

BIO 213 – Participation 1

1. Peter and Rosemary Grant from Princeton University have been studying “Darwin finches” for more than 30 years at the Revillagigedo Islands.
 - a. True.
 - b. False.**
2. Populations of Thick billed parrots (*Rhynchopsitta pachyrhyncha*) inhabiting the Sierra Madre in Mexico are known to have low levels of genetic diversity. Would you consider their potential for evolution is
 - a. High.
 - b. Low.**
 - c. None.

Discussion 1

1. For discovering useful novel products derived from wild organisms (e.g. antibiotics from bacteria and fungi) it is more productive and efficient to
 - a. Search randomly in any organisms but without a bias.
 - b. Search for new species.
 - c. Search systematically considering evolutionary relationships between organisms.**
 - d. Inventory all species that produce such products and create bioengineered species with desired combinations.
2. The field of medicine that is challenging orthodox medical practices of treating fevers, microbial infections and treatment of diseases, etc., with modern evolutionary insights goes by the name of
 - a. Molecular biology.
 - b. Darwinian medicine.**
 - c. Phylogenetics.
 - d. Lamarkian theory.
3. A new-found capacity of plants to tolerate lead (= grow in soils with high concentration of lead and other heavy metals) in mine tailings is a demonstration of
 - a. Serendipitous events that make plants tolerant to heavy metals, but because of their chanciness cannot be studied and therefore are useless.
 - b. Lack of evolution.
 - c. Adaptation and evolution.**
 - d. Demonstration that eventually all life will adapt to heavy metal pollution.

Discussion 2

1. What is the empirical evidence supporting the assumption that chimpanzees have not evolved very much in the past 5 million years while humans have, and therefore chimp behavior can be taken as a basis of comparison for behavior of early and modern humans.
 - a. Human fossils after the split from chimps are very much like that of chimps.**
 - b. Primitive human societies show chimp-like behavior.
 - c. Chimps share many human behaviors, indicating that they have undergone parallel evolution.
2. Patriloc societies are the ones in which
 - a. Males leave the troop in which they are born.
 - b. Females leave the troop in which they are born.**
 - c. Males are vocal.
3. For male chimps, what is the likely advantage of killing males from neighboring troops?
 - a. They win over all the females from those troops, increasing their fitness.
 - b. Culling keeps their population under control.
 - c. It increases their territory size, which affords them more food resources.**