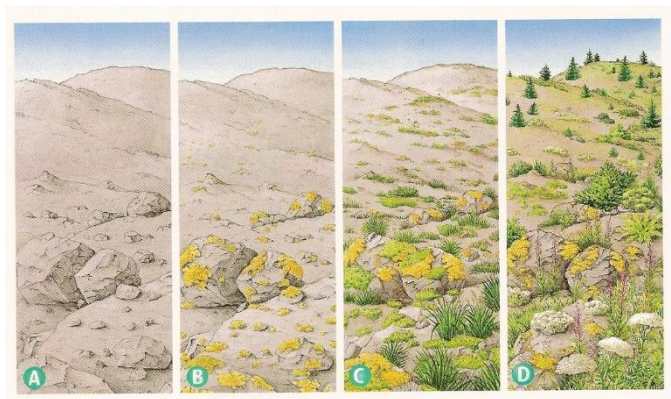
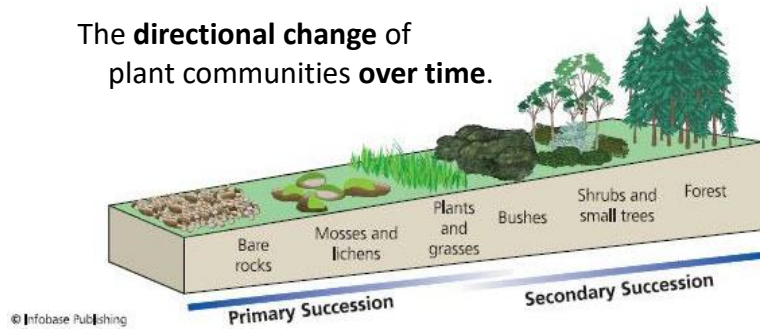


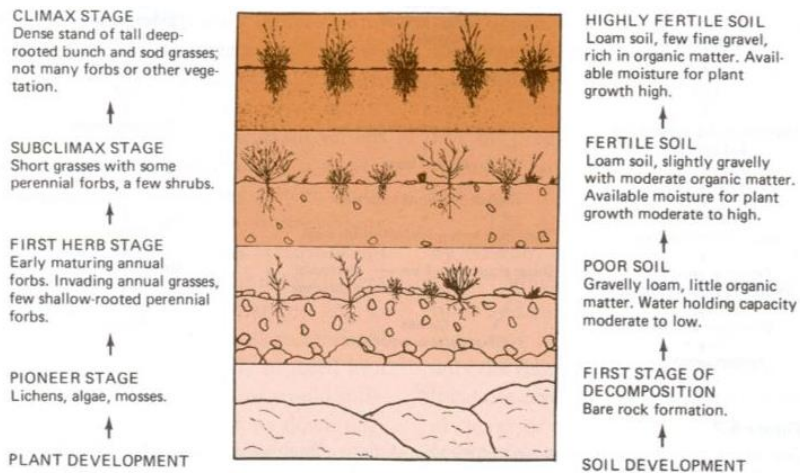
Rangeland Succession

Rangeland Principles (REM 151) - Note guide

The **directional change** of plant communities **over time**.



Seral Stage: distinct community type within the sequence of succession.



The end-point of succession = Climax or **Potential Natural Community**

A stable group of plants and animals that is the end result of the succession process:

- Trees in forests
- Grasses in prairies
- Cacti in deserts
- Lichens and shrubs in the tundra

The end-point depends on climate and soils

Would the following events on rangeland lead to *primary* or *secondary* succession?

1. A prescribed fire to reduce juniper trees: _____
2. An erosion event that removes all the soil and leaves bedrock: _____
3. Overgrazing by elk and cattle on canyon grasslands: _____
4. A restoration practice where the land managers sprayed cheatgrass with herbicide and reseeded with perennial grasses: _____

Basic Ideas of Succession:

- The simple plants die, adding more organic matter.
- The soil layer thickens, and grasses, wildflowers, and other plants begin to grow.
- These plants die, and they add more nutrients to the soil.
- Shrubs and trees can then survive.
- Insects, small birds, and mammals begin to inhabit.

Forces of Ecosystem Change

- **Immigration** and **establishment** of plants.
- **Competition** between plants.
- **Site Modifications** (add organic matter, change available moisture and nutrients)
- **Stabilization** (reduce yearly variation in kind and amount of plants and animals).

Important Concepts of Succession

- Ecological Sites
 - The product of all the environmental factors that influence the development of soils and vegetation, including disturbance
- Community Resilience
 - The ability of a plant community to return to prior composition and structure after a disturbance
- Community Resistance
 - The plant community's ability to avoid being changed following disturbance

