

Principles of Ecological Science

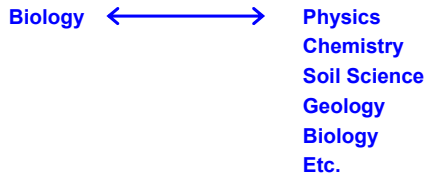
1. What is Ecology? January 14, 2008
2. The Environment
3. Environmental Factors
4. Difficult Conditions
5. Disturbance & Change
6. Principles of Biodiversity
7. Important Species

What is Ecology?

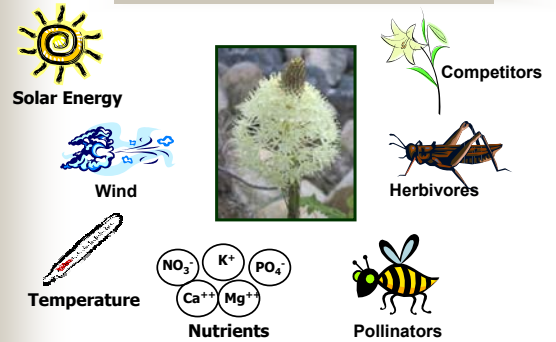
- Logos (G) –
- Oikos (G) –

ECOLOGY

The study of organisms in relation to their environment

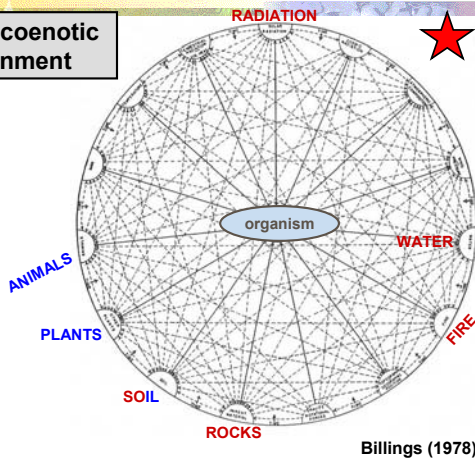


Environmental "Factors"

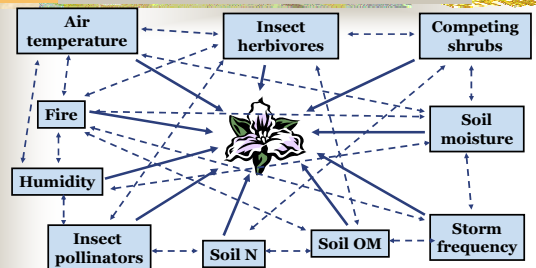


The Holocoenotic Environment

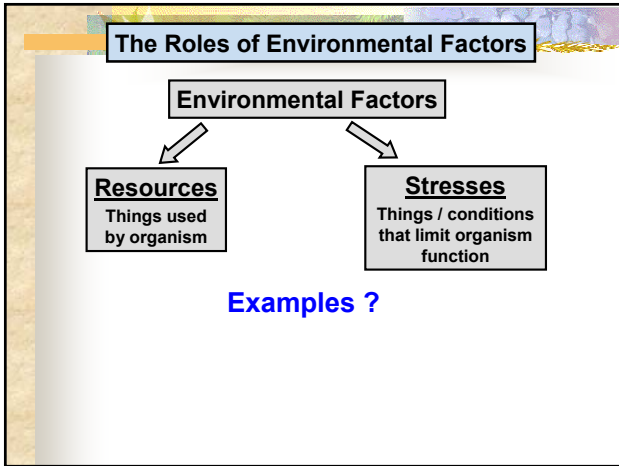
- 1.
- 2.



The Holocoenotic Environment





Multiple Factors impact organisms simultaneously
 These factors interact complexly








Difficult Conditions

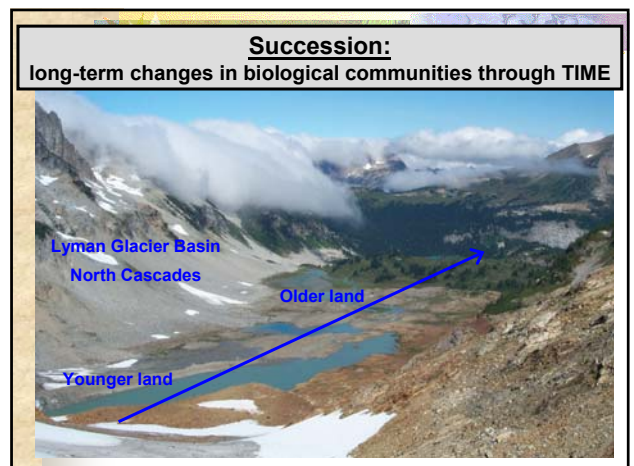
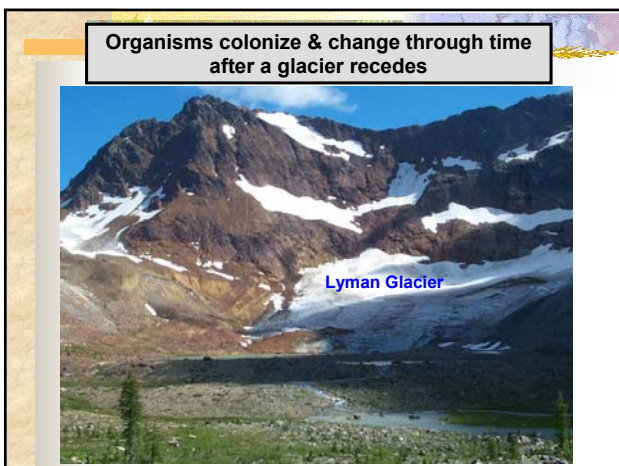
Conditions that reduce numbers, biomass, growth, reproduction, or other functions of organisms

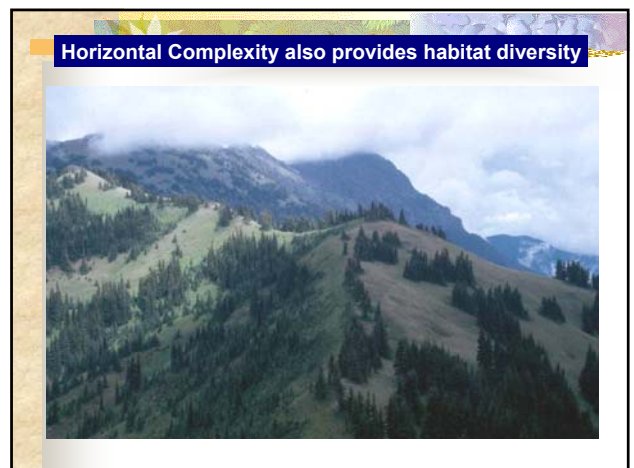
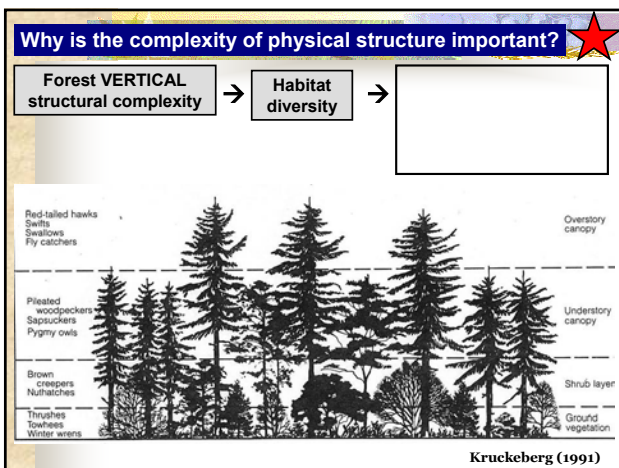
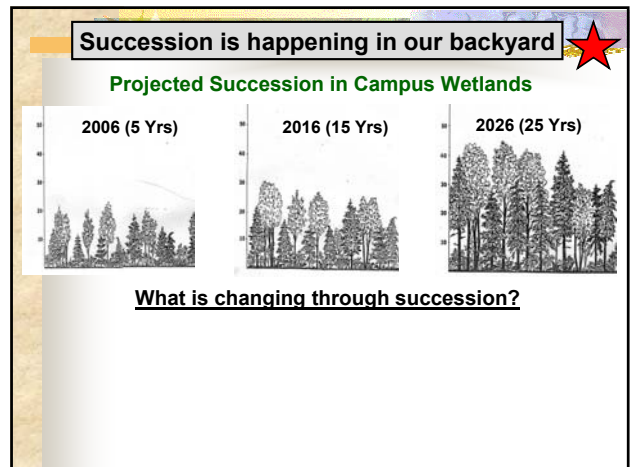
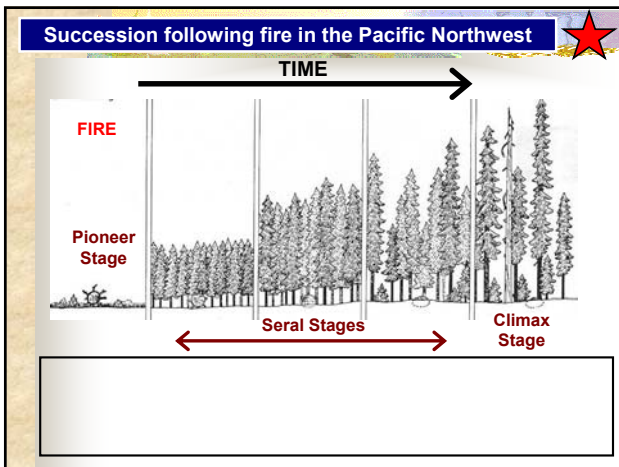
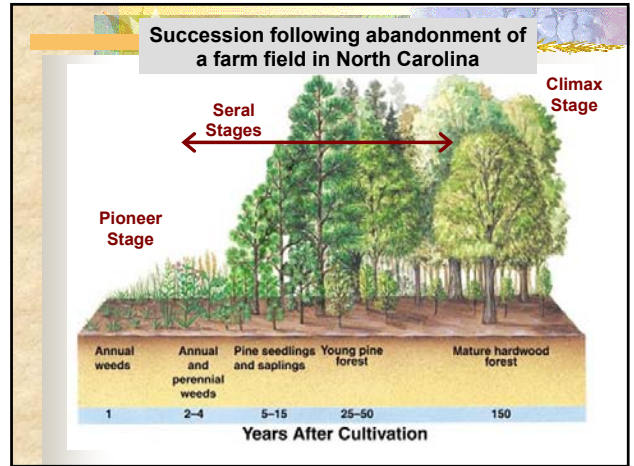
- Stress**

- Disturbance**


Disturbances change biological composition


The process of recovery after disturbance is called "Succession"

- Fire**

- Flood**

- Humans**

- Volcanoes**

- Wind**




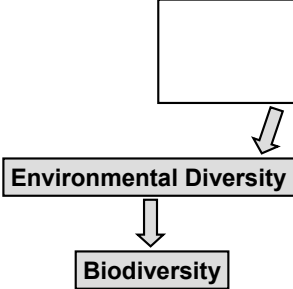


Biodiversity



What underlies biological diversity ?


Some Keys to Biodiversity ★



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graph TD
    A[ ] --> B[Environmental Diversity]
    B --> C[Biodiversity]
  
```

Glacial disturbance fosters different communities (of varying ages)

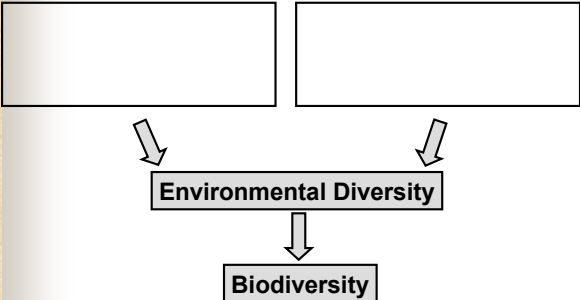


300 years
150 years
80 years

Falling trees (disturbance) create light gaps – fostering diversity



Some Keys to Biodiversity ★



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graph TD
    A[ ] --> B[Environmental Diversity]
    C[ ] --> B
    B --> D[Biodiversity]
  
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