

Name _____ Period _____

Chapter 56: Conservation Biology and Restoration Ecology

In the overview at the beginning of the chapter, the author sets the stage for this final chapter of the book. This chapter will deal with both *conservation biology* and *restoration ecology*. Let's begin by comparing and contrasting these two terms.

conservation biology

restoration ecology

Concept 56.1 Human activities threaten Earth's biodiversity

1. Ecologists organize biodiversity on three levels. In the table below, explain the impact of decreasing diversity in each division. Begin reading on page 1248, where the topic changes to threats to biodiversity before answering this question.

Level of Biodiversity	Impact
<i>Genetic diversity</i>	
<i>Species diversity</i>	
<i>Ecosystem diversity</i>	

2. Explain the difference between *endangered species* and *threatened species*.

3. Use this table to organize your thoughts on how the following three threats affect biodiversity.

Threat to Biodiversity	How it reduces biodiversity
<i>Habitat loss</i>	
<i>Introduced species</i>	
<i>Overexploitation</i>	

4. List five *introduced species* that present a serious threat to their new communities. Explain the damage done by each introduced species. ***Include two introduced species that are a threat in your own region of the country. Indicate these with an asterisk.

Introduced Species	Damage
(1)	
(2)	
(3)	
(4)	
(5)	

Concept 56.2 Population conservation focuses on population size, genetic diversity, and critical habitat

5. What do conservation biologists who adopt the *small-population approach* study?
6. Explain what an *extinction vortex* is, and describe one field study that supports this idea.
7. Why is genetic variation the key issue in the small-population approach?
8. On what type of population does the *declining-population* model focus?
9. What is the emphasis for study in the declining-population model?

10. Scientists drilled nest holes for red-cockaded woodpeckers in an attempt to increase their population levels. How is this action a response to the declining-population model?

Concept 56.3 Landscape and regional conservation aim to sustain entire biotas

11. Describe how the increase in cowbirds is related to forest fragmentation.

12. What are potential positive and negative effects of *movement corridors*?

13. Explain the concept behind a zoned reserve.

Concept 56.4 Restoration ecology attempts to restore degraded ecosystems to a more natural state

14. What is the goal of restoration ecology?

15. Restoration ecology uses two key strategies. Explain how each strategy works:

bioremediation

biological augmentation

Concept 56.5 Sustainable development seeks to improve the human condition while conserving biodiversity

16. Explain the concept behind the phrase “sustainable development.”

Testing Your Knowledge: Self-Quiz Answers

Now you should be ready to test your knowledge. Place your answers here:

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____



Kudzu, the wonder vine! Will not climb!