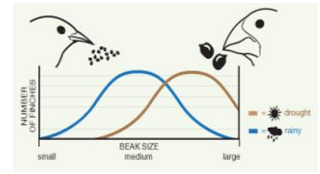


Name: _____ Block: _____ Date: _____



Types of Natural Selection

1. Limpets are marine organisms that have shells that vary in color from white to dark brown. Limpets live their adult life attached to rocks. On light colored rock, white shelled limpets are at an advantage because the birds that prey upon them have a difficult time locating them. On dark-colored rock, dark-shelled limpets are well camouflaged. On the other hand, tan-colored limpets are easily spotted on either light or dark rocks.

Name the type of selection: _____

Draw a graph to represent this type of selection.

Explain why this type of selection occurred:

2. In spiders, the average size is at an advantage in terms of survival and reproduction. Large spiders are easily seen and captured by their predators. Smaller than average spiders cannot catch enough prey to survive.

Name the type of selection: _____

Draw a graph to represent this type of selection.

Explain why this type of selection occurred:

3. Woodpeckers feed by pecking holes in trees in order to get at the insects living under the bark. One year, the trees are invaded by insects that live deep within the trees. Woodpeckers with short beaks can't reach insects and starve. Only the woodpeckers with long beaks can eat and survive.

Name the type of selection: _____

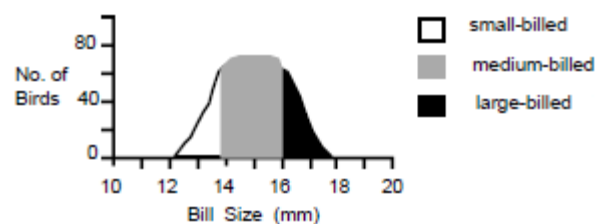
Draw a graph to represent this type of selection.

Explain why this type of selection occurred:

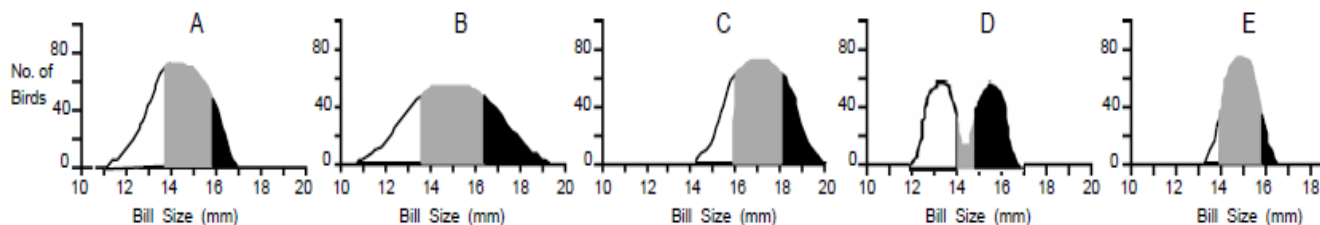
For the following description, identify the type of natural selection:

4. Favors one extreme form of a trait. _____
5. Selects AGAINST the intermediate forms. _____
6. Selects the average form of a trait. _____
7. Favors the two extremes of a trait. _____
8. Selects against both extremes of the trait. _____

9. In crossbills, a finch-like bird that lives in mountain forests, bill size is directly related to the size of seeds that are eaten. Small seeds are eaten by birds with small bills while large seeds are eaten by birds with large bills. Birds with a bill of intermediate size feed on seeds of intermediate size.



A specific population of crossbills has a distribution similar to the one at the right. Questions # a-d present four types of environmental change that might impact this population. For each potential change, choose the distribution below that best suggests how this population of crossbills would adjust. Compare each question separately to the original starting population at the right. Any of the distributions (A-E) may be used once, more than once, or not at all.



- _____ a. Over a 10-year period, various species of seed-eating ants invade the area and disproportionately consume a much greater number of intermediate-sized seeds.
- _____ b. For 15 growing seasons colder than normal temperatures gradually favor the production of larger seeds while plants producing smaller seeds do not survive and reproduce as well.
- _____ c. A new species of finch, with a bill-size distribution similar to that of the crossbills, moves in to the area. If combined onto one graph, which would be the most likely graph?
- _____ d. Unidentified environmental factors, acting through natural selection, decrease the amount of variation in bill size among the crossbills.