1067-92-1970   **Qihua Huang*** (`qxh6207@louisiana.edu`), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010, **Azmy S. Ackleh**, Lafayette, LA 70504-1010, and **Keng Deng**, Lafayette, LA 70504-1010. *Stochastic juveile-adult models with application to a green tree frog population.*

We derive several stochastic models from a deterministic model that describes the dynamics of age-structured juveniles coupled with size-structured adults. Numerical simulations results of the stochastic models are compared with the solution of the deterministic model. These models are then used to understand the effect of demographic stochasticity on the dynamics of an urban green tree frog (Hyla cinerea) population. (Received September 22, 2010)