1125-92-1905 **Rebecca K. Borchering*** (rborchering@ufl.edu), **Steve E. Bellan**, **Jason M. Flynn**, **Juliet R.C. Pulliam** and **Scott A. McKinley**. *Resource-Driven Encounters and the Induction of Disease Among Consumers.* Preliminary report.

Territorial animals share a variety of common resources, which can be a major driver of conspecific encounter rates. We examine how changes in resource availability influence the rate of encounters among individuals in a consumer population by implementing a spatially explicit model for resource visitation behavior by consumers. Using data from 2009 and 2010 in Etosha National Park, we verify our model's prediction that there is a saturation effect in the expected number of jackals that visit a given carcass site as carcasses become abundant. However, this does not directly imply that the overall resource-driven encounter rate among jackals decreases. This is because the increase in available carcasses is accompanied by an increase in the number of jackals that detect and potentially visit carcasses. Using simulations and mathematical analysis of our consumer-resource interaction model, we characterize key features of the relationship between resource-driven encounter rate and model parameters. These results are used to investigate a standing hypothesis that the outbreak of a fatal disease among zebras can potentially lead to an outbreak of an entirely different disease in the jackal population, a process we refer to as indirect induction of disease. (Received September 19, 2016)