

Chapter 8: Understanding Populations Lecture Guide, Day Two

An Organism's Niche

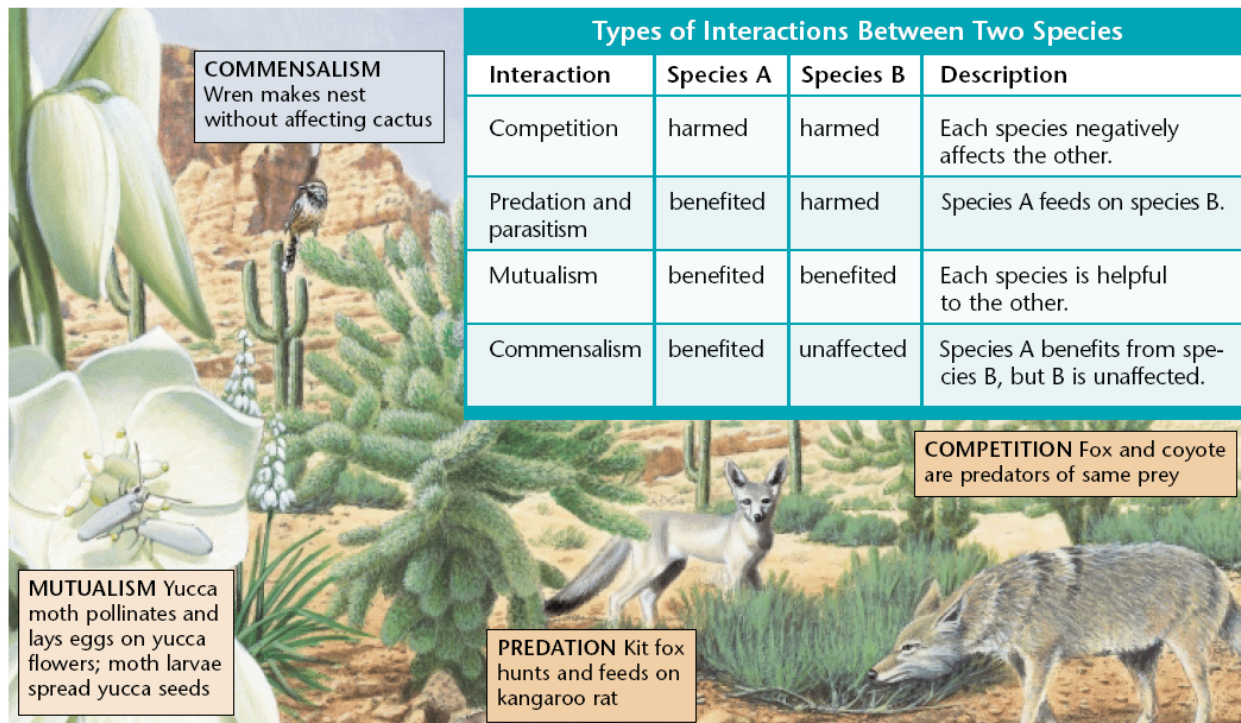
- A _____ is the unique position occupied by a species, both in terms of its physical use of its habitat and its function within an ecological community.
- A niche can also be thought of as the _____ of a particular species in an ecosystem.

Symbiosis and Coevolution

- _____ is a relationship in which two different organisms live in close association with each other.
- Symbiosis is most often used to describe a relationship in which _____.
- Overtime, species in close relationships may _____.
- These species may evolve adaptations that _____ of the relationship.

Ways in Which Species Interact

- Interactions between species are categorized at the level where one population interacts with another.
- The five major types of species interactions are:
 - _____
 - _____
 - _____
 - _____
 - _____



Interaction	Species A	Species B	Description
Competition	harmed	harmed	Each species negatively affects the other.
Predation and parasitism	benefited	harmed	Species A feeds on species B.
Mutualism	benefited	benefited	Each species is helpful to the other.
Commensalism	benefited	unaffected	Species A benefits from species B, but B is unaffected.

COMMENSALISM Wren makes nest without affecting cactus

MUTUALISM Yucca moth pollinates and lays eggs on yucca flowers; moth larvae spread yucca seeds

PREDATION Kit fox hunts and feeds on kangaroo rat

COMPETITION Fox and coyote are predators of same prey

Ways in

Which Species Interact

- These categories are based on whether each species causes _____ to the other species in a given relationships in terms of total effects over time.

Competition

- _____ is the relationship between two species (or individuals) in which both species (or individuals) attempt to use the same limited resource such that both are negatively affected by the relationship.
- Members of the same species must compete with each other because they _____ the same resources because they occupy the same niche.

Indirect Competition

- For example, suppose that one insect feeds on a certain plant during the day and that another species feeds on the same plant during the night.
- Because they use the same food source, the two species are _____.

Adaptations to Competition

- But in the course of evolution, adaptations that _____ will also be advantageous for species whose niches overlap.
- One way competition can be reduced between species is by _____ in time or space.

Adaptations to Competition

- _____ is when each species uses less of the niche than they are capable of using.

Predation

- _____ is an interaction between two species in which one species, the predator, feeds on the other species, the prey.

Parasitism

- An organism that lives in or on another organism and feeds on the other organism is a _____.
 - Examples include ticks, fleas, tapeworms, heartworms, and bloodsucking leeches.
- The organism, the parasite, takes its nourishment from is known as the _____.
- _____ is a relationship between two species, the parasite, benefits from the other species, the host, and usually harms the host.

Parasitism

- The differences between a parasite and a predator are that a parasite spends some of its life _____ the host, and that the parasites do not usually kill their hosts.

Mutualism

- _____ is a relationship between two species in which both species benefit.

Commensalism

- _____ is a relationship between two organisms in which one organism benefits and the other is unaffected.