

Bell Ringer

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If an ecosystem is like a society, what kinds of “jobs” would organisms have?

Niches



What is it?

Let's compare...

HABITAT → ADDRESS (city/state)

Then...

NICHE → WHICH HOUSE, OCCUPATION

Example

Clownfish

Ecosystem = marine (ocean)

Niche = lives among sea anemones for protection

produces mucus to protect against anemone stings



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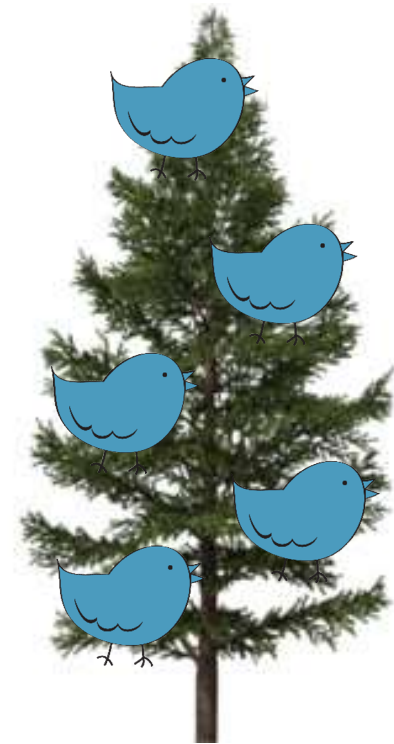
No other fish has the exact same “job” in this ecosystem!



Sharing a niche

Two species can have the *potential* to thrive in the same niche.

- Example: two species of bird are successful in this type of tree.

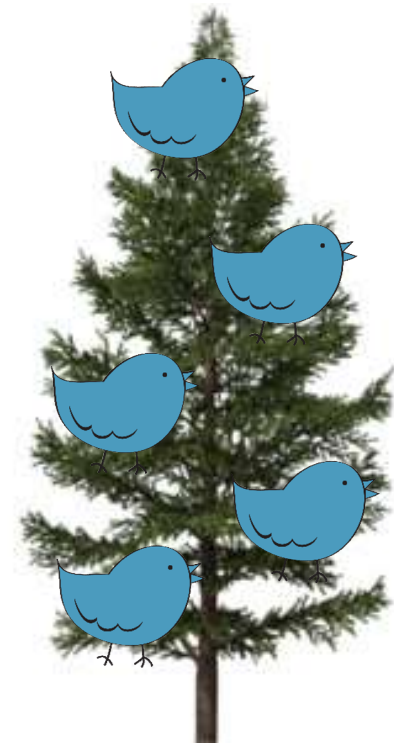


Sharing a niche

Two species can have the *potential* to thrive in the same niche.

- Example: two species of bird are successful in this type of tree.

But what happens when they try to share the niche?



Sharing a niche

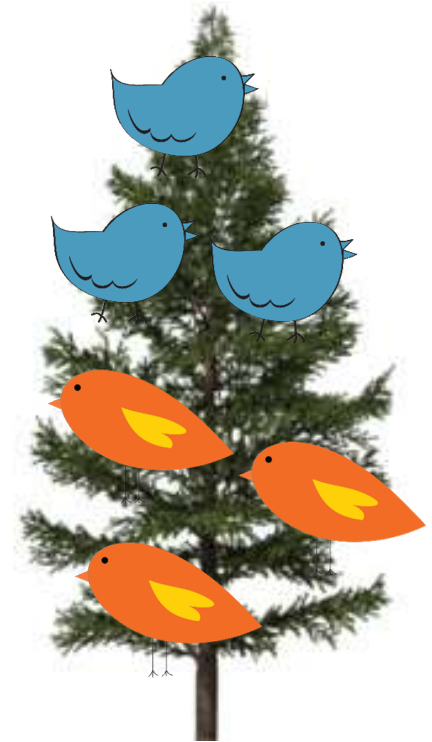
The two species must compete for resources in the niche.

One of the species will out compete the other.

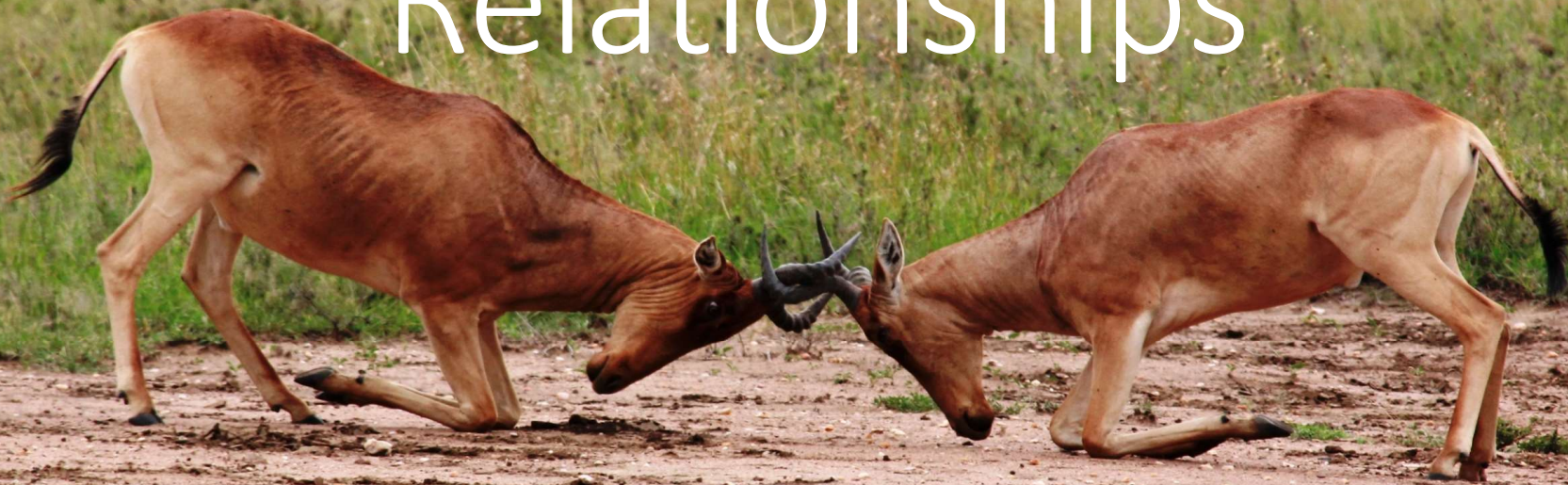
- Both species will have a smaller niche.

Example:

- Both species live in the same type of tree but their niche is limited to certain parts of these trees due to competition.



Interspecies Relationships



Competition

Two organisms (or species) are in conflict over a limited essential resource.

Example: food, shelter, water, mates



Predator-Prey

Predator = organism that eats another organism.

Prey = the organism eaten by the predator.



Symbiosis

A close, usually long-term, relationship between two or more species.

Mutualism = Both species benefit from the relationship



Parasitism = One species benefits at the expense of the other



Interspecies relationships

Competition = for resources, mates

Predator-prey = one species hunts and kills the other for energy

Mutualism = two species benefit each other

Parasitism = one species benefits at the expense of the other

EXIT TASK

Describe how interspecies relationships (especially competition) shape an organism's niche.