

16.4 Threats To Biodiversity

KEY CONCEPT

The impact of a growing human population threatens biodiversity.



16.4 Threats To Biodiversity

- ▶ **Preserving biodiversity is important to the future of the biosphere.**
 - The loss of biodiversity has long-term effects.
 - loss of medical and technological advances
 - extinction of species
 - loss of ecosystem stability



16.4 Threats To Biodiversity

▶ Loss of habitat eliminates species.

- Habitat fragmentation prevents an organism from accessing its entire home range.
 - occurs when a barrier forms within the habitat
 - often caused by human development
- Habitat corridors are a solution to the problem.



16.4 Threats To Biodiversity

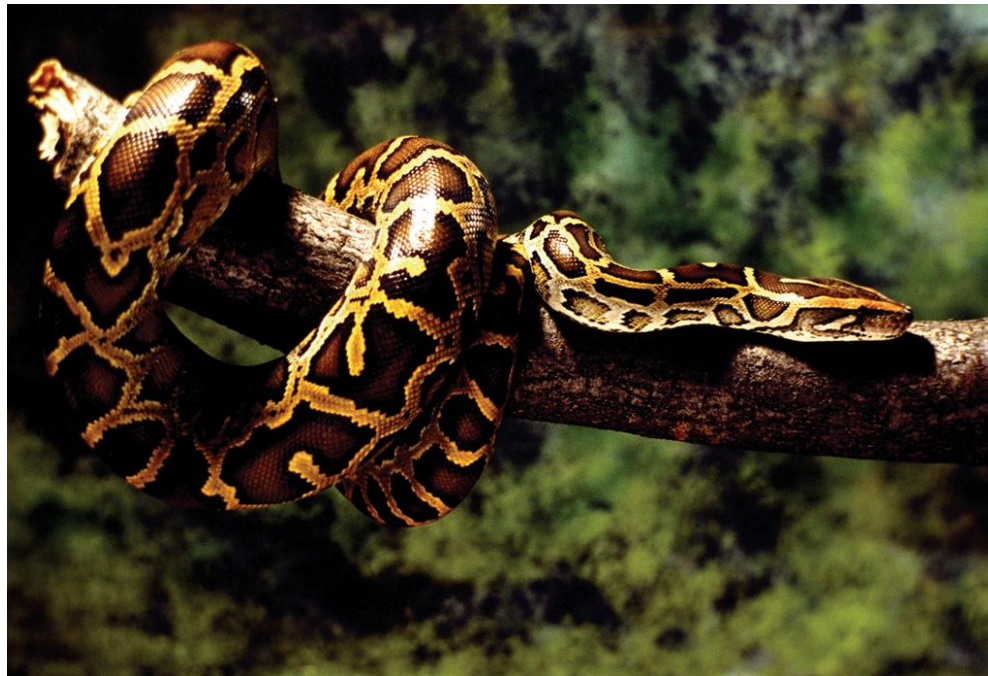
▶ Introduced species can disrupt stable relationships in an ecosystem.

- An introduced species is one that is brought to an ecosystem by humans.
 - accidental
 - purposeful
- Invasive species can have an environmental and economic impact.



16.4 Threats To Biodiversity

- Invasive species often push out native species.
 - Burmese python (Florida Everglades)
 - Introduced to the Florida Everglades from Asia (pet)
 - It is a constrictor and as the population grows, park officials worry that the endangered species here will fall prey to the snake.



16.4 Threats To Biodiversity

- Invasive species often push out native species.
 - mice (Australia)
 - Introduced to Australia from Europe (stowaways on cargo ships)
 - Cost farmers millions of dollars in lost crops.
 - Lack of predators to keep the population stable.



16.4 Threats To Biodiversity

- Invasive species often push out native species.
 - kudzu (southeastern United States)
 - Introduced from southeast Asia (ornamental house plant)
 - Spread too quickly. “Chokes” out native species. Now classified as a problematic weed species.



16.5 Conservation

So, what can we do???

- **Conservation methods can help protect and restore ecosystems.**



16.5 Conservation

- ▶ **Sustainable development manages resources for present and future generations.**

- Sustainable development meets needs without hurting future generations.
 - resources meet current needs
 - resources will still be available for future use



- The timber industry has started to adopt sustainable practices.

16.5 Conservation

➤ Global fisheries have adopted several sustainable practices.

- rotation of catches
 - Gives time to recover
- fishing gear review
 - Avoids damaging sea floor
- harvest reduction
 - Slows harvest, allowing recovery
- fishing bans
 - Replenishes populations



16.5 Conservation

► Conservation practices focus on a few species but benefit entire ecosystems.

- The Endangered Species Act works to protect individual species from extinction.
- A listed species is often called an umbrella species.
 - the habitat in which the species lives must be protected
 - other species are protected because they share the ecosystem



16.5 Conservation

▶ **Protecting Earth's resources helps protect our future.**

- The Environmental Protection Agency (EPA) was created in 1970.
 - develops policies and regulations to protect the environment.
- Legislation helps to protect the environment and endangered species. The following are three important laws:
 - Clean Air Act
 - Clean Water Act
 - Endangered Species Act (this law recovered the bald eagle)



16.5 Conservation

- There are several ways that people can help protect the environment.
 - control population growth
 - develop sustainable technology
 - change practices
 - protect and maintain ecosystems

