Succession

- Succession is the change in structure and species composition over time
- Species diversity increases over time
- New species will outcompete existing species until a stable community, climax community, is established.
- Climax Community: A stable, self-perpetuating community that has reached equilibrium with its environment, and no further change occurs.

Example of Sere (Sequence of Community)

Bare Rock -> Lichen -> Mosses -> Grasses and Herbaceous Plants -> Shrubs -> Trees
Lichen - Pioneer Species: First species to colonise a new area in an ecological succession
Trees - Climax Community: A stable, *self-perpetuating* community that has reached equilibrium with its environment, and no further change occurs.

Definition

Primary Succession - The change in structure and species composition of a community over time in an area not previously colonised by a community.
Secondary Succession - The change in a community following the disturbance or damage to a colonised habitat.

- Secondary Succession is quicker than Primary Succession

Factors Affecting Succession

Migration

- Arrival of new species
- Immigrating non-native species would alter the community and soil

Competition

- Organism compete for survival
- Plant: Light, water, space nutrients
- Animals: Food and shelter

1. Intraspecific Competition

- Density Dependent -> ⬆️Population -> ⬆️Competition
- Denser Environment: Greater proportion to fail for survival
- Organism produce more offspring than the habitat which can be supported

2. Interspecific Competition

- Competition between individuals of different species
- Different species will have their unique optimal conditions and different niche (role within ecosystem)
- One will have advantage and will survive
- Example: Grasses outcompete mosses

Facilitation

- Symbiosis
- Facilitation increase significant of succession

1. Mutualism

- Two species which both derive a benefit
- Ex: Bird clean off parasite from back of deer

2. Commensalism

- One species benefits but the organism is not species
- Example: Squirrel live in oak tree
- Example 2: 'Nurse plants', plants that make a canopy (shelter) that protects individuals from other species