2.3.5a Succession

Succession is usually described as the orderly succession of communities to a climax community (biome) or as a sequence of communities (a sere) with each transitory community as a seral stage.

For example, in Southern Ontario, a simple description of a sere that would develop on an abandoned field might be:

grass -> shrubs -> trees -> maple-beech ->hemlock forest

In this sere, the grass is the pioneer community and the maple-beech -hemlock forest is the climax community. Each step in the sere (grass, shrubs, trees, maple-beech -hemlock forest) is individually known as a seral stage.

2.3.5b Primary and Secondary Succession

Primary succession which begins with bare rock exposed by geologic activity
Sample sere:
rock -> lichen -> moss -> grass -> shrub -> trees -> maple-beech -hemlock forest

Secondary succession begins on soil from which a previous community has been removed (by fire, agriculture, etc.)

old field succession
Sample sere:
grass -> shrub -> trees -> maple-beech ->hemlock forest

Secondary succession can proceed much faster because the soil has already been prepared by the previous community.

2.3.5c Comparison of Pioneer and Climax stages in Succession

Pioneer Community	Climax Community
Unfavorable environment	favorable environment
biomass increases quickly	biomass stable
Energy consumption inefficient	energy consumption efficient
some nutrient loss	Nutrient cycling and recycling
r - strategists	K - strategists
low species diversity, habitat diversity, genetic diversity	high species diversity, habitat diversity, genetic diversity