



Chapter 47 Exercises

Review Questions

- With an extinction rate of 100 E/MSY and an estimated 10 million species, how many extinctions are expected to occur in a century?
 - 100
 - 10,000
 - 100,000
 - 1,000,000
- An adaptive radiation is _____.
 - a burst of speciation
 - a healthy level of UV radiation
 - a hypothesized cause of a mass extinction
 - evidence of an asteroid impact
- The number of currently described species on the planet is about _____.
 - 17,000
 - 150,000
 - 1.5 million
 - 10 million
- A mass extinction is defined as _____.
 - a loss of 95% of species
 - an asteroid impact
 - a boundary between geological periods
 - a loss of 50% of species
- A secondary plant compound might be used for which of the following?
 - a new crop variety
 - a new drug
 - a soil nutrient
 - a pest of a crop pest
- Pollination is an example of _____.
 - a possible source of new drugs
 - chemical diversity
 - an ecosystem service
 - crop pest control
- What is an ecosystem service that performs the same function as a pesticide?
 - pollination
 - secondary plant compounds
 - crop diversity
 - predators of pests
- Which two extinction risks may be a direct result of the pet trade?
 - climate change and exotic species introduction
 - habitat loss and overharvesting
 - overharvesting and exotic species introduction
 - habitat loss and climate change
- Exotic species are especially threatening to which kind of ecosystem?
 - deserts
 - marine ecosystems
 - islands
 - tropical forests
- Certain parrot species cannot be brought to the United States to be sold as pets. What is the name of the legislation that makes this illegal?
 - Red List
 - Migratory Bird Act
 - Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
 - Endangered Species Act (ESA)

11. What was the name of the first international agreement on climate change?
 - a. Red List
 - b. Montreal Protocol
 - c. International Union for the Conservation of Nature (IUCN)
 - d. Kyoto Protocol

12. About what percentage of land on the planet is set aside as a preserve of some type?
 - a. 1%
 - b. 6%
 - c. 11%
 - d. 15%

Critical Thinking Questions

13. Describe the evidence for the cause of the Cretaceous–Paleogene (K–Pg) mass extinction.
14. Describe the two methods used to calculate contemporary extinction rates.
15. Explain how biodiversity loss can impact crop diversity.
16. Describe two types of compounds from living things that are used as medications.
17. Describe the mechanisms by which human population growth and resource use causes increased extinction rates.
18. Explain what extinction threats a frog living on a mountainside in Costa Rica might face.
19. Describe two considerations in conservation preserve design.
20. Describe what happens to an ecosystem when a keystone species is removed.