

Foundation species working group
September 13, 2012
Final report

This working group was divided into two sessions. The morning session focused on data sharing/presentations by HFR and CWT researchers on their common hemlock removal experiment. The afternoon session was discussion and information gathering with the goal of extending experiments and approaches to other LTER sites. Participants at both sessions came from a large number of LTER sites (see participant list).

Presenters at the morning session included:

- Aaron Ellison (HFR) – Overview; HFR experimental design; microclimatic responses
- Audrey Barker Plotkin (HFR) – vegetation and N cycling response
- Adrien Finzi (HFR/Boston Univ.) – carbon dynamics
- Ally Degraasi (HFR/Univ. Vermont) – small mammal dynamics
- Kitty Elliott (CWT) – CWT experimental design; vegetation responses
- Jack Webster (CWT) – in-stream processes
- Chelcy Ford/Steve Brantley (CWT/Univ. of Minnesota) – hemlock water use and growth
- Steven Brantley (CWT/Univ. of Minnesota) – hemlock water use and mortality
- Jennifer Knoepp, Jennifer Fraterrigo, Kitty Elliott – N and P cycling

Late-morning and afternoon discussions focused on:

- Refining the definition of foundation species
- Possible extensions of study areas and experiment to HBR
- Application of foundation species to:
 - mangroves at LUQ
 - kelp at SBC
 - salt marshes (VCR, GCE, FCE)
 - whitebark pine and limber pine in northwest (AND, NWT)
- Functional responses and functional replacement of foundation species
- Other insects and pathogens with potential to eliminate foundation species
 - Emerald ash borer
 - bark beetles
 - Asian long-horned beetle
- Impacts of climate change

Potential products:

- Synthesis proposal for C dynamics and foundation species to LNO (Chelcy Ford, lead, with Ellison, Elliott, Brantley, co-leads)
- Citation analysis of 2005 Frontiers paper of foundation species (Brantley, Degraasi, co-leads)
- Synthesis paper on mangroves as foundation species (Blanco, Ellison, co-leads)
- Synthesis paper on HFR and CWT hemlock removal experiments (Elliott, Ford, Ellison, co-leads)