The genomes of forest trees: new frontiers of forest biology
Arnold Arboretum of Harvard University, Boston, MA, USA
16–17 June 2015

Scope
New genomic technologies are bringing previously intractable but fascinating aspects of forest tree biology to the forefront of plant biology. Completed and ongoing sequencing projects are providing extensive expressed gene and even full genome sequence resources for tree species from diverse taxa. At the same time, creative applications of genomic and sequencing technologies are producing tools capable of probing the fundamental processes responsible for woody growth and other unique biological processes in trees. Among the most promising but largely unexplored areas of research is the use of comparative evolutionary genomics approaches that can illuminate key regulatory processes and how they have evolved over macro- and micro-evolutionary history. For example, the evolutionary innovations leading to the vast array of woody growth forms in extant plants are almost entirely unknown at the genetic level, but could soon be elucidated using comparative genomics approaches.

We will bring together researchers who are exploring the frontiers of tree evolution, ecology, and development using next generation sequencing, genomics, and systems biology approaches. Together, we hope to inspire new ideas for collaborative research that will bring together currently disjoint research communities, and usher in a new era of genome-based forest biology. Ultimately, the approaches and insights from genome-based forest biology will inform us how to address problems ranging from forest conservation during climate change to tailoring of tree-based biofuels feedstocks.

Symposium format
The symposium will take place over two days at the Arnold Arboretum of Harvard University, Boston, MA, USA. There will be dedicated time for discussions, posters, selected poster talks, a conference dinner and a tour of the Arboretum’s collections.

Confirmed speakers and discussion leaders
Siobhan Brady University of California, Davis, USA
Peter Crane Yale University, New Haven, USA
Taku Demura Nara Institute of Science and Technology, Nara, Japan
Steve DiFazio West Virginia University, Morgantown, USA
Carl Douglas University of British Columbia, Vancouver, Canada
William Friedman Arnold Arboretum of Harvard University, Boston, USA
Ykä Helariutta University of Helsinki, Helsinki, Finland
Isabelle Henry University of California, Davis, USA
Nathalie Isabel Natural Resources Canada, Canadian Forest Service, Québec, Canada
Catherine Kidner University of Edinburgh, Edinburgh, UK
Francis Martin INRA, Nancy, France
David Neale University of California, Davis, USA
Steve Strauss Oregon State University, Corvalis, USA
Nathaniel Street Umeå University, Umeå, Sweden
Jill Wegzyn University of Connecticut, Storrs, USA
Matthew Zinkgraf USDA Forest Service, Davis, USA

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