

Integrative Biology 102: Lecture Outline
Community Relationships

Lecture Objectives

By the end of the lecture and after reading the text, you should be able to:

1. explain the connection between evolution and natural selection.
2. list the types of pressures that constitute natural selection.
3. give examples of symbiotic relationships, and explain the effect of these relationships on the survival and reproductive success of the organisms involved.
4. describe competition and its effects on evolved characteristics and community structure.
5. give examples of plant and animal anti-predator defenses.
6. describe mutualism and give examples of mutualistic relationships.
7. distinguish between the ecological niche and the habitat of an organism.
8. describe the process of primary and secondary succession; contrast the properties of the early stages of succession with the climax stage of succession.
9. explain why a natural community undergoes a sequential series of changes in plant and animal populations.

Reading: Ch. 4.

Terms

ecological niche	mutualism
symbiosis	parasitism
commensalism	

1. Evolution

natural selection

adaptations

fitness

2. Limitations (Selection pressures)

abiotic

biotic

niche

3. Communities

4. Symbiotic Relationships

herbivory/predation/parasitism

- effects on community structure
- defense mechanisms (strategies to reduce herbivory)

* disease

competition

- Strategies to reduce competition
- resource partitioning

mutualism

○ Examples of mutualistic relationships

5. Succession

* primary

* secondary

* reason for community changes

* disturbance

For the next lecture on *Population Ecology* read Ch. 6. Be ready to answer this question:

* What contributes to the death rate of populations other than the human population?