Lyme Disease Questions: Chapter 8 – Embracing Complexity Biodiversity selection + PPT

1. List the host reservoirs of *B. burgdorferi* in order of most competent (efficient) to least competent (least efficient) and in between.

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1. What is a zoonotic disease and what are some characteristics of zoonoses and zoonotic pathogens?

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1. What are 3 facts about the black legged tick that affect whether or not a person acquires Lyme disease?

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1. What is an important fact about the Lyme spirochete that affect whether or not a bitten host is infected with Lyme disease?

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1. Ostfeld hypothesizes that ***biodiversity*** in a community will lead to lower infection and fewer humans exposed to the disease. One of the arguments for this is the *dilution effect*. What is the *dilution effect,* and how might this relate to the abundance of tick vectors and a lower incidence of infection?

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5. In the reading ‘Commonalities’, Ostfeld puts forth 2 evolutionary hypotheses as to why certain ‘weedy’ species proliferate in low diversity environments. This is troubling as these species tend to be the most competent reservoirs for important pathogens. What are the two possible reasons he gives for this pattern?

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6. a. What does the data suggest about the effect of loss of species in a community to the risk of Lyme? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Describe three specific ways that human activities threaten biodiversity that seem to have resulted in increased incidence of Lyme.

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