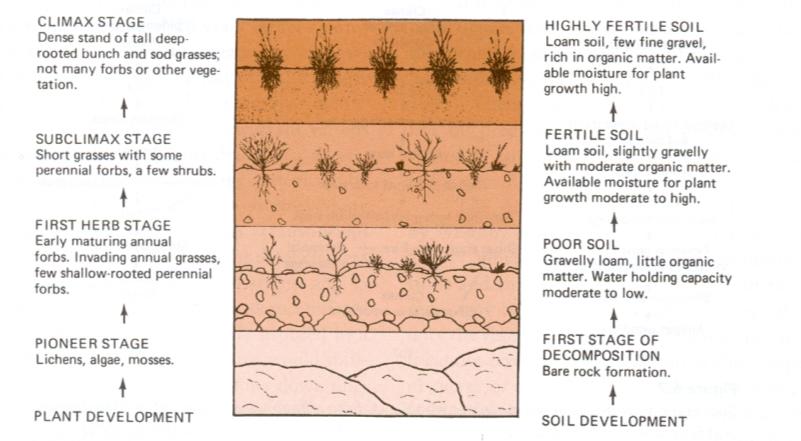
**Rangeland Succession**

* **Succession** 
  + The orderly change of plant communities over time.
  + The gradual replacement of one plant community by another through natural processes over time
    - Primary = From parent material
    - Secondary = With soil in place
* **Primary Succession**
  + Soil and plants evolve together



* **Primary Succession**
  + Begins in a place without any soil
    - Sides of volcanoes
    - Landslides
    - Flooding
  + Starts with the arrival of living things such as lichens that do not need soil to survive
    - Called **PIONEER SPECIES**
  + Soil starts to form as lichens and the forces of weather and erosion help break down rocks into smaller pieces
  + When lichens die, they decompose, adding small amounts of organic matter to the rock to make soil
* **Secondary Succession**
  + Begins in a place that already has soil and was once the home of living organisms
  + Occurs faster and has different pioneer species than primary succession
  + Example: after forest fires
    - Others?
* **Basic idea of Succession** 
  + The simple plants die, adding more organic matter.
  + The soil layer thickens, and grasses, wildflowers, and other plants begin to grow (annuals & herbaceous).
  + These plants die, and they add more nutrients to the soil.
  + Shrubs and tress can then survive.
  + Insects, small birds, and mammals begin to inhabit.

\*\* What was once bare rock now supports a variety of life.

\*\* We manage forces that cause these changes.

* **Forces of Ecosystem Change**
  + Immigration and establishment of plants
  + Competition between plants
  + Site modification
    - Add organic matter
    - Change available moisture and nutrients
  + Stabilization
    - Reduced yearly variation in kind and amount of plants and animals.
* **Climax Community**
  + The end point of succession = Climax
  + A stable group of plants and animals that is the end result of the successionprocess
    - Trees in forests
    - Grasses in prairies
    - Cacti in deserts
    - Lichens and shrubs in the tundra
  + The end point depends on climate