

**WFGA 58<sup>th</sup> Meeting, USDA Forest Service, Pacific Southwest Research Station,  
Institute of Forest Genetics, Placerville CA**

Draft Schedule

**Monday, June 24:**

5:00-9:00- Opening Reception and Registration, Sequoia Mansion, 643 Bee Street, Placerville, CA

**Tuesday, June 25:**

8:30-8:45 - Introduction and Welcome

**Plenary Session I: Applied Genomics**

8:45-9:30 - Applications of genomic and epigenomic studies of local adaptation in California-wide populations of valley oak (*Quercus lobata*). **Victoria L. Sork**, Luke Browne, Sorel Fitz-Gibbon, Matteo Pellegrini, Jessica W. Wright

9:30-10:15 - Preserving evolutionary potential in the face of rapidly changing conditions: the role of genetic rescue. **Jill Hamilton**, F. Thomas Ledig, Paul Hodgkiss, Lionel di Santo and Jessica Wright

10:15-10:45 - Coffee Break, sponsored by Port Blakely

**Offered presentations I- Genes and Genomes**

10:45-11:00 - A Hybrid Genetic Genomic Map for *Pinus taeda*. **Kristian Stevens**, PineRefSeq Consortium

11:00-11:15 - Genome sequencing in California redwoods for conservation and restoration. **Alison D. Scott**, Aleksey V. Zimin, Daniela Puiu, Rachael Workman, Monica Britton, Emily Burns, Winston Timp, Steven L. Salzberg, David B. Neale

11:15-11:30 - SNPs in large genomic scaffold are strongly associated with *Cr1<sup>R</sup>*, major gene for resistance to White Pine Blister Rust in range-wide samples of Sugar Pine (*Pinus lambertiana*). Jessica W. Wright, Kristian Stevens, Paul Hodgkiss, **Charles H. Langley**

11:30-11:45 - Genetics of phenotypic plasticity: discovery and characterization of loci controlling leaf morphometric parameters in *Populus* using a unique gene copy number variant population. **Héloïse Bastiaanse**, Isabelle Henry, Luca Comai, Andrew Groover

11:45-12:00 - Mitochondrial phylogeography of the ponderosa pines in the USA and Mexico. **Ann Willyard**, David S. Gernandt, Stephen K. Langer, Alejandro López Reyes, Kevin Potter

## 12-2:15- Lunch and poster session

- A. Adaptive genetic variation in giant sequoia (*Sequoiadendron giganteum*) and conservation under climate change. **Allen, B.J.**, Scott, A.D., Neale, D.B.
- B. Analyzing Past Gamete Data from a Conifer Seed Orchard to Determine Smaller Sample Size for Accurately Estimating Genetic Diversity and Genetic Worth. **Kailey Charest.**
- C. Using genome-wide sequencing to assess fine-scale genetic connectivity and inbreeding in North America's rarest pine. **Lionel Di Santo**, Thomas Parchman, Jessica Wright and Jill Hamilton
- D. High-Quality Genome of a California Endemic Oak, *Quercus lobata*, Informs and is Informed by Patterns of DNA Methylation. Victoria L. Sork, Aleksey Zimin, Shawn Cokus, Daniela Puiu, **Sorel Fitz-Gibbon**, Matteo Pellegrini, Paul Gugger, and Steven Salzberg
- E. Gene expression response to leaf drying in six California oak species identifies genes associated with adaptation to contrasting climates. **Alayna Mead**, Camila Medeiros, Lawren Sack, Victoria Sork
- F. Accumulation of somatic mutations in an old Sequoia tree. **Zane J. Moore**, S. C. Sillett, A. L. Carroll, A. D. Scott, J. A. Jernstedt, D. B. Neale
- G. The extent and timing of ancient introgression among two distantly related white oak species (*Quercus* sect. *Quercus*) in southern California. **Scott O'Donnell**, Sorel Fitz-Gibbon, Victoria L. Sork
- H. Phenotypic and genomic patterns of climate adaptation in western larch to assess assisted migration strategies with climate change. **Beth Roskilly**, Brandon Lind, Mengmeng Lu, Sam Yeaman, Sally N. Aitken
- I. Physiological and anatomical adaptations of two commercial tree species in Alberta: lodgepole pine & white spruce. **Barb R. Thomas**, Xiaojing Wei, Jennifer G. Klutsch, and Nadir Erbilgin
- J. Population genomics of Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*). **Lida Anita To**, Kristian A. Stevens, Marc W. Crepeau, David B. Neale, and Charles H. Langley

## Plenary Session II: Climate change adaptation

2:15-3:00 - A forest of information: Comparing phenotypic, genomic and climatic data for managing climate adaptation. Colin R. Mahony, Ian R. MacLachlan, Brandon M. Lind, Jeremy B. Yoder, Tongli Wang, **Sally N. Aitken**

3:00-3:30 - Break

## Offered presentations II- Ecological & Conservation Genetics

3:30-3:45 - Tracking historical and future climate change for the seed zones of California. **Joseph A E Stewart**, Jessica W. Wright, James H. Thorne

3:45-4:00 - Home climate and genotype as predictors of early pine seedling performance. **Emily V. Moran**

4:00-4:15 - Landscape genomic variation across three juniper taxa and their hybrids. **Kathryn Uckele**, Lora Richards, Thomas Parchman.

4:15-4:30 - Range-wide genetic structure and diversity in subalpine larch (*Larix lyallii*). **Marie Vance**, Patrick von Aderkas

4:30-4:45 The 1912 Douglas-Fir Heredity Study: Lessons after 100 years. **Brad St.Clair**, Glenn Howe, Jennifer Kling

**Banquet:** a discussion of the history and future of Forest Genetics in North America lead by **David Neale**

---

### **Wednesday, June 26**

#### **Plenary Session III: Genetics in Action**

8:30-9:15 - Taking the Long View and Acting Now: High Elevation White Pines at the White Pine Blister Rust Infection Front. **Anna W. Schoettle**, Michael Antolin, Stu Field, Angelia Kegley, Richard Sniezko, Jun-Jun Liu, Gretchen Baker, Phyllis Pineda Bovin, Brian Verhulst and Kelly Burns

9:15-10:00 - Pining for home: seed source selection in a changing climate. **Greg O'Neill**

10:00-10:30 Break

#### **Offered Presentations III- Tree Breeding**

10:30-10:45 - Tree breeding and silviculture effects on growth, stem quality and wood quality of coastal Douglas-fir. **Miriam Isaac-Renton**, Michael Stoehr

10:45-11:00 - Tolerance to Swiss Needle Cast in BC's coastal Douglas-fir breeding population. **David Montwé**, Jürgen Ehlting, Michael Stoehr.

11:00-11:15 - Restructuring breeding zones based on patterns of genotype-environment interactions and climate change. **Nicholas Ukrainetz**, Alvin Yanchuk and Shawn D. Mansfield

11:15- 11:30- Breeding Management System for Forestry. **Shawn Yarnes**

11:30-12:30 Lunch

12:30- 1:30 WFGA Business meeting

1:30-4:00 - Walking tours of IFG, Eddy Arboretum and the Placerville Nursery

4:00- Adjourn