

## Succession

- Ecosystems and organisms continuously change and respond to changes in the environment.
- Some changes happen suddenly and quickly.
  - Catastrophic natural disasters
  - Examples— hurricanes destroying vegetation; lightning starting a forest fire; volcano
- Most changes are gradual
- Succession —The slow development or replacement of an ecological community by another ecological community over time
  - Examples— eutrophication; seasonal and long-term changes in climate
- Primary Succession occurs where the area is totally devoid of vegetation such as places devastated by volcanic activity or glaciations.
  - The first batches of organisms that establish themselves in that environment are called pioneer species.
    - Typical examples of primary succession are species such as lichens and algae. They form the base line for other species to sprout up and grow in the area.
- Secondary Succession happens to areas that have been disturbed but that still have soil. This type of succession is forced because the previous population was wiped out due to factors such as sudden steep changes in the climate such as a flood or drought or fire.
  - Due to these factors the area lost the living matter, but the soil is still intact enough to sustain living matter and the original community may regrow through a series of stages called secondary succession.
- Succession can happen over decades or hundreds of years.
- Producers form first, followed by decomposers and consumers.
- Eventually, a balanced, stable ecosystem will exist.
- Climax species — well-adapted species that will dominate a community as it matures
- Once climax species are established, the resources can support many different kinds of organisms.
- Biodiversity — the number and variety of species that are present in an area
  - A more diverse ecosystem is more stable and less likely to be destroyed by sudden changes