

Upon completion of *Patchy Prairies (WB)*, students should be able to:

1. Explain how habitat fragmentation threatens many species in general and Fender's Blue butterflies in particular.
2. Define habitat corridors and stepping-stones, in the context of animal movement across fragmented landscapes.
3. Explain how the isolation and size of habitat fragments can generally affect threatened dispersing species (such as Fender's Blues).
4. Predict the effect of periodic disturbances on population viability across broadly different habitat configurations.
5. Perform a basic sensitivity analysis using a simple model of animal movement behavior within a fragmented landscape to identify behavioral parameters that could be important to a population's viability.
6. Interpret results from a sensitivity analysis to determine which parameters should be evaluated further.
7. Use a simple model of animal movement behavior to predict whether different reserve design strategies (such as corridors or stepping-stones) are likely to increase or decrease population viability.
8. When using a non-deterministic model (one that includes random variability), describe why multiple simulation runs are required to effectively compare behavioral parameters that could affect survival probabilities for a real-world population.