

1065-92-209

**Maeve Lewis McCarthy\*** ([maeve.mccarthy@murraystate.edu](mailto:maeve.mccarthy@murraystate.edu)), Mathematics & Statistics,  
Murray State University, 6C Faculty Hall, Murray, KY 42071. *Intermorph cannibalism amongst  
Arizona Tiger Salamanders.*

The Arizona Tiger Salamanders at the Mexican Cut Nature Preserve in Colorado form a closed population due to the elevation of their habitat. They exhibit facultative paedomorphosis in which salamander larvae either metamorphose into terrestrial adults or become sexually mature while still in their larval form. Although many salamanders exhibit cannibalism of larvae, the Arizona Tiger Salamander also exhibits cannibalism of one adult morph by the other. We formulate an ODE model of this system, treating one adult form as a predator, the other as a prey, and the larvae as juveniles whose stage duration is short in comparison to adult life expectancy. We incorporate Allee effects by modeling the predator as a generalist predator that is either hungry or satiated. We discuss the analysis and interpretation of the model. (Received September 13, 2010)