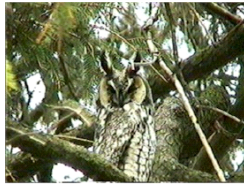


Niche

- each organism has its own place in an ecosystem.
- the organism's place in the food web, its habitat, its breeding area, and the time of the day when its active are all a part of its "niche".
- how an organism operates in their niche ultimately decides their continuing survival and reproducing capability.

Eagle vs Owl



Feb 12-1:46 PM

Feb 12-1:48 PM

Eagle vs Owl

- both organisms eat small rodents (mice, lemmings, small birds)
- and they can be found in roughly the same large geographical territories

How can they co-exist?

Answer → they occupy different niches

- they fly differently → owls have bigger, thicker wings and they hunt in thick forested areas....eagles have thinner, lighter wings that make them travel very fast and they have to hunt in flat, more open spaces
- eagles always build their nests @ the top of the tallest tree - owls have their homes in the deep cover of trees.

<http://www.youtube.com/watch?v=w4OH6gMN6vY&safe=active>



http://video.nationalgeographic.com/video/animals/birds-animals/birds-of-prey/eagle_hald_northwest/



Competition in Niches

- there are times when a NEW species enters an ecosystem, causing a disturbance.
- competition may occur between that new species and the one already there.
- these new species are called "**exotic species**" because they are not native to this ecosystem.
- new species have been known to cause huge problems .

Feb 12-2:01 PM

Examples...

1. Killer Bees



<http://www.youtube.com/watch?v=e7fUXw-5T2Q>

- were known for making large amounts of honey (they're native to Africa - African Honeybees)
- so scientists and farmers decided to bring some over to Brazil and SW Texas to study them.
- somehow a few escaped and then they started multiplying rapidly, competing with (and out-competing) the other native bees.
- unexpected results were lower honey yields and worse.....they also had a more aggressive bee that can cause problems (mass swarming - leading to death)

Feb 12-2:02 PM

2. The Zebra Mussel



- this mussel originated in western As
- it established itself and outcompete mussel found in the Great Lakes
- their populations became huge very quickly

Pros and Cons

- by attaching to any object, the zebra mussels started choking and clogging pipes of industrial plants, factories and electrical plants.
- they were negatively effecting the freshwater supplies to these plants and surrounding communities.
- to fix this clogging/choking problem, large amounts of chlorine were poured around this pipework.....this ended up killing some of these pesky animals → but too much chlorine is poisonous to everyone.....
- one thing that has happened is that ducks and other shorebirds eat this mussel, so they have more food (a positive thing)....more aquatic bird life exists in the Great Lake area
- fresh-water jellyfish eat mussels....so more mussels means more food for the jellyfish (again...a positive thing).
- zebra mussels are fantastic filterers. they process 1 and 1/2 Litres of water a day, removing most of the pollutants (again a positive thing)....The Great Lakes are actually considered to be 60% cleaner than they were 30 years ago.

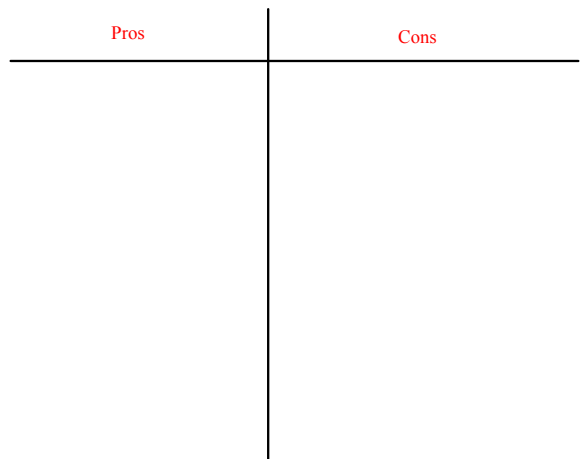
Feb 12-2:07 PM

Feb 12-2:12 PM

Unfortunately

- pollutants stay inside of the mussel and are stored in its flesh. If humans or birds eat too muc of these mussels....they can get sick and potentially die (a negative thing)
- cleaner water can actually be TOO clean! They can result in certain species of algae not being present and some of these algae feed smaller microscopic fish....leading to a loss in a food source in the Great Lakes (again a negative thing)
- also water that is too clean, can have less dissolved oxygen in it and fish need dissolved oxygen to survive....some fish may not survive and some populations are down (another negative)

the idea.....exotic species CAN mess up an ecosystem!



Feb 12-2:12 PM

Feb 12-2:13 PM

What species was introduced to Newfoundland...and is now causing problems?



Nov 3-11:41 AM

Nov 3-2:23 PM