

Chapter 55: Conservation Biology

OBJECTIVES:

The Biodiversity Crisis

1. Describe the three levels of biodiversity.
2. Explain why biodiversity at all levels is vital to human welfare.
3. List the four major threats to biodiversity and give an example of each.

Conservation at the Community, Ecosystem, and Landscape Levels

4. Explain why natural reserves must be functional parts of landscapes.
5. Define restoration ecology and describe its goals. Explain the importance of bioremediation and the augmentation of ecosystem processes in restoration efforts.
6. Describe the concept of sustainable development.
7. Explain the goals of the Sustainable Biosphere Initiative.
8. Define biophilia and explain why the concept gives some biologists hope.



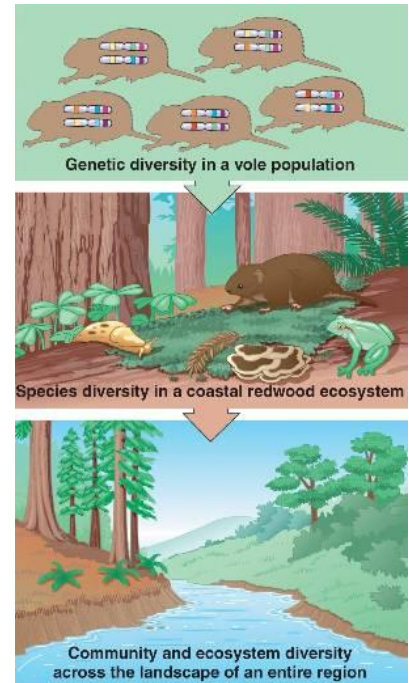
Guided Reading: Chapter 55

79. Use the diagram to the right to help you describe the three levels of biodiversity.

(1) Genetic diversity is the genetic variation (differences) within a population

(2) The variety of species in an ecosystem.

(3) The variety of ecosystems in the biosphere.



80. Explain why biodiversity at all levels is vital to human welfare.

Biodiversity at all levels is vital to human welfare due to our dependence on the many natural resources of our biosphere.

81. In the table below, list the four major threats to biodiversity and give an example of each.

Biodiversity		
	Threat	Example
1	Habitat Destruction	<ul style="list-style-type: none"> • Deforestation of tropical forest. • Bleaching of coral reefs.
2	Imported / Invasive Species (Introduced)	<ul style="list-style-type: none"> • Zebra mussels in the Great Lakes. • Purple Loosestrife in the Midwest. • Burmese python in the Everglades.
3	Pollution Poaching (overexploitation)	
4	Overpopulation	

(Remember: **HIPPO** from Honors Biology?)

82. Define restoration ecology and describe its goals.

83. Explain the importance of bioremediation and the augmentation of ecosystem processes in restoration efforts.

84. Describe the concept of sustainable development.

85. Explain the goals of the Sustainable Biosphere Initiative.

86. Define biophilia and explain why the concept gives some biologists hope.