1125-35-1344 Keng Deng^{*} (deng@louisiana.edu), 1401 Johnston Street, Lafayette, LA 70504, and Yixiang Wu. Extinction and uniform strong persistence of a size-structured population model.

In this paper, we study the long-time behavior of a size-structured population model. We define a basic reproduction number \mathcal{R} and show that the population dies out in the long run if $\mathcal{R} < 1$. If $\mathcal{R} > 1$, the model has a unique positive equilibrium, and the total population is uniformly strongly persistent. Most importantly, we show that there exists a subsequence of the total population converging to the positive equilibrium. (Received September 16, 2016)