



TOPIC: COMMUNITY INTERACTIONS: MUTUALISM (+/+) & COMMENSALISM (+/0)

Positive Community Interactions

Mutualism: both organisms <i>benefit</i> (____/____). Sometimes two organisms may <i>depend</i> on each other for _____ (<i>obligate</i> mutualism).	Commensalism: one organism benefits, the other is NOT affected (____/____).
	
Red-billed oxpecker: eats ticks in impala's fur. (+) Impala: fur gets cleaned, parasites removed. (+)	Remoras: eat scraps of food left behind by shark. (+) Shark: no tangible benefit or drawback. (0)

◆ **Symbiosis:** any _____, prolonged interaction between 2 species (mutualism, commensalism, & parasitism).

PRACTICE

Certain strains of *E. coli* bacteria can live in human intestines, where it relies on intestinal contents for nutrition. This bacterium also produces vitamin K, which humans use to produce blood clotting factors. In this case, the relationship between humans and *E. coli* is:

- a) Mutualism.
- b) Commensalism.
- c) Parasitism.
- d) Exploitation.

PRACTICE

You observe an interaction between two species. Removal of species A has a negative impact on species B. Removal of species B has a positive impact on species A. Which of the following is the most likely relationship between the two organisms?

- a) They have a mutualistic relationship.
- b) Their interaction is commensalism, as species B no longer benefits when species A is removed.
- c) They are competitors with a similar niche.
- d) Species B is a parasite that relies on species A.

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Summary of Community Interactions

Type of Interaction	Effect on Fitness	Important Notes
Competition	___/___	Competition can lead to competitive exclusion & local extinction, or resource partitioning & character displacement.
Exploitation	___/___	3 main types: Predation, Herbivory, & Parasitism.
Mutualism	___/___	Common in nature; some species may depend on each other for survival (obligate mutualism).
Commensalism	___/___	Often involves using another organism or its byproducts as shelter, food, transportation, or habitat.