

# 14.1 Habitat And Niche

## KEY CONCEPT

**Every organism has a habitat and a niche.**





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## ▶ A habitat differs from a niche.

- A habitat is all aspects of the area in which an organism lives.
  - biotic factors
  - abiotic factors
- An ecological niche includes all of the factors that a species needs to survive, stay healthy, and reproduce.
  - food
  - abiotic conditions
  - behavior





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## ▶ Resource availability gives structure to a community.

- Species can share habitats and resources.
- Competition occurs when two species use resources in the same way.
- Competitive exclusion keeps two species from occupying the same niche.



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- Competitive exclusion has different outcomes.
  - One species is better suited to the niche and the other will either be pushed out or become extinct.
  - The niche will be divided.
  - The two species will further diverge.





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- Ecological equivalents are species that occupy similar niches but live in different geographical regions.





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## KEY CONCEPT

**Organisms interact as individuals and as populations.**





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## ► Competition and predation are two important ways in which organisms interact.

- Competition occurs when two organisms fight for the same limited resource.
  - Intraspecific competition
  - Interspecific competition





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- Predation occurs when one organism captures and eats another.





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- There are three major types of symbiotic relationships.
  - Mutualism: both organisms benefit





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- There are three major types of symbiotic relationships.
  - Commensalism: one organism benefits, the other is unharmed



**Human** Our eyelashes are home to tiny mites that feast on oil secretions and dead skin. Without harming us, up to 20 mites may be living in one eyelash follicle.

Commensalism



**Demodex** Eyelash mites find all they need to survive in the tiny follicles of eyelashes. Magnified here 225 times, these creatures measure 0.4 mm in length and can be seen only with a microscope.



Organism is not affected

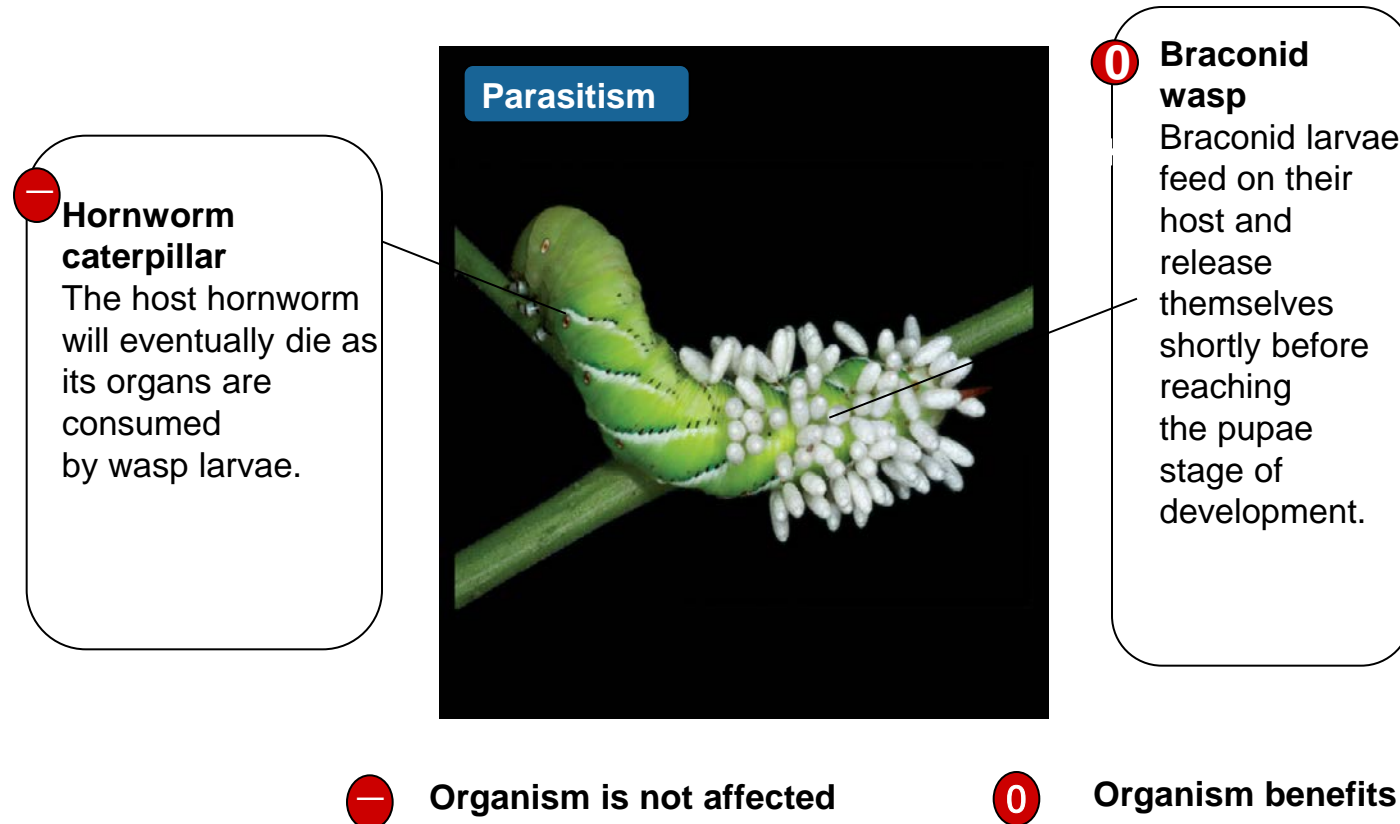


Organism benefits



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- There are three major types of symbiotic relationships.
  - Parasitism: one organism benefits, the other is harmed





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- There are three major types of symbiotic relationships.
  - Parasitism meet their needs as ectoparasites (such as leeches) and endoparasites (such as hookworms)

