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Lee R Gibson* (mathdoctorg@gmail.com), KY , and **Mary E Bradley** (mebrad01@gwise.louisville.edu). *Cannibals and Mosquitos: Using a predator-prey epidemic model to search for a Dengue fever reservoir*. Preliminary report.

Rudolf and Antonovics (2007) combined classical epidemic and predator-prey models to demonstrate the critical importance of the number of individuals feeding on a single carcass to the spread of a disease within a cannibalistic population. Mosquito larvae engage in a similar behavior, scavenging of conspecifics, which may play a key role in determining whether mosquitos may act as a reservoir for Dengue fever between human outbreaks. But if too many larvae partake of a single carcass, disease transmission may actually decrease. We will discuss a new ODE model involving this non-monotonically density dependent transmission rate, with some preliminary results. (Received September 22, 2011)