CHAPTER 9

Reproductive Barriers

Procedure

Read each of the following scenarios carefully. Choose which reproductive barriers could be acting.

Remember, in most cases there could be more than one possible barrier.

1. Two distinct species of ant live in the same national park. Little is known about their natural history, but they have been observed working during the day and resting at night in similar habitats. These species look different, and scientists have discovered that they produce different pheromones.

Pre-Zygotic Barriers	Post-Zygotic Barriers
Behavioural isolation	**Zygotic invaiability**
Temporal isolation	**Zygotic sterility**
Ecological/habitat isolation	**Zygotic breakdown**
Mechanical isolation	
Gametic isolation	

2. Bats in the genus *Myotis* look identical and have always been classified as one species, even though behavioural differences have been observed. Recently, scientists using molecular biology techniques have discovered that there are many different and genetically distinct species within this genus. In one case, two genetically distinct species of *Myotis* were found sharing the same roost over a period of years.

Pre-Zygotic Barriers	Post-Zygotic Barriers
Behavioural isolation	**Zygotic invaiability**
Temporal isolation	**Zygotic sterility**
Ecological/habitat isolation	**Zygotic breakdown**
Mechanical isolation	
Gametic isolation	

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3. Certain species of deer are capable of mating and producing zygotes, but they are widely separated geographically in nature.

Pre-Zygotic Barriers	Post-Zygotic Barriers
Behavioural isolation	**Zygotic invaiability**
Temporal isolation	**Zygotic sterility**
Ecological/habitat isolation	**Zygotic breakdown**
Mechanical isolation	
Gametic isolation	

4. Choose one of the three scenarios given above and describe how you could determine which reproductive barriers are at work. Explain your reasoning.

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