

1116-VM-2518 **Baoling Ma*** (baoling.ma@millersville.edu), **Azmy S Ackleh** and **Xinyu Li**. *Fitting structured population dynamics models for the green treefrog (*Hyla cinerea*) to population estimates from field data*. Preliminary report.

Major declines of many amphibian populations have been reported around the world and led to numerous research efforts. Many of these efforts focus on monitoring amphibian populations to better understand their dynamics. Estimates for an urban population of greentree frogs (*Hyla cinerea*) from capture-mark-recapture field data during the years 2006-2009 were obtained. To describe the population dynamics, structured mathematical models with distributed recruitment and distributed states-at-metamorphosis were developed and compared to the time-series obtained from the weekly population estimates using a least-squares approach. The results of the model-to-data fit are very good and suggest that mathematical models can be used as an important tool to predict the long term dynamics of this population and to understand conditions for its persistence. (Received September 22, 2015)