

Section 5.2

Conservation of Biodiversity

North Carolina Objectives Objective 5.03 Assess human population and its impact on local ecosystems and global environments: Sustainable practices/stewardship

► Before You Read

This section discusses ways to keep plants and animals and their environments safe and healthy. On the lines below, list things you do to keep a favorite plant or animal safe and healthy.

► Read to Learn

STUDY COACH

Mark the Text

Restate the

Main Point Highlight the main point in each paragraph. State each main point in your own words.

✓ Reading Check

1. What is conservation biology?

Conservation Biology

Conservation biology is the study and carrying out of ways to protect biodiversity. Conservation biology develops ways to conserve, or save, species and natural resources. **Natural resources** are the parts of the environment that are needed by or useful to living organisms. Sunlight, water, air, and plants and animals are all natural resources. These must be thought of when any conservation activity is planned. ♻️

Protecting Species and Habitats In the United States and in many other countries, laws have been made to protect endangered and threatened species.

Habitats, the place where a species lives, must be protected, too. Many habitats have been protected by the creation of natural preserves and national parks. The United States has many national parks. Some examples are Yellowstone, Crater Lake, and Big Bend National Parks.

Habitat Corridors In some areas, habitat corridors are created to connect wilderness areas that are separated from one another. **Habitat corridors** are protected strips of land that allow organisms to move from one wilderness area to another. Research has shown that these can help both animal and plant species to remain strong and be able to reproduce.

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Conservation of Biodiversity, continued

How do sustainable use programs protect ecosystems and benefit people?

Plants and animals that live in national parks must still be protected from harm. National parks in the United States and other countries hire rangers to help protect all species in the parks. Some parks allow sustainable use of the natural resources in the parks. Sustainable use lets people use the natural resources in ways that will benefit them and maintain the ecosystem. For example, in some rain forests, people are allowed to harvest crops like Brazil nuts that grow naturally. The people are able to sell the nuts to make money while the ecosystem is maintained.

How do reintroduction programs work?

Reintroduction programs can help save organisms that are in danger. Reintroduction programs take members of an endangered species and breed and raise them in protected habitats. When many of the organisms have been raised, they are released back into the area where they would naturally live.

Ferrets were reintroduced to their habitat this way. Ferrets feed on prairie dogs. At one time, the land where prairie dogs lived was being reduced by rural land use. This was destroying the habitat of the prairie dogs. As a result, the ferrets were losing their food supply and becoming endangered. A number of ferrets were captured and a breeding program was begun. Many black-footed ferrets have been reintroduced to the wild.

An organism that is kept by humans is said to be in captivity. Some species exist only in captivity in zoos or other special places. When endangered species are in captivity, scientists try to increase their number. Then they try to reintroduce the species into the habitat where they would live naturally. It is easier to reintroduce plants into the wild than animals. Some animals raised in captivity may lose the behaviors needed to survive in the wild.

Reading Check

2. What are reintroduction programs?

Three horizontal lines for writing an answer to the reading check question.

After You Read

Mini Glossary

captivity: when people keep members of a species in zoos or other conservation facilities

conservation biology: field of biology that studies methods and carrying out ways to protect biodiversity

habitat corridors: natural strips of land that allow the migration of organisms from one wilderness area to another

natural resources: those things in the environment that are useful or needed for living organisms

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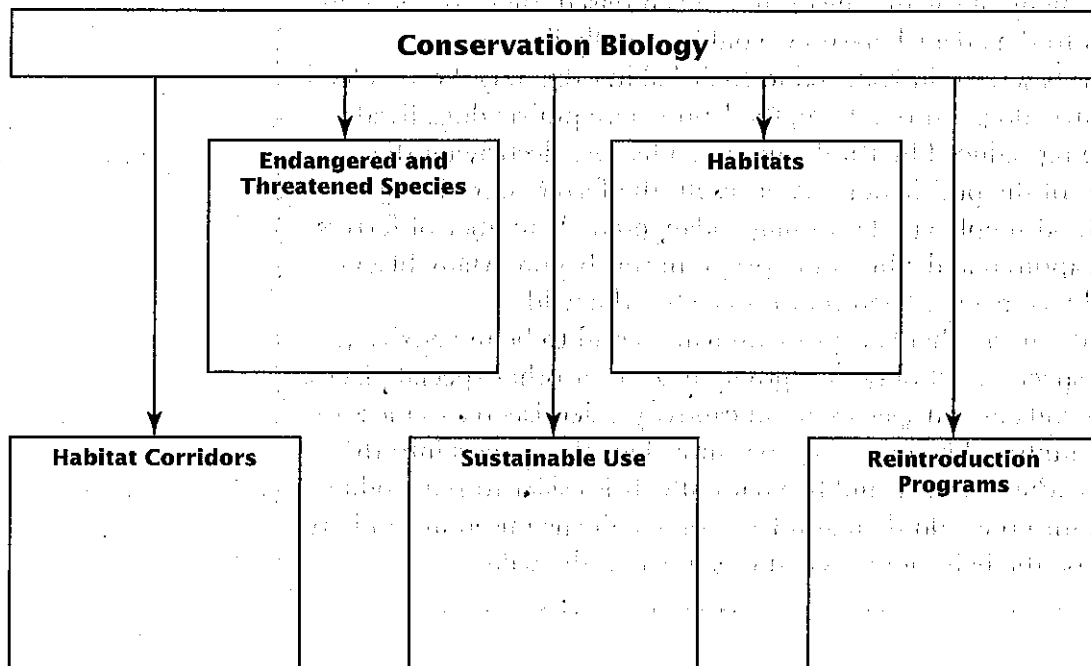
Conservation of Biodiversity, *continued*

reintroduction programs: programs that take members of an endangered species and breed and raise them in protected habitats; when many of the organisms have been raised, they are released back into the area where they would naturally live

sustainable use: philosophy that promotes letting people use resources in wilderness areas in ways that will benefit them and maintain the ecosystem

1. Review the terms and their definitions in the Mini Glossary above. Use one of the terms in a sentence that supports conservation efforts in your community.

2. Use the diagram below to help you review this section. In the top two boxes, list one method used to protect the natural resources. In the bottom three boxes, explain what the methods listed attempt to accomplish.



Visit the Glencoe Science Web site at science.glencoe.com to find your biology book and learn more about conservation of biodiversity.