

Bio 307 – Principles of Ecology

Part I – Predators and Their Prey

I. Herbivore Predation on Plants

A. Effects on Plant Fitness

- 1) Negative Effects**
- 2) Plant Compensation**
- 3) Benefits: Increased Fitness?**

B. Plant Defenses against Herbivores

- 1) Chemical Defenses**
- 2) Mimicry**
- 3) Structural Defenses**
- 4) Predator Satiation (Synchronized Seed Production)**

II. Predation on Animals

A. Animal Prey Defenses

- 1) Chemical defenses**
- 2) Warning Coloration and Mimicry**
- 3) Cryptic Coloration**
- 4) Armor and Weapons**
- 5) Behavioral Defenses**
- 6) Predator Satiation**

B. Hunting Tactics

- 1) Seat and Wait (ambush)**
- 2) Stalking**
- 3) Search and Pursuit**

C. Specialized Forms of Predation

1) Cannibalism

2) Intraguild Predation

D. Predator Regulation of Prey Populations

Part II – Coevolutionary Interactions

I. Coevolution

A. Symbiosis

II. Parasitism

A. Characteristics of Parasites

1) Ectoparasites versus Endoparasites

2) Microparasites versus Macroparasites

B. Hosts as Habitat

1) Transmission (Direct, Indirect, Intermediate Hosts)

2) Host Responses

III. Mutualism

A. Types of Mutualism

B. Pollination

C. Seed Dispersal