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Maeve L McCarthy* (mmccarthy@murraystate.edu), Mathematics & Statistics, Murray State University, Murray, KY 42071, and **Dorothy Wallace**. *A model of the impact of morphological choice on the Arizona Tiger Salamander*. Preliminary report.

Arizona Tiger Salamanders exhibit facultative paedomorphosis in which the salamander larvae either metamorphose into terrestrial adults, become sexually mature while still in their larval form or become cannibalistic adults. We consider an ODE model of the salamanders and their food sources. Predation is modeled using a modified Hill function that captures the contribution of each prey to the diet of the predator. We discuss the analysis and interpretation of the model. In particular, we investigate the impact of different morphological choices on the system to determine whether a dominant choice drives the population dynamics. (Received September 08, 2014)