

Name _____





Date ___/___/___

GENETICS

Adaptive Radiation

Based on: [Adaptive Radiation Tutorial](#) & [Definition](#)

I. Multiple Choice: Circle the letter of the correct answer

- Which of the following is true?
(1) Charles Darwin noticed the variety of finches on Galapagos Islands.
(2) Darwin's finches evolved beaks that differ in shape and sizes to make them better adapted to their diet.
(3) Darwin concluded that these finches came from different ancestral species that caused them to adapt differently over time.
 - 1 only
 - 1 and 2
 - 2 and 3
 - 1, 2, and 3
- Which of the following is NOT an example of an adaptive radiation?
 - Beak diversity in finches in Galapagos Islands
 - Beak diversity in honeycreepers in Hawaii
 - Diversity of wings of birds, insects, and bats
 - Marsupials that have adapted and occupied different ecological niches in Australia
- Which of these finches are best adapted to eating grubs?
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- Which of these is true about adaptive radiation?
 - It prevents speciation.
 - It decreases biodiversity.
 - It suppresses adaptation
 - It leads to species diversification.
- Previously, the finches were inhabiting the South American mainland. However, they somehow managed to occupy the Galapagos islands. What drove them to migrate to the islands that are over 600 miles away from the mainland?
 - Higher competition on the islands
 - New ecological niche in the mainland
 - Decreasing food resources on the islands
 - Growing competition in the mainland

Name _____

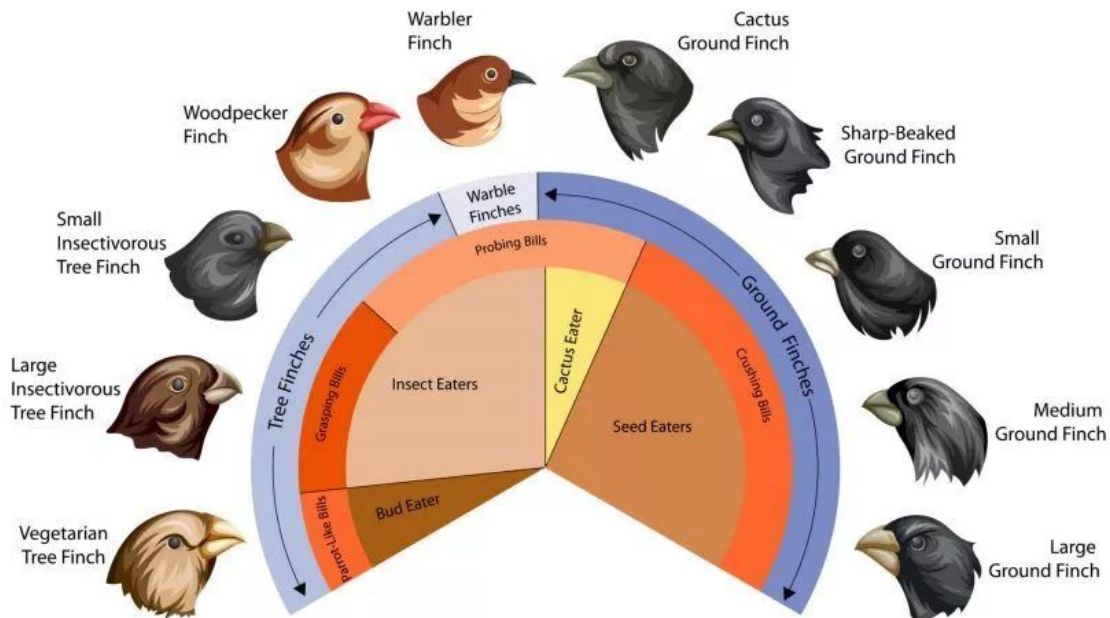
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II. Critical Thinking: Analyze the diagram below to answer the questions below.



1. Based on the diagram above, what is the common beak feature among these finches: woodpecker finch, warbler finch, and cactus ground finch? _____
2. Which of these finches is better adapted to eating buds?
 - a. An insectivorous tree finch
 - b. A vegetarian tree finch
 - c. Woodpecker finch
 - d. A ground finch
3. Which of the following made most ground finches better adapted to eating seeds?
 - a. A beak adapted for crushing
 - b. A beak adapted for poking holes
 - c. A beak adapted for grasping
 - d. A beak adapted for probing
4. Which of these led to the variation of their beaks?
 - a. Mechanisms of natural selection
 - b. Changes in the gene pool
 - c. Both a and b
 - d. None of the above
5. Why is this an example of adaptive radiation? Write your answer in the box below.