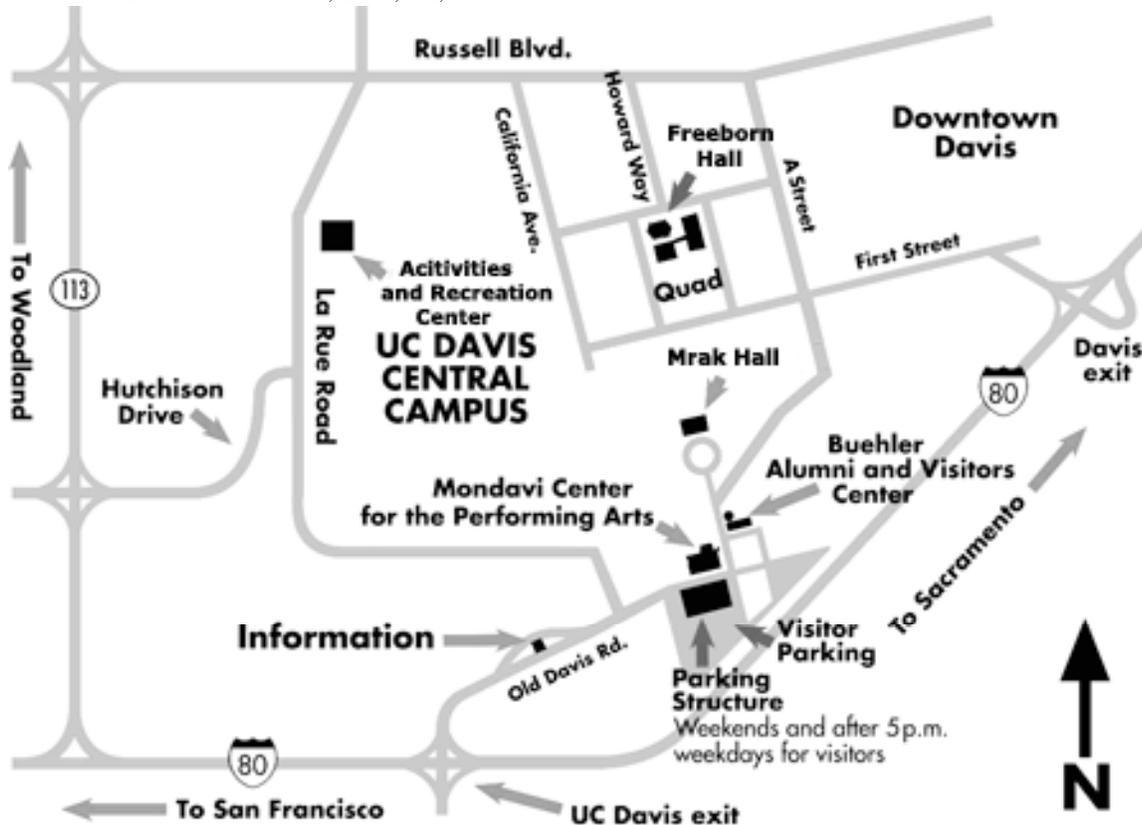
WO Scientists: Rob Mangold, Randy Johnson, Borys Tkacz

Meeting Justification and Goals:

US forests are being challenged by many natural and anthropogenic stresses, including introduced pathogens and insects, climate change, fire suppression and resulting overstocking, catastrophic wildfire, air pollution, climate-driven outbreaks of native insects and diseases, and habitat degradation. Managing forest resources to meet such needs as biodiversity, watershed integrity, conservation, renewable resources, wildlife, recreation, and greenhouse gas sequestration, is challenging, especially given the complex interactions of biotic and abiotic threats. Integrative approaches in science and technology are needed to address these pressing forest health issues. Much progress has been made in conifer genomics, and is now being applied in national tree breeding programs (e.g., see www.pinegenome.org/ctgn/). Approaches used by the Conifer Translational Genomics Network (CTGN) could be applied to address a number of forest health issues in the western US. Linking genecological approaches, such as common garden studies (provenance tests), to evaluate and identify important phenotypes and phenotypic variation of complex adaptive traits (e.g., water-use efficiency, disease and insect resistance, phenology) in natural forest populations with genomic tools (SNP genotyping and association genetic studies) is critical to develop timely and effective forest health strategies, to potentially mitigate the effects of natural and anthropogenic stressors. Such information can provide resource managers with the knowledge and tools to develop reforestation and restoration strategies, with the aim of maintaining forest health and resilience, given a rapidly changing environment. This information can help prioritize monitoring, conservation, and even assisted migration efforts, as well as guide further ecological and genetic research. Genetic information (e.g., frequency of resistance, or important phenological or physiological traits) could be made available from a genetic database and integrated into forest health risk assessments. With that said, our goals for this meeting are to present the rationale and importance of an integrated approach and to create a dialogue among forest health specialists, resource managers, forest geneticists, and ecologists. In addition, how do we gain support and meet the needs of the National Forest System to maintain healthy and resilient forests in the future.



Directions to the University of California, Davis
Buehler Alumni & Visitors Center, Davis, CA,



From San Francisco: Take Interstate 80 East. Exit at UC Davis. Turn left onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go to the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From Sacramento: Take Interstate 80 West. Exit at UC Davis. Turn right onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go to the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From Sacramento Airport: Take Interstate 5 South towards Sacramento to Interstate 80 West towards San Francisco. Exit UC Davis. Turn right onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go to the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From Woodland: Take Highway 113 South to Interstate 80 towards Sacramento. Exit at UC Davis. Turn left onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go to the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

The easternmost, triangular portion of the parking lot provides the quickest access to the Alumni & Visitors Center.

Effective July 1, 2003 visitor parking is \$6.00 per day.