

SECTION 16-3 REVIEW

FORMATION OF SPECIES

VOCABULARY REVIEW Define the following terms.

1. morphology _____

2. geographic isolation _____

3. punctuated equilibrium _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. One limitation of the morphological species concept is that
 - a. morphological characteristics are not easy to observe.
 - b. it cannot be applied to extinct organisms.
 - c. members of different species often appear quite different.
 - d. there can be morphological differences among individuals in a single population.

- _____ 2. According to the biological species concept, a species is a population of organisms that
 - a. can successfully interbreed but cannot breed with other groups.
 - b. have a similar structure and appearance.
 - c. are physically separated from other organisms with a similar appearance.
 - d. can hybridize with each other to produce infertile offspring.

- _____ 3. Fish populations that do not interbreed because they live in different ponds may evolve into separate species due to

a. ecological isolation.	c. prezygotic isolation.
b. geographic isolation.	d. postzygotic isolation.

- _____ 4. Bird populations that do not interbreed because they cannot recognize each other's mating calls may evolve into separate species due to

a. ecological isolation.	c. prezygotic isolation.
b. geographic isolation.	d. postzygotic isolation.

- _____ 5. A pattern of rapid evolutionary changes followed by long periods of no change is described as

a. gradual evolution.	c. reproductive isolation.
b. punctuated equilibrium.	d. continuous speciation.

SHORT ANSWER Answer the questions in the space provided.

1. What are two limitations of the biological species concept? _____

2. What is one advantage of prezygotic isolation over postzygotic isolation? _____

3. Describe two pieces of evidence indicating that speciation does not always occur at the same rate.

4. **Critical Thinking** Some scientists predict that if global warming continues over the next few centuries, melting of the polar ice caps will raise the level of the oceans, causing some peninsulas to become islands. How might this change eventually affect the species that live on these peninsulas?

STRUCTURES AND FUNCTIONS The graph below shows the mating seasons of several species of frogs. On the basis of the information shown in the graph, do the peeper frog and the leopard frog likely have barriers to reproduction in addition to slightly different mating seasons? What other barriers might be in operation? Explain your answers.


