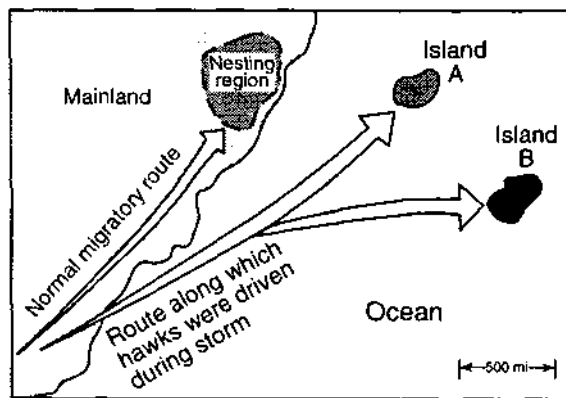


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- Based on modern evolutionary theory, the development of a new species would most likely be associated with
 - a constant environment
 - stable gene pools
 - geographic isolation**
 - a lack of mutations
 - What would be the most probable effect of reproductive isolation in a population?
 - It has no effect on variations in the species.
 - It favors the production of new species.**
 - It prevents the occurrence of mutations.
 - It encourages the mixing of gene pools.
 - Over a long period of time the organisms on an island changed so that they could no longer interbreed with the organisms on a neighboring island. This inability to interbreed is known as
 - hybridization
 - reproductive isolation**
 - artificial selection
 - survival of the fittest
 - Two squirrel populations are prevented from mating only because they live on opposite sides of the Colorado River. This situation is an example of
 - reproductive isolation
 - geographic isolation**
 - adaptive radiation
 - natural selection
 - The American toad breeds earlier in the spring than the Fowler's toad does. Therefore, they do not interbreed, even though they often live in the same habitat. Which conclusion can best be drawn from this information?
 - The two species do not interbreed because of geographic isolation.
 - The two species do not interbreed because of a form of reproductive isolation.**
 - Adaptive mutations occurred more often during the evolution of the American toad.
 - Fowler's toad has a higher rate of survival than the American toad does.
 - The species of finches that Darwin found on the Galapagos Islands displayed different structural and behavioral adaptations. These adaptations differed among the species according to the birds' varying habitats. Such adaptations most likely evolved as a result of
 - use and disuse
 - transmission of acquired characteristics
 - reproductive isolation
 - geographic isolation**
 - A group of organisms became reproductively isolated from its original population due to geographic separation. This group would most likely be
 - unable to successfully interbreed with its original population**
 - genetically identical to its original population
 - unable to live in the same habitat with its original population
 - able to reproduce with its original population, only
 - Members of a population may become separated from the original population by a newly formed mountain range. This occurrence is an example of
 - geographic isolation**
 - reproductive isolation
 - natural selection
 - struggle for existence
 - What would most likely be the result of two subdivisions of a population remaining geographically isolated from each other for several hundred generations?
 - Variations in one subdivision would differ from variations in the other subdivision.**
 - Variations in both subdivisions would be identical.
 - Neither subdivision would show any variations.
 - Both subdivisions would show variations resulting in similar mating patterns.

10. Distinct species of birds on two separate islands have similar characteristics that indicate common ancestry. The differences that have evolved to make these species distinct have resulted in
- (1) the inheritance of acquired traits
 - (2) frequent interbreeding
 - (3) the elimination of variations
 - (4) **reproductive isolation**
11. Geographic isolation of a small population from a main group may contribute to the development of new species. This speciation is more likely to happen if the members of the geographically isolated population, compared to the members of the main group, have
- (1) an inability to survive environmental conditions
 - (2) the ability to resist genetic mutations
 - (3) **different environmental factors acting on them**
 - (4) the same initial gene frequencies
12. A large population of wildcats is broken up into several small groups as a result of geographic isolation. Over a long period of time, these groups will most likely become
- (1) **reproductively isolated**
 - (2) identical in genotypes
 - (3) identical in phenotypes
 - (4) artificially selected
13. Thousands of years ago, a large flock of hawks was driven from its normal migratory route by a severe storm. The birds scattered and found shelter on two distant islands, as shown on the map below. The environment of island A is very similar to the hawk's original nesting region. The environment of island B is very different from that of island A. The hawks have survived on these islands to the present day with no migration between the populations.



Which statement most accurately predicts the present-day condition of these island hawk populations?

- (1) **The hawks that landed on island B have evolved more than those on island A.**
- (2) The hawks that landed on island A have evolved more than those on island B.
- (3) The populations on islands A and B have undergone identical mutations.
- (4) The hawks on island A have given rise to many new species.

14. The separation of a small group of individuals from the main population is known as

- (1) chromosomal mutation
- (2) fossil formation
- (3) **geographic isolation**
- (4) reduction division

15. Geographic and reproductive isolation are most closely associated with

- (1) **speciation**
- (2) extinction
- (3) overproduction
- (4) competition