1125-34-3097 **Daniel Allin Korytowski*** (`dkorytow@asu.edu`) and **Hal Smith**. *Permanence and Stability of a Kill the Winner Model in Marine Ecology.*

We focus on the long term dynamics of "killing the winner" Lotka-Volterra models of marine communities consisting of bacteria, virus, and zooplankton. Under suitable conditions, it is shown that there is a unique equilibrium with all populations present which is stable, the system is permanent, and the limiting behavior of its solutions is strongly constrained. (Received September 21, 2016)