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**Azmy S Ackleh\*** ([ackleh@louisiana.edu](mailto:ackleh@louisiana.edu)), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010, **Keng Deng** ([Deng@louisiana.edu](mailto:Deng@louisiana.edu)), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010, and **Qihua Huang** ([qxh6207@louisiana.edu](mailto:qxh6207@louisiana.edu)), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010. *Finite difference approximation for a nonlinear juvenile-adult population model with age-size structure.*

We present a juvenile-adult population model where juveniles are structured by age while adults are structured by size. We develop an explicit finite difference method to approximate the solution of the model. Convergence of this approximation is established and numerical results are presented. (Received September 01, 2008)