

evolution

Answer Key to Darwin's Finches

Specific data that supports each postulate:

- **Individuals within a population vary in their traits.**

Supported by:

Figure 1: Histogram of distribution of beak depth of medium ground finches

Figure 2: Relationship between beak depth of offspring and their parents

- **Some of these variable traits are heritable—passed on to offspring.**

Supported by:

Figure 2: Relationship between beak depth of offspring and their parents

- **More offspring are produced than can survive because of limited resources such as food and nesting sites.**

Supported by:

Figure 3: Changes in *Geospiza fortis* population and seed abundance on Daphne Major, before and after the drought of 1977

- **Individuals with advantageous traits will survive and reproduce.**

Supported by:

Figure 1: Histogram of distribution of beak depth of medium ground finches

Answers to questions:

- **How do you know that finches' beak depth is heritable?**
You can see from Figure 2 that there is a correlation between the parents' and offsprings' beak size.
- **How did the finch population change from before the drought to after?**
According to Figure 1, the average beak depth increased in size and the finch population had more finches with greater beak depths in 1978 than before the drought.
- **Why do you think the average beak depth of the birds increased?**
The drought reduced the number of seeds, and finches with bigger beaks were able to eat the larger and harder seeds, so more of them survived.