

Limiting Factors and Carrying Capacity

What is a Limiting Factor?

- **Limiting Factors** are...

(two similar definitions)

- conditions of the environment that **limit** the growth of a species.
- biotic and abiotic factors that prevent the continuous growth of a population.



What is a Limiting Factor?

- Populations would continue to increase if they had all of the resources they require in unlimited amounts, but there are always *factors that limit* their increase.
- **Limiting factors** control population growth.



What is Carrying Capacity?

- Because of these **limiting factors**, each ecosystem has a finite capacity for growth connected to its **carrying capacity**.



What is Carrying Capacity?



- **Carrying capacity** is the number of individuals of a species that an ecosystem can support.

Limiting Factors Facts

- In nature, populations of organisms rarely grow uncontrolled. Each ecosystem has a carrying capacity (or number of organisms it can sustain/support).
- Remember, limiting factors are biotic and abiotic factors that prevent the continuous growth of a population.
- Because of limiting factors, the number of organisms in a population is often well below carrying capacity.
- Range- the area where an animal or plant is found living