

UCSB Geography Colloquium

2/16/12; 3:30 – 4:45; 1930 Buchanan

FRONTIER FIRE IN THE AMAZON: LOCAL TO GLOBAL CONSEQUENCES OF HUMAN-ALTERED FIRE REGIMES IN TROPICAL FORESTS

Presented by

Dr. J. K. Balch

Abstract:

The tropics is a region marked by rapid landscape transformation and waves of frontier expansion that leave a patchwork of degraded and recovering forests amidst a matrix of human-dominated land uses. Fire is an integral tool in the transformation and management of these landscapes, as well as a pervasive threat to the longevity of tropical forests. Yet, our understanding of natural fire regimes and the consequences of human-altered fire frequencies in tropical forests is limited. In this talk, Dr. Balch will explore the global carbon consequences of tropical fires, both intentional and unintentional wildfires. And she will describe the effects of increasing fire frequency on the dynamics of a southern Amazon forest—based on one of the largest experimental burns in the tropics.

J.K. Balch short academic bio:

Dr. Jennifer Balch earned her Ph.D. at Yale's School of Forestry & Environmental Studies. Her research looks at the patterns and processes that underlie fire disturbance and ecosystem recovery, particularly in tropical forests. Currently, as a Postdoctoral Fellow at the National Center for Ecological Analysis and Synthesis, she is investigating the role of fire in the Earth system and the human imprint on global fire activity. For her dissertation research, she explored the effects of recurrent fire on transitional forest dynamics in the Amazon's wildfire frontier in Mato Grosso, Brazil. She has conducted research in the field of tropical ecology for over a decade, and she has lit a few experimental fires to understand the consequences of increasing fire in tropical forests. In the fall, she will be starting a faculty position at Penn State's Department of Geography.