

Population Growth Patterns

What factors tend to increase and decrease a population?

- natality
- mortality
- immigration
- emigration
- open population
- closed population

Factors Affecting Populations

- **Biotic Potential**

- species have a varying ability to reproduce
- defined as the maximum number of offspring if resources were unlimited

- **Limiting Factors**

- factors provided by the environment that limit an organisms ability to reach its biotic potential
- food, water, territory, pollution, toxic chemicals etc

- **Carrying Capacity**

- the greatest number of individuals an area can support indefinitely

Limits of Tolerance

- Law of the Minimum: the nutrient in least supply will be the one that limits growth
- Law of Tolerance: an organism can survive within a certain range of an abiotic factor

Factors Related to Population Density

- Density Independent Factors: factors that affect the population that do not depend on how dense or spread out the population is; Ex. Fire or flood
- Density dependent Factors: factors that affect the population because of its size; Ex. disease, food

