

Species Interactions and Coevolution

Part 1: Natural History of Species Interactions

Types of species interactions can be based on costs and benefits or the closeness of association. Species interactions are dynamic and context dependent. Exploitation, competition, and mutualism are explored.

- Species Interact
- Natural History of Species Interactions
- Exploitative Interactions
- Competition in Limited Environments
- Positive Interactions Are Surprisingly Abundant
- The Currency of Mutualisms: A Trade Deal
- Mutualisms Have Broad Impacts
- Check Your Understanding
- Summary of Part 1
- Quiz Questions
- Ask Your Instructor

Part 2: Costs and Benefits Drive Species Interactions

Species interactions arise and are continually influenced by costs and benefits to individuals. Removal experiments help scientists understand interactions. Mutualisms are profoundly shaped by trade-offs.

- Figuring Out How Two Species Interact
- Removal Experiments
- Practice Identifying Species Interactions
- Exploring Interactions on the Great Barrier Reef
- Devil's Gardens
- The Cost of Success
- Mutualisms Involve Trade-offs
- Summary of Part 2
- Quiz Questions
- Ask Your Instructor

Part 3: Coevolution

Species interacting over time may coevolve. Coevolution is defined and explored through examples and simulations. Cheating in mutualisms is a reality and can be a selective pressure. The evolution of eukarya is discussed.

- Together Through Time

- What Is Coevolution?
- An Evolutionary Arms Race
- Coevolution Can Promote Genetic Diversity
- Sex and the Red Queen Hypothesis
- Predator-Prey Coevolution
- Coevolving Mutualisms and Exaggerated Traits
- Why Not Cheat?
- Endosymbiosis and Eukaryotic Organelles
- Summary of Part 3
- Quiz Questions
- Ask Your Instructor