

CHAPTER 4**HANDOUT****Speculating About Speciation****BLM 4.3.5**

All of the native finch species living in the Galápagos Islands may be descended from a single species that arrived there from South America. The species now found there were geographically isolated from each other on the many different islands.

Suppose that there is a shipwreck, and two populations of the same species of rabbits arrive on two different islands in the ocean. The following scenarios illustrate how the two populations could be affected by their isolation.

Describe what is likely to occur in the following examples and why.

1. One island has predators that eat rabbits and the other does not. How might natural selection change the two rabbit populations after several generations?

2. The food available to the rabbits is different on one island than it is on the other. How might natural selection change the two rabbit populations with regard to their food requirements after several generations?

3. Suppose that the climate of one island is hot, but the climate of the other is cold. How might the two rabbit populations become adapted to the different climates?

4. If, after several generations, individuals from the two populations were transported to the same habitat, do you think they could mate and produce viable offspring? Why or why not?
