

The Rangeland Ecology Section is sponsoring 3 events at this year's Annual Meeting of the Ecology Society of America in Memphis TN:

**1) *The detection of catastrophic thresholds: perspectives, definitions, and methods***

Tuesday, August 8, 8-11:30 am

Organizers: Robert Washington-Allen, Cindy Salo

The concept of threshold behavior of ecosystem variables and parameters in space and time has received theoretical treatment as early as C.S. Holling's (1973) landmark paper on resilience (Annual Review of Ecology and Systematics 4:1-23). Contemporary research has renewed this focus, particularly on the use of catastrophe theory as a mathematical framework for operational use in natural resource management. The speakers in this symposium will discuss threshold concepts including catastrophe theory, self-organized criticality, operational definitions, scaling laws, and methods for detection of thresholds including time scale calculus and renormalization. For example, catastrophic regime shifts in aquatic and terrestrial ecosystems will be discussed, as will the novel use of time scale calculus to model the outbreak of West Nile virus in NYC and to direct the mosquitoes spraying schedules, and a recently discovered general scaling law for landscapes. The symposium will conclude with a discussion and synthesis of talks.

**2) *Trends in Long Term Ecological Research: opportunities and challenges in the synthesis of long term data***

Tuesday, August 8, 8-10 pm

Organizers: Debra Peters, Christine Laney

Long term studies are increasingly recognized as critical to understanding short term patterns and dynamics and providing the context for short-term mechanistic studies. In addition, data from long term studies are needed to distinguish directional changes from natural variability. Synthesizing long term data from a variety of ecosystem types for different kinds of ecological and social science problems provides opportunities as well as challenges. In this informal session, we will discuss both the opportunities and challenges associated with this type of synthetic effort. We will also discuss an ongoing collaborative effort among federal agencies (USFS, USDA-ARS) and the NSF-supported Long Term Ecological Research sites to synthesize long term data into a book format and a web page. Opportunities to contribute to this effort and to access the data sets will also be discussed.

**3) *Joint Mixer with Soil Ecology Section***

Wednesday, August 9, 6:30-8:00 pm

Hope to see you in Tennessee!!

Justin Derner, Section Chair