

Species Interactions

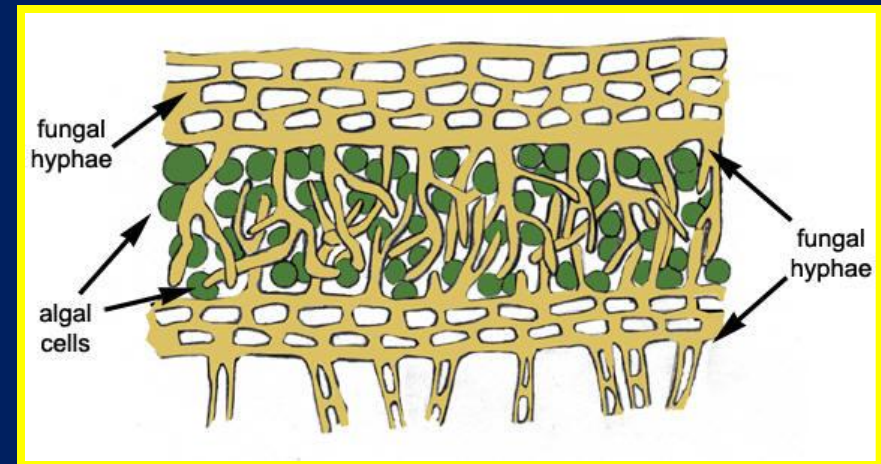


Clarifying Objective 2.1.3

Explain various ways organisms interact with each other including predation, competition, parasitism, and mutualism.

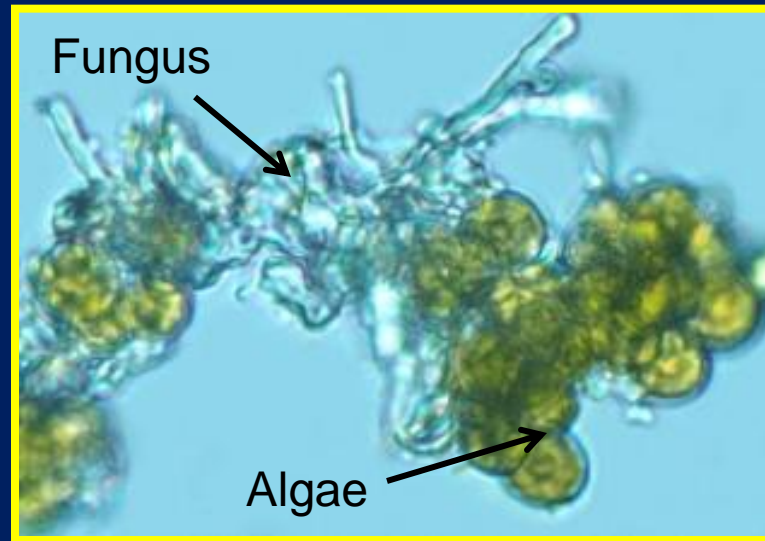
Symbiosis

When two species form a close and permanent relationship, it called symbiosis.



Symbiosis

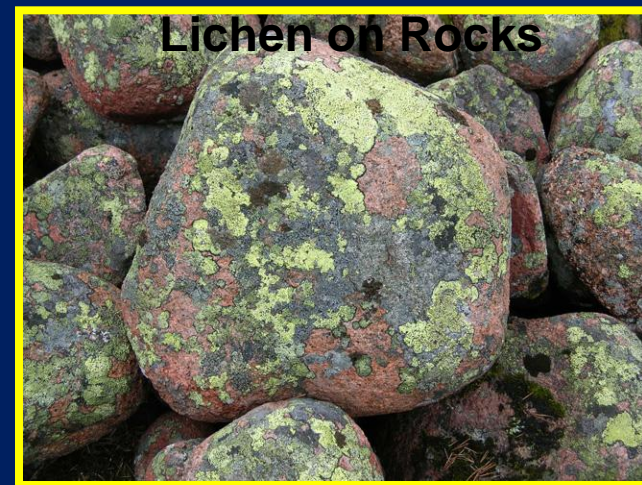
The algae provide energy rich food for the fungi, through photosynthesis.



The fungi acts as a sponge, absorbing moisture from the air and holding onto it, providing the water necessary for the algae to photosynthesize.

Symbiosis

Because of this symbiotic relationship, lichen can be found in a wide range of habitats, including the arctic tundra.



Reindeer feed mainly on lichen during the winter.

Mutualism

Mutualism is a symbiotic relationship in which both species benefit



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Parasitism

Parasitism is a symbiotic relationship in which one species benefits and one is harmed.

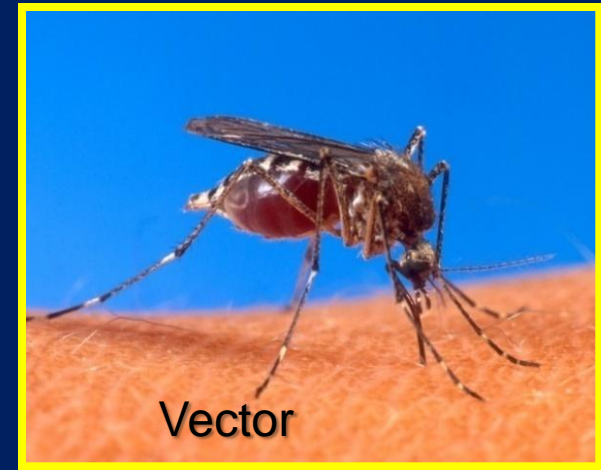


Host

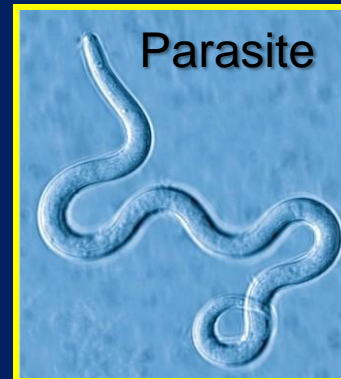


Fleas

Parasite



Vector



Parasite



Host

Elephantitis

Commensalism

Commensalism is when one species benefits and the other species is not affected



Dung Beetle



Spanish Moss

Competition and Predator-Prey Relationships

Two other types of interactions found in ecosystem are competition and predator-prey relationships.



Competition



Predator-Prey

Although these relationships involve interactions between different species, they are not as species specific as the symbiotic relationships.

Competition

Competition between two different species can occur when share the same resource such as food, water, and space.



Predator-Prey

Predator-prey relationships occur when the predator species kills and eats the prey species.



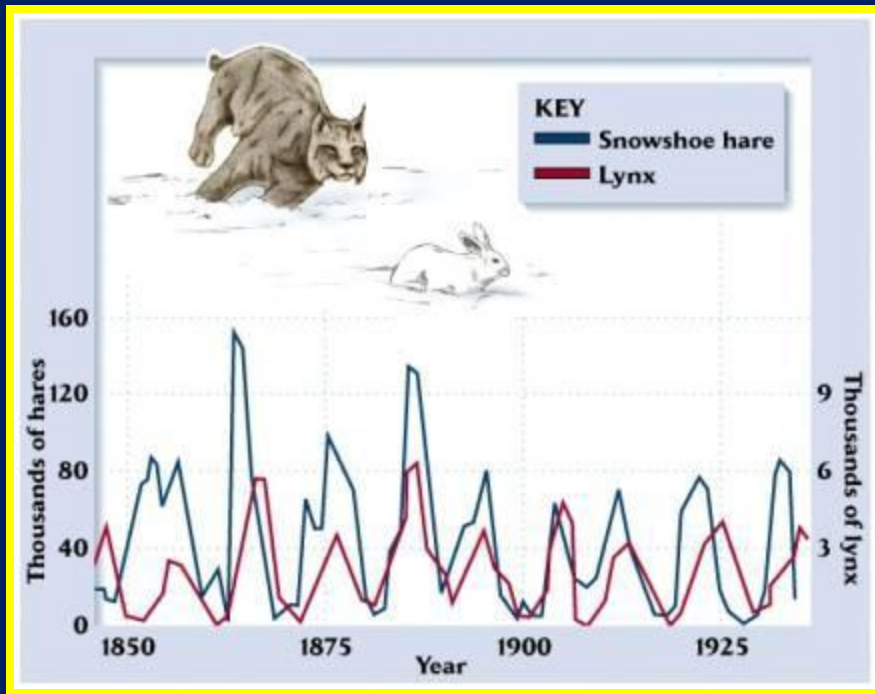
Prey



Predator

Predator-Prey

The predator-prey relationship is crucial in keeping the ecosystem in balance.



Too many grazers results in overgrazing and starvation.

Natural predators, keep the number of grazers down.

However, too many predators results in overhunting and eventual starvation of predators.

As the number of predators decrease, the grazer populations begin to increase again and the cycle repeats itself.