

# Ecosystem Interactions

- Remember that an ecosystem is made of:
  - Biological community (different populations same area)
  - All abiotic factors affecting the communities
- Each population uses the resources of the ecosystem in different ways
  - Helps each population survive!
- Each species has it's own **habitat**
  - An area where an organism lives
  - Can be a single thing or a group of things (ex: tree or forest)



# LAKE ECOSYSTEM

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# Community Interactions

- Remember that a community is different populations in the same area (not the abiotic factors)
- Competition
  - More than one organisms uses a resource at the same time
  - Strong organisms compete with weaker organisms
  - Sometimes populations might leave an area to avoid competition
- Predation
  - one organism consumes another for food
  - The one that consumes = **predator**
  - The one that is consumed = **prey**

# Community Interactions

- Symbiotic Relationships

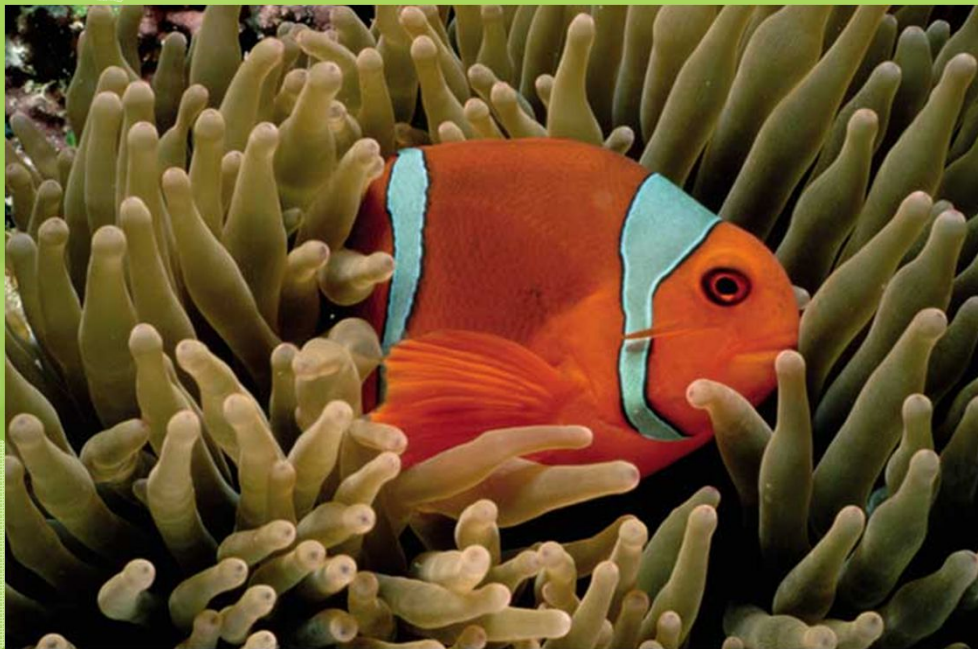
- species survive because they have developed with other species
- They depend on each other to live

- **1. mutualism**

- Two or more organisms live closely together
- Both benefit from the relationship
- Example: Lichen and a tree
  - The tree lets the lichen have a home
  - The lichen allows for food for fungi on the tree



# Community Interactions



Corbis/Jeffrey L. Rotman

## ○ 2. Commensalism

- One organism benefits and the other organism is neither harmed nor helped
- Example: Clownfish and sea anemone
  - Clownfish are protected by the anemone
  - The sea anemone is not harmed but has no benefit



# Community Interactions

## ● 3. Parasitism

- One organism benefits at the expense of another
- One organism is harmed or killed
- If a host dies, the parasite usually also dies
- Example: heartworm in dogs
  - Worm needs a place to feed and live
  - Will attach to the heart of a dog
  - Makes the dog weak but will not usually kill it

