

KANSAS STATE
UNIVERSITY
Division of Biology Presents:

**Ecological Interactions Across Trophic Levels: Fire, Grazers, and
Parasite Dynamics**

Monday, October 12th, 2026 • 3:30 PM • 232 Ackert Hall



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African savanna ecosystems support the most diverse assemblages of mammalian grazers on Earth. These ecosystems are further shaped by frequent fires, creating a dynamic system in which both fire and grazers depend on grasses for fuel and forage, respectively. As a result, interactions among grazer species and between grazers and fire can be either competitive or facilitative. These interactions influence vegetation structure, resource availability, and grazer movement across the landscape, ultimately determining patterns of habitat use and interactions among grazer species.

Because parasite transmission is strongly influenced by host density, movement, and habitat structure, these trophic interactions are expected to have important consequences for disease dynamics. In this seminar, I present a series of case studies examining how interactions among grazers and fire shape vegetation, alter resource availability and animal movement, and ultimately influence parasite transmission in African savanna ecosystems. Together, these examples illustrate how trophic interactions can link ecosystem processes with disease ecology across savanna landscapes.

If you would like to visit with Dr. Jason Donaldson, please contact Dr. Rachel Keen at rkeen@ksu.edu.

Coffee & snacks served preceding the seminar in Ackert Hall, Room 225