

## Env. Sci. 120 - Wednesday, October 21st

**REMINDER:** Tomorrow we will be at the MSA...we will be leaving from the main entrance at 12:30 and returning by 3:00. Bring cameras if you want to work on possible EcoPoint opportunities. If you are unable to attend, you must see Mr. Hallihan first thing Thursday morning.

### TODAY:

Copy down the notes from the following slides, read them over and discuss!

Check out the links to videos that support the notes.

We will finish yesterday's class activity on Friday.

Those students absent yesterday...pick up a copy of activity and do at home.

# An Organism's Niche

---

- The unique role of a species within an ecosystem is a **niche**
  - An **ecosystem** is all of the organisms living in an area together with their physical environment
  - It includes their physical home, the environmental factors necessary for survival, and all interactions with other organisms
  - It is different than a **habitat** (where an organism lives)

# Ways in Which Species Interact

- Interactions are categorized by how one population interacts with another
- These interactions depend on whether they harm or help one another
- Some interactions are direct, others are indirect
- This is still being studied to better understand its complexities

# Competition

- A relationship in which different individuals or populations attempt to use the same limited resource
- Each individual can be harmed by the competition
- Can occur within or between species
- Ex. Fox and coyote compete for the same prey



# Competition

## Indirect Competition

- Some species may never come in contact with each other and still compete
- Ex. One type of insect during the day and another at night

## Adaptations

- Some species reduce competition with each other by adjusting their niche
- This is called *niche restriction*

# Predation

- An organism that feeds on another organism
- The organism that is fed upon is called the **prey**
- Ex. Coyote and deer
- Many species have evolved some mechanisms to avoid or defend against predators




Predation in action...Click on the globe to go to video




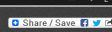
 Nature's Perfect Predators - Komodo Dragon



 Golden Eagle vs. Jackrabbit



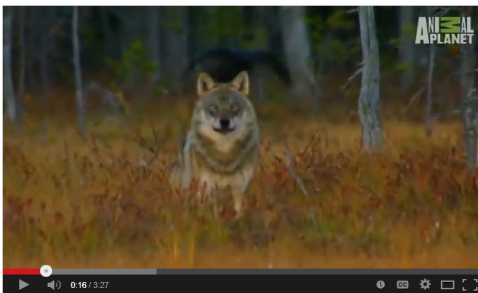
 download video as MP3 or MP4

 Share/Save



 Nature's Perfect Predators- Praying Mantis

## Some more predation...

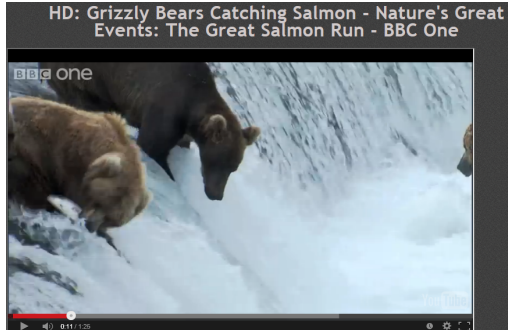


Viking Wilderness - Wolves and Bears Clash

<http://safeshare.tv/w/RtMLeerijm>



<http://safeshare.tv/w/CVYeiWRLqA>



<http://safeshare.tv/w/DgMXOFqBTc>



<http://safeshare.tv/w/JgRIbNPTLP>



# Parasitism

- An organism that lives on another organism and feeds on the other organism is a **parasite**
- The organism that provides the nourishment is the **host**
- Ex. Ticks, fleas, tapeworms, sea-lice



Uploaded on Apr 27, 2009

A parasitic wasp has injected her eggs into a caterpillar  
-- and now they're ready to hatch.

## Check out this parasite



# Mutualism

- A close relationship between two species in which each species provides a benefit to the other
- Ex. Humans and certain types of bacteria in the intestines
  - Humans are better able to digest food and bacteria have a place to live



• Check it out

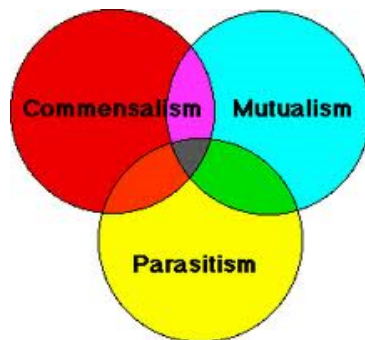
# Commensalism

- A relationship in which one species benefits and the other species is neither harmed nor helped
- Ex. Sharks and remoras
  - Sharks are unharmed and fish are able to eat what the shark doesn't



# Symbiosis and Coevolution

- A relationship in which two organisms live in close association is called **symbiosis**
  - Symbiosis is often used to describe at least one species benefiting from another
  - Over time, the species may **coevolve**
  - They develop adaptations that reduce the harm or improve the benefit of the relationship



Video...

