Climatic extremes as drivers of ecosystem change

Carl Beierkuhnlein

Professor Dr. Chair of Biogeography University of Bayreuth



12 November 2012 12:30 - 1:30 PM Room H-1269

Climate change goes along with increasing temperatures, regionally modified precipitation regimes and increased climatic variability. Ecosystems and species are adapted to certain climatic conditions. Extreme conditions of short duration and high intensity are expected to cause disproportionally strong effects. The EVENT experiments are simulating future climatic projections. Partly, we mimic extreme drought, heavy rain, modified frost cycles, partly, we monitor the longterm effects of extreme events at different levels of organization. Ecosystem responses are surprising according to the resilience of important functions and services such as biomass, but also according to the disruptions of successional trajectories. Furthermore, we find that intra-specific diversity may be used for the design of adaptation strategies to maintain key ecosystems under future conditions.