

Ch. 21-3

# SUCCESSION





# DEFINITION

- A community change in which new populations of organisms gradually replace existing ones
  - Predictable
  - Orderly



# INTERMEDIATE COMMUNITIES

- A.k.a. SERAL COMMUNITIES
  - Alter the environment
  - Impossible to regenerate itself
  - Example



# CLIMAX COMMUNITY

- Reaches stability
  - Young can regenerate
  - Species diversity
- “Permanent” community
  - Remains constant for a long period of time
- Determined by temperature, soil conditions, rainfall, etc.
- Very complex; may be regularly “reset”



# PRIMARY SUCCESSION

- Begins in areas where there is no existing plant life (barren area)
  - Bare rock
  - Lava flow
  - Sand dune
  - Glacier lake



# Succession continues from there

- Soil formation
- Grasses
- Shrubs
- Trees
- Example
  - Lake to forest
  - Sand dune to forest
  - 500-10,000 yrs.



# SECONDARY SUCCESSION

- Occurs where there was once life
- Disrupted
  - Natural disasters
    - Fire
    - Flood
    - Volcano
  - Man
- Typically takes about 100 years total



# PIONEER SPECIES

- First organisms to inhabit an area
- Tend to be small, fast growing & fast reproducing
- ~~Examples depend on whether it's primary or secondary succession (see next slide)~~



# Pioneer Species

## Primary versus Secondary



### ■ Examples

- Lichens- dissolve rock
- Bacteria
- Algae
- Fungi spores
- Protists



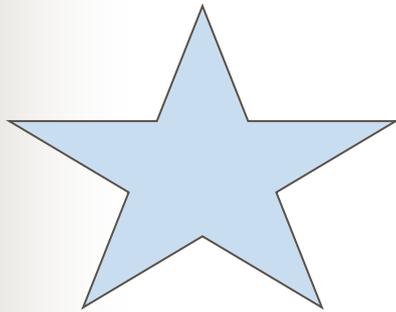
### ■ Examples

- Grasses
- Weeds



# Mt. Saint Helens

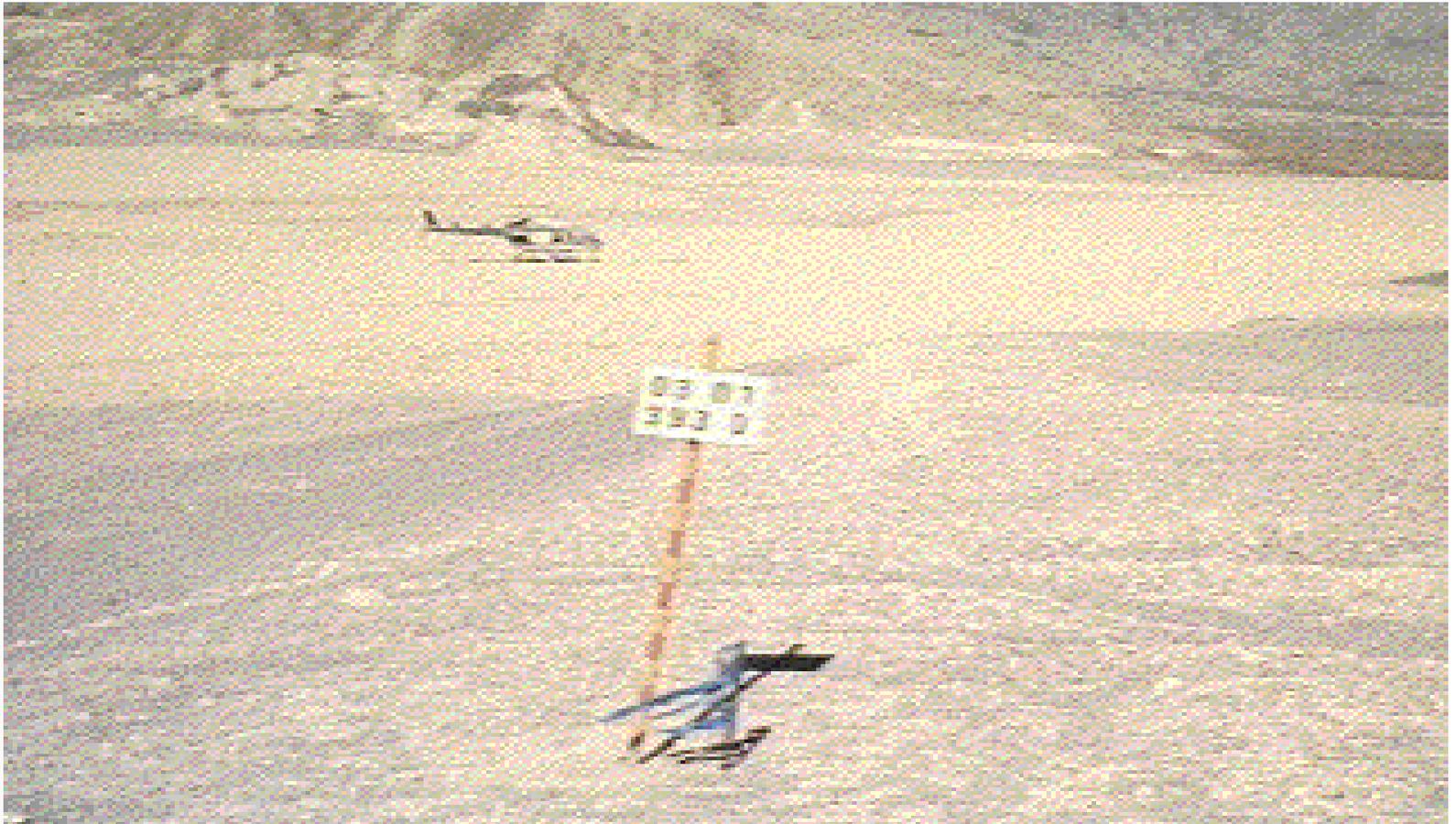
- Eruption in May 18, 1980
- Ancient firs, cedars and hemlocks
- Wildlife was abundant



# Spirit Lake Basin 1979



Same place in 1980; scoured by debris avalanche- no survivors



# Same place in 1981



# Conifer Plot in 1981



# Same plot in 1987



# Clearwater Riparian in 1981



# Same place in 1982



# Same place in 1983



Same place in 1984



# Same place in 1987









94  
8 S5  
10 E



# FLNA November 2002

Clear-Cut



vs.

Natural  
(Blow-down)



# FLNA September 2004



# Fumee Lake Natural Area

## September 2005

Blow-down



Select cut

