Appendix S6. Description of data and code.

File list

fecundityData.csv
growthsurvivalData.csv
sexRatiosWA.csv

individualGrowthTrajectories.R
oysterIPM_demography.R
oysterIPM_estimateParams.R
oysterIPM_makePlots.R
oysterIPM_runIPM.R
oysterIPM_saveData.R
oysterIPM.R

Description

Data for oyster IPM.—

fecundityData.csv: fecundity data obtained from Kang et al. (2003) and Ren et al. (2003)
growthsurvivalData.csv: growth and survival data obtained from Stick (2011)
sexRatiosWA.csv: data from Buroker (1983) on size-specific sex ratios in a population of *C. gigas* in Washington state

Code for oyster IPM.—

oysterIPM.R: runs the age- and/or size-dependent IPM and generates a separate data file for parameters that yield $\lambda = 0.5$, $\lambda = 1.0$ and $\lambda = 1.5$. These data files can be plotting with **oysterIPM_makePlotsR**. This file sources the following R files:

- **oysterIPM_demography.R:** creates functions that specify demographic functions for growth, survival, and fecundity
- **oysterIPM_estimateParams.R:** conducts the statistical fits to growth, survival, and fecundity data
- **oysterIPM_runIPM.R:** builds and evaluates the IPM
- **oysterIPM_saveData.R:** saves the data as RData files

The oysterIPM.R file requires the following data files for input:

- **fecundityData.csv**
- **growthsurvivalData.csv**
- **sexRatiosWA.csv**

oysterIPM_makePlots.R: calls the data files generated by oysterIPM.R and creates the plots shown in the manuscript. This file sources the following R files:

- **oysterIPM_estimateParams.R**: conducts the statistical fits to growth, survival, and fecundity data

The oysterIPM_makePlots.R file requires the following data files for input:

- **growthsurvivalData.csv**
- **sexRatiosWA.csv**

individualGrowthTrajectories.R: using growth kernels from the age- and size-structured model, simulates individual trajectories of growth. This generates output given in Appendix A. This file requires the following data files for input:

- **growthsurvivalData.csv**