

1096-VG-2573 **Ariel Cintron-Arias*** (cintronarias@etsu.edu), Department of Mathematics and Statistics,
Box 70663, East Tennessee State University, Johnson City, TN 37614. *Extensions to the
Daley-Kendall model*. Preliminary report.

A model for two interacting species is formulated and analyzed. Conditions for the existence of a Hopf bifurcation are given. Longitudinal observations are used to estimate model parameters. A sensitivity analysis is carried out for two dynamical scenarios: when the system supports a co-existence stable equilibrium and when periodic solutions exist. In both scenarios the most influential parameters, in one of the state variables, are explored. (Received September 17, 2013)