Mechanisms of Evolution

Objectives

1. Explain how people came to believe that the populations of organisms that inhabit Earth have changed through time.
2. Understand the difference between microevolution and macroevolution.
3. Know the five assumptions of Hardy-Weinberg, and explain how the equation is used to make predictions about evolving populations.
4. Understand how variation occurs in populations and how changes in allele frequencies can be measured.
5. Describe how genetic drift leads to a loss in genetic diversity.
6. Know how mutations, gene flow, and population size can influence the rate and direction of population change.
7. Define natural selection in terms of differential survival and reproduction.
8. Describe the different kinds of selection mechanisms that help shape populations, and give examples of each type.
9. Describe the different isolating mechanisms that give rise to speciation.
10. Define an adaptation and explain the role adaptive traits play in an organism's survival.
11. Describe the patterns that may lead to macroevolution.

To ensure that you understand each of the above objectives, use the Cengage site (Chapter 17), and also on "Crash Course Biology", there are a few videos, including "Natural Selection" that will help you understand the Mechanisms of Evolution.

The Evolution 101 website through Berkeley, also has a plethora of information about all aspects of evolution