

# Evolution lab report assignment



**ASSIGN  
BUSTER**

In addition, I believe that the population of finches on Darwin Island will be able to maintain their population size if not increase. On the other hand, I hypothesize that the population of finches on Wallace Island will decrease as well as their clutch size and their beak size would stay the same size because of the small amount and variation of seeds available on the island, resulting in a possible distinction of the species on the island. The materials I used to conduct this experiment included a computer and access to the Evolution Lab available on the student website.

So the first thing I did to conduct this experiment was go to the Evolution Lab website. From there, I manipulated the traits from each population of finches, as well as their environmental conditions. Then I adjusted the traits and environment of the finches. For the finches on Darwin Island, I doubled the size of the Island, beaks, clutch, and population compared to the finches on Wallace Island. For instance, the parameter of Darwin island is 1.0 km, the size of Wallace island is 0.5 km, there are about 20 eggs in the finches clutch on Darwin island, and there are half that amount laid by the finches on Wallace island. The first graph displays a comparison of the two populations of both species of finches. The red line represents the finches on Darwin island and the blue line represents the finches on Wallace island. The starting population of the finches on Darwin island was 350 finches and the starting population of the finches on Wallace island was 150 finches.

This graph shows that the population of finches from Darwin island increased from about 350 finches to about 1,550 finches within a span of 10 years. From there on for the next 200 years, the populations of the finches fluctuate staying within a population count of 1500. On the other hand, the

finches on Wallace island decrease in population from about 50 finches to 50 finches over a span of about 40 years and from there, their population increases from about 50 finches to 500 finches over a span of 150 years.

The second graph displays a graph that is based on and compares the evolution of the beak size of the finch population of each island. The red line on the graph represents the finches on Darwin island and the blue line represents the finches on Wallace island. Starting with the finches on Darwin island, their initial beak size was mm and decrease in size over the next 200 years slightly leaving the beak size of the finch population on Darwin island at about mm. As for the finches on Wallace island, their beak size was initially mm increased over the span of 200 years resulting in a beak size of mm.

In this experiment, divided a species of finches, altered the environment of one of the populations, and analyze and recorded how the changes WOULD influence the evolution of each finch population. This type of isolation of the species is known as allophonic speciation. Hypothesized that the finches on the Darwin Island would increase in population and clutch size and that their beaks would increase in size due to the various types and amount of seeds available to them. In addition, the population of finches on Darwin Island will be able to maintain their population size if not increase.

On the other hand, I hypothesize that the population of finches on Wallace Island will decrease as well as their clutch size resulting in a possible distinction of the species on the island and their beak size would stay the same size because of the small amount and variation of seeds available on

the island. My hypothesis ended up being semi-valid. The reason this is because for starters I hypothesized that the finches on Darwin island would increase in population and in beak size. Their population did increase however, their beak size decreased over time.

In addition, I hypothesized that the finches on Wallace island would decrease and their beak size would remain the same. However, their population increased in size over time and remained the same for the remainder of the time the experiment recorded and the beak size grew and continued to grow for the next 200 yr. By the looks of the graph that displays the change in beak size, it is possible that the two populations of finches will end having the same beak size or exchange the trait.