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HW 3

Population Ecology

1. 6.1: When we are using models, we are only looking at the effects of one factor on another. In the case of two-species interactions, we only look at the dynamics of one species affecting another. In nature, we don't see these isolated systems. There are many other factors such as resource availability like habitat or food or mates. These are not factored into the calculations made by the models.

   6.3: When the alpha values are being added in the function, then we can say that the relationship or effect of alpha1 on alpha2 and/or vice-versa is mutualistic or positive. If in the function, the alpha values are subtracted, then the effect of alpha1 on alpha2 or vice-versa are negative or can be labeled as competition.

2. In chapter 6, it appears that the alpha-ij value serves to show the interaction between the rate of growth of the population and the effects of intra-species interaction. In chapter 7, which concerns itself with competition, this alpha-ij value denotes the effect of one species on the other in a more inter-species manner.

3. Nothing occurred when increasing the parameter p which had people moving from New York to California. The eigen-value remained 1.

4. https://docs.google.com/document/d/1U8ovM2IDsZaNbIhzQlcykGAJaFB073zzRY3g4lSKnX4/edit?usp=sharing