

# Upcoming CC Meetings

## **Fall 2002 Coordinating Committee Meeting**

Niwot Ridge – September 12-15

SCIENCE THEME: Invasive species/time series analysis of plant species change

## **Spring 2003 Coordinating Committee Meeting**

Kellogg Biological Station, Michigan – last week of April

PROPOSED SCIENCE THEME: Assessing Trophic Structure and Dynamics through Network Ecology

## **Fall 2003 Coordinating Committee Meeting**

Bonanza Creek, Alaska – third week of August

SCIENCE THEME: Interactions of Multiple Disturbances in a Changing Climate



# Assessing Trophic Structure and Dynamics through Network Ecology

Proposed by Robert R. Christian and Alan Covich

Trophic structure and dynamics are central to ecosystem ecology and associated with core requirements of LTER. Yet attempts to assess general trophic characteristics of very different types of food webs have encountered problems and great uncertainties regarding comparisons. One approach, used primarily in aquatic ecosystems, involves network ecology. Network ecology operates by structuring material, energy or informational flows into multi-compartmental models. These models are then evaluated by ecological network analysis (ENA). ENA is a collection of algorithms that are particularly valuable to the ecologist in categorizing compartments and groups of compartments, defining indirect relationships between compartments, and indexing system-level attributes. Inferences can be made concerning the maturity of ecosystems and the nature of their development. Furthermore, recent incorporation of tools from social network analysis (SNA) has expanded the potential of network ecology. In particular SNA provides new ways of visualizing complex interactions with food webs. We propose that an LTER Coordinating Committee (CC) Meeting be used as a forum to present the potential of network ecology as an integration approach for the LTER network with emphasis on food webs, but not to the exclusion of other flow networks (e.g., nutrient cycles and social systems).

