

## Homework 4: Problem Set

The objective of these homework problems is to give you an opportunity to practice manipulating some of the population ecology models.

Please complete the following problems from Gotelli:

### **Chapter 1: Exponential Growth**

Problem 1.2

Problem 1.4

### **Chapter 2: Logistic Growth**

Problem 2.1

Problem 2.2

Problem 2.3

### **Chapter 3: Structured Population Growth**

Problem 3.2

You can use R or Excel for the life table construction in problem 3.2. Matrix multiplication in R is done using the `%*%` command. Matrix exponentiation is not a built in function in R. However, you can acquire functions to do this from several packages. The Biodem package has a function for this purpose, as does the enaR package (`mExp()`).