

Predator-Prey Arms Race

- Blending in
- Counter shading
- Aggressive mimicry (predator version of deceptive mimicry)
- Weapons
- Chemicals
- Flee



Foraging

- Process of finding and consuming food

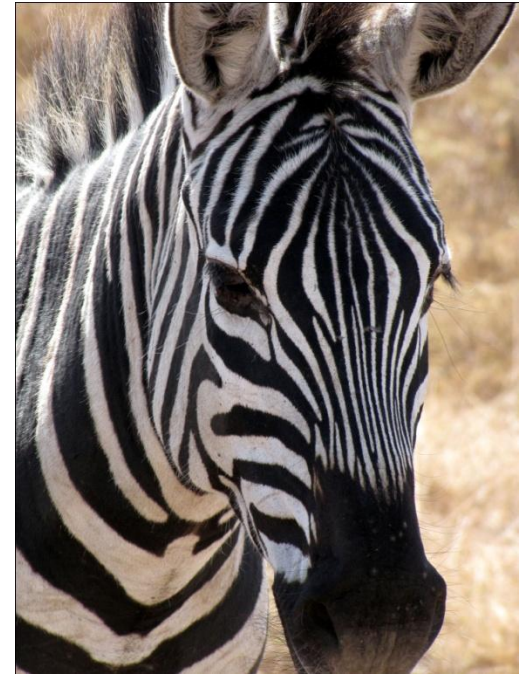
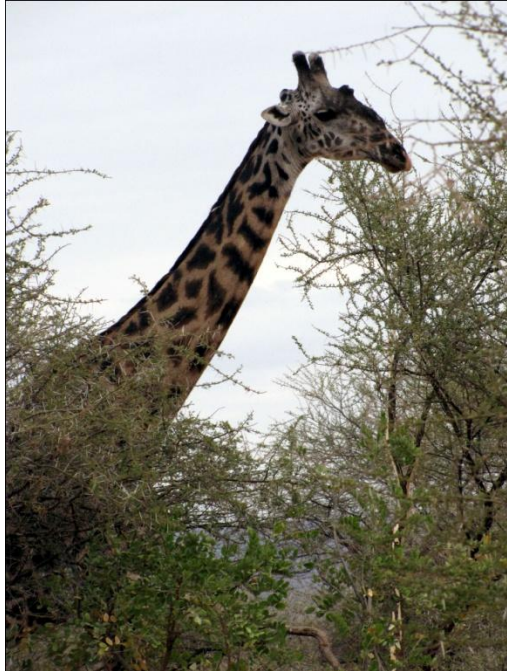
Predator = animal doing the consuming

Prey = organism that gets consumed

Decide

Proximate factors: anatomy and physiology

Herbivore = eat plant material



Decide

Proximate factors: anatomy and physiology

Herbivore = eat plant material

Carnivore = eat other animals



Decide

Proximate factors: anatomy and physiology

Herbivore = eat plant material

Carnivore = eat other animals

Omnivore = eat both plants and animals



Decide

Ultimate factors: adaptive value of different choices

Influenced by:

1. Characteristics of the food
 - energy contained in food (e.g. calories)
 - handling time = time and energy required to process food
 - profitability = maximize energy intake and minimizing handling time
2. Predation risk
 - balance risk with profitability
3. Competition from others in population

Search

2 stages:

1. Generalized search - finding the appropriate habitat
2. Focused search – choosing actual food items

2 types of strategies:

A. Active search

increase success rate:

- i. search image – set of visual cues reliably associated with a specific prey
- ii. Search in groups



Search

2. Focused search – choosing actual food items

2 types of strategies:

A. Active search

B. Sit and Wait

- relies on crypsis
- often uses deceptive/aggressive signals



e.g. Bola's spiders



e.g. Angler fish



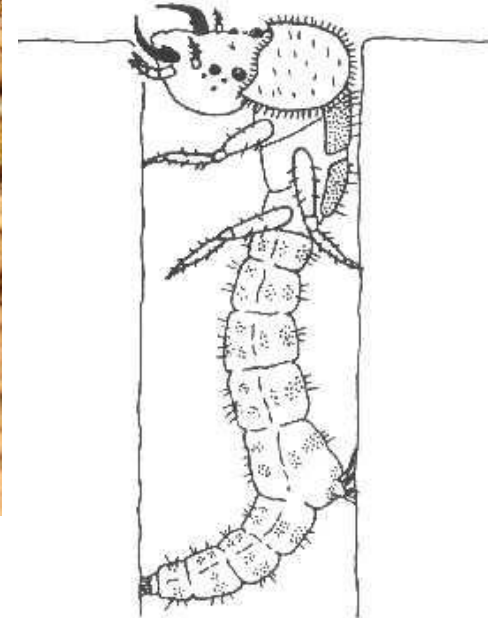
Capture

2 types of strategies:

1. Active hunters
2. Sit and wait

increase success rate by:

- A. Crypsis
- B. Venom or poisons
- C. Building traps
- D. Fast reaction times



Consume

1. Additional handling

2. Where to eat

3. When to eat it → now or save it for later = hoarding

