Conservation biology study questions: Metapopulations and island biogeography

1. What is a metapopulation? What are the assumptions of metapopulation models?

2. Island biogeography suggests that the number of species on an island is a function of the colonization rate and the extinction rate. What are some factors that can influence colonization and extinction rates?

3. Show with graphs the equilibrium number of species when island sizes of two island and their distance to the mainland differ?

4. Explain how many species we expect to find on islands in the pacific that got colonized from Indonesia or Malaysia. If you use island biogeography to explain then explain why the number of species is today less dependent on island biogeography?

5. What are the limitations of island biogeography (under what conditions might it not apply?)

6. Similarities between fragmented landscape and islands? Dissimilarities?

7. Define source-sink metapopulation.