1014-35-414   **Jay R. Walton*** (`jwalton@math.tamu.edu`), Department of Mathematics, Texas A&M University, College Station, TX 77843-3368. *A Nonlinear Parabolic/Hyperbolic System Arising in a Size Dependent Population Dynamics Model.*

We discuss the question of existence of traveling wave solutions to a nonlinear, parabolic-hyperbolic system of partial differential equations arising in a size dependent population dynamics model. In this model, size is not introduced through the customary structure parameter paradigm which adds an additional independent variable, size, to the four dimensional space-time setting. Rather, size is introduced as an additional dependent variable resulting in a lower computational cost. For this new system, we discuss the state of current results, open questions and give comparisons with results for the classical Fisher/KPP and Nagumo equations. (Received September 15, 2005)