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Jonathan Bell* (jbell@ucb.edu). *Predator-mediated coexistence with chemorepulsion.*

We discuss analysis and simulations associated with a model system consisting of two competing populations and one common predator population; all populations are mobile (random dispersal), but the predator's movement is influenced by one prey's gradient representing a chemorepulsive effect on the predator population. There is no adaptive mechanism in the present model. We examine pattern formation through bifurcations with respect to the chemotactic sensitivity parameter, and the prey diffusivity parameter. We also mention existence and convergence to steady state results. This work is in collaboration with Evan Haskell (Nova Southeastern University, Ft. Lauderdale, FL). (Received July 01, 2017)