

Poster #1-57**Homeostasis of Drought Tolerance Traits at the End of the Dry Season Among Trees Species at the Daintree Research Observatory in Australia**

Alexandria Pivovarovoff^{1*}, Heather Pacheco¹, Nate McDowell¹, Kolby Jardine², Jeff Chambers², Charlotte Grossiord³, Peipei Zhang¹, Yoko Ishida⁴, Alistair Rogers⁵, Tayana Barrozo Rodrigues², Brendan Choat⁶, Jennifer Peters⁶, Michael Liddell⁴, Lucas Cernusak⁴, and Susan Laurance⁴

¹ Pacific Northwest National Lab, Richland, WA;

² Lawrence Berkeley National Lab, Berkeley, CA;

³ Swiss Federal Research Institute WSL, Birmensdorf, Switzerland;

⁴ James Cook University, Queensland, Australia;

⁵ Brookhaven National Lab, Upton, NY;

⁶ Hawkesbury Institute for the Environment, Western Sydney University, Richmond, Australia

Contact: alexandria.pivovarovoff@pnnl.gov

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Tropical rainforests play a major role in biogeochemical cycles, especially carbon and water, thereby contributing to Earth's climate regulation. Climate change and especially hot drought are having negative impacts on tropical forests. We investigated the impacts of drought on tropical tree species to determine foliar turgor loss risk. To test this, we measured gas exchange (GE), non-structural carbohydrates (NSC), turgor loss point (TLP), and other traits for tree species in control versus drought treatment plots at the Daintree Research Observatory (DRO) in the Wet Tropics of Queensland Australia. Traits were first sampled in November, at the end of the dry season, and will be re-sampled in May at the end of the wet season. November-sampled data showed there were no differences in GE, NSC, or TLP between the control and drought treatments, revealing a remarkable homeostatic maintenance of traits in the face of abiotic stress. This lack of change may point to these tree species being well adapted to tolerate drought conditions. However, it may also suggest a lack of acclimation and/or plasticity. If conditions become more stressful, as is predicted by a hotter and drier future, these species may cross a threshold beyond which mortality occurs. Re-sampling of all measured traits in May will reveal seasonal effects on target traits.