First set of Beverton-Holt simulations for testing sparse modeling code, generated via the “Linear response of lambda to environment” section in the included R code file.

* All these data are with 10 species and 50 plots (independent runs).
* Alphas are set at the beginning of each simulation and consistent for all 50 plots  
  + - Intraspecific alphas are always 0.01.
    - Generic competitors alphas are drawn from a normal distribution with a mean 0.001 and sd of 0.0003.
    - Non-generic competitors are chosen by a single draw from a poisson distribution with lambda of 2 to determine how many species should be non-generic, and then randomly selecting which ones those should be. For each of these species, a single draw from an exponential distribution with a rate of 0.5 determines what that non-generic competition term should be, this is multiplied with the generic draw (mean 0.001 sd 0.0003) for each pair of competitor-responders.
* Starting populations are drawn from a normal distribution with mean of 80 and sd of 100. Populations less than 0 are set to 0. Starting populations are drawn independently for each species and each plot.
* Lambdas are determined in different ways for each of the included files:  
  + - 1. no variation: Mean lambda drawn from uniform distribution from 1 to 5. Lambda consistent for all 50 plots.
    - 2. demographic heterogeneity only: Mean lambda drawn from uniform distribution from 1 to 5. A demographic stochasticity parameter is drawn for each species in each plot from a normal distribution with mean 0 and sd 0.2 and added to lambda.
    - 3. linear environmental response only: Mean lambda drawn from uniform distribution from 1 to 5. Environmental response for each species is drawn from a normal distribution with mean 0 and sd 2. For each plot, lambda for each species is calculated as the mean lambda plus the interaction between the environmental response of that species and the environmental condition of that plot.
    - 4. linear environmental response + demographic heterogeneity: Mean lambda drawn from uniform distribution from 1 to 5. Environmental response for each species is drawn from a normal distribution with mean 0 and sd 2. For each plot, lambda for each species is calculated as the mean lambda plus the interaction between the environmental response of that species and the environmental condition of that plot plus the demographic stochasticity parameter as in #2.