

# Succession

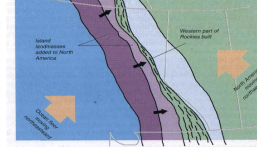
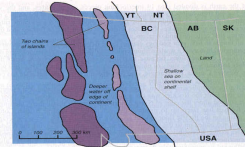
## Succession

- Directional change in community composition or structure over time
- Non-seasonal, continuous pattern of local colonization and extinction by different plant populations

## Definitions

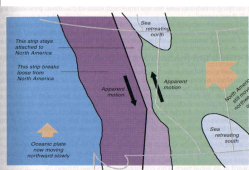
- Sere: unit of succession
- Seral stage: distinct community within sere
- Pioneer community: initial seral stage
- Climax community: final seral stage
- Climax: dynamic equilibrium, stable species composition
- Old growth: complex forest, beyond climax

The building of the Canadian Rockies

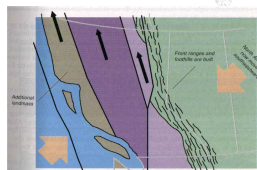


BC and most of AB under a shallow sea, islands off shore, 200 my ago.

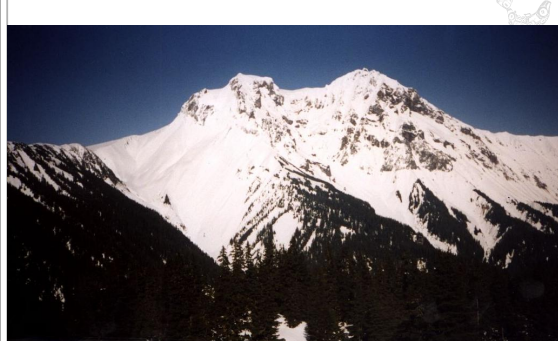
Islands collide with NA continent 175 my ago. Note the inland sea.



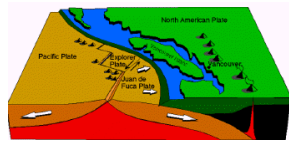
Motion of plates change direction, inland sea retreats. 135 my ago.



Motion of plates change bringing Van. Island, Rockies built. 60 my ago.



Mt. Garibaldi

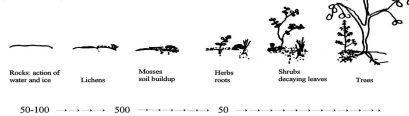


The eruption of Krakatau (1883) in the Sunda Strait between Java and Sumatra was one of the largest in history.

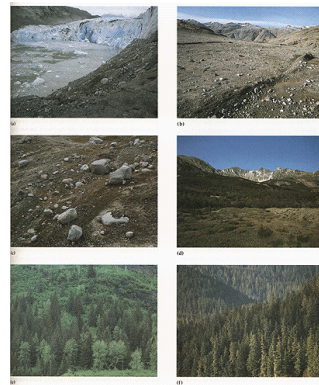
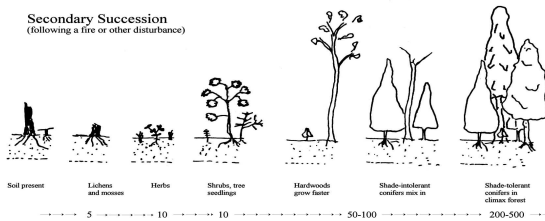
- Two-thirds of the island of Krakatau was blown away.
- Tsunami killed 36,000 people and inundated Java.
- Soundwave heard 5000 km away in Madagascar.
- Tremendous volume of tephra blown up to 50 km high in atmosphere.
- 50 megatons of sulfur dioxide aerosols produced.
- Dust encircled globe creating amazing sunsets, solar halos, and lunar effects for two years.



#### Primary Succession (on bare rock)

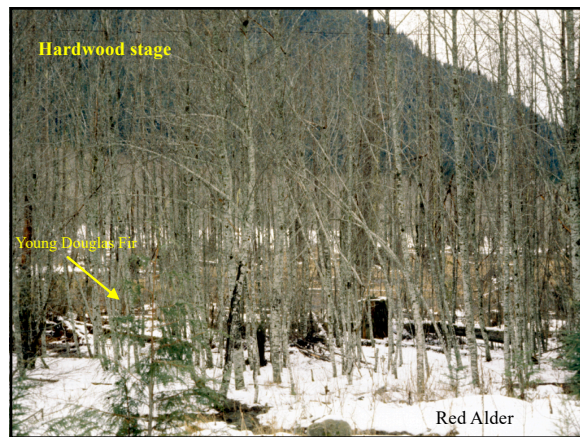
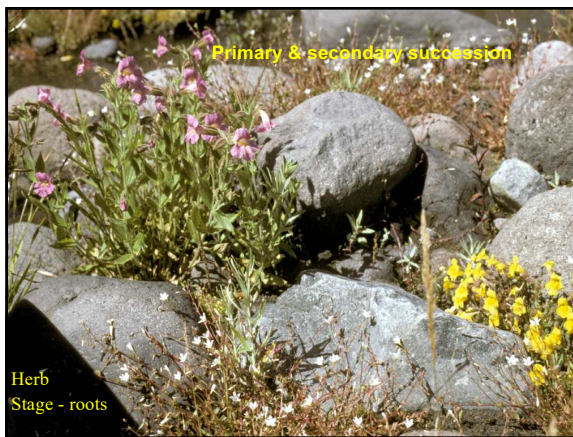
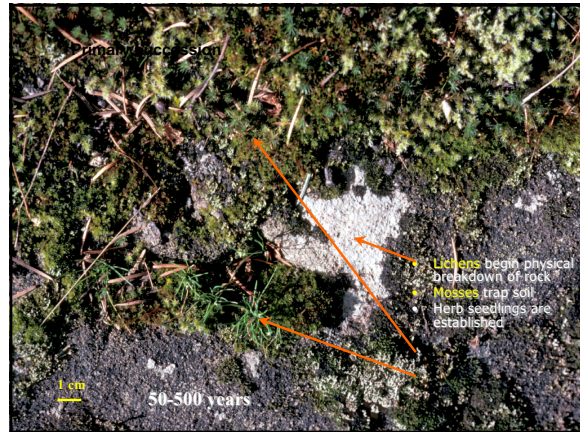


#### Secondary Succession (following a fire or other disturbance)

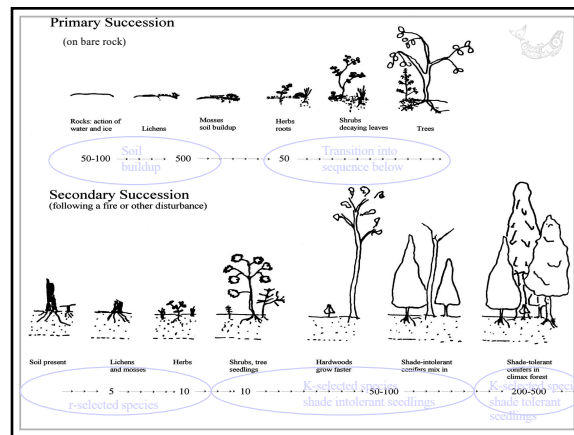
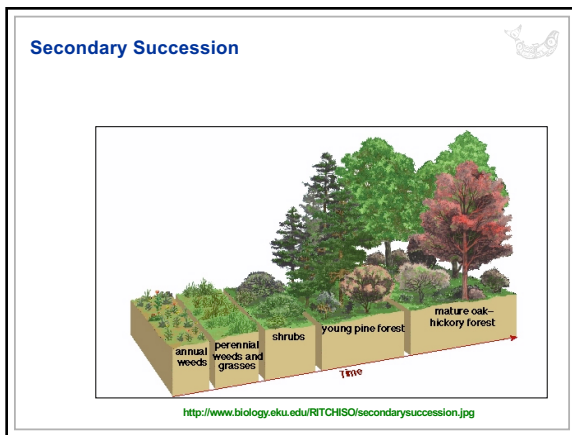
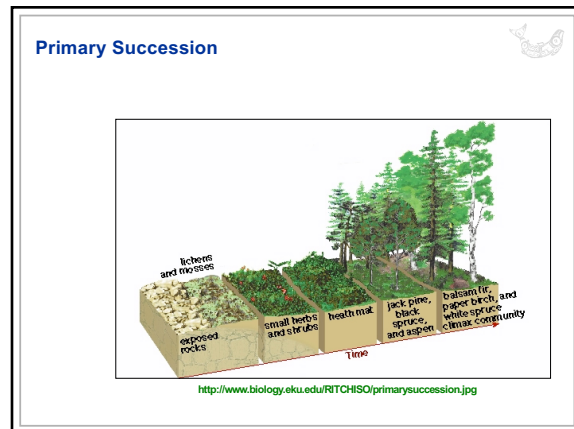


**Primary succession following the retreat of a glacier.**

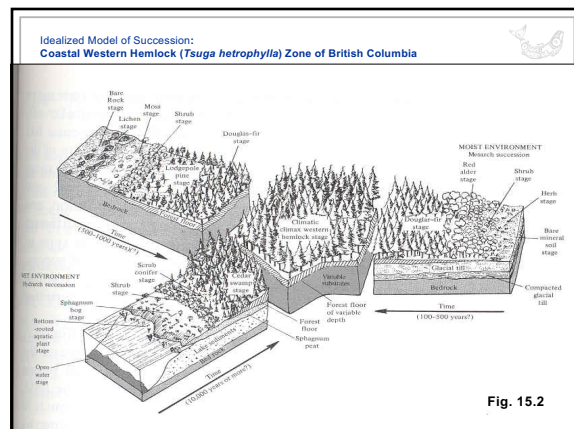








- ### Succession in the CWH
- A typical sequence of species after logging or other disturbance:
    - Fireweed
    - shrubs (esp. *Rubus*)
    - Alder
    - bigleaf maple, Douglas fir
    - cedar and hemlock are climax





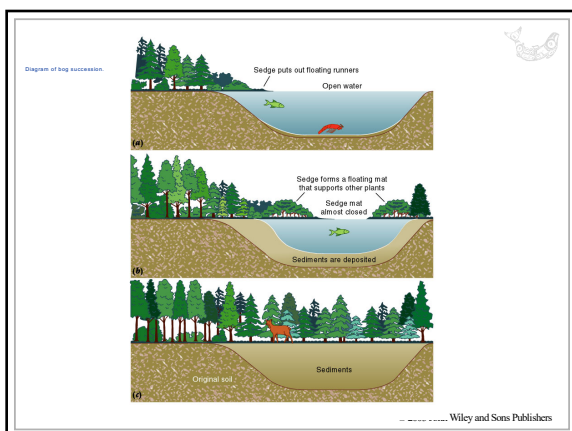
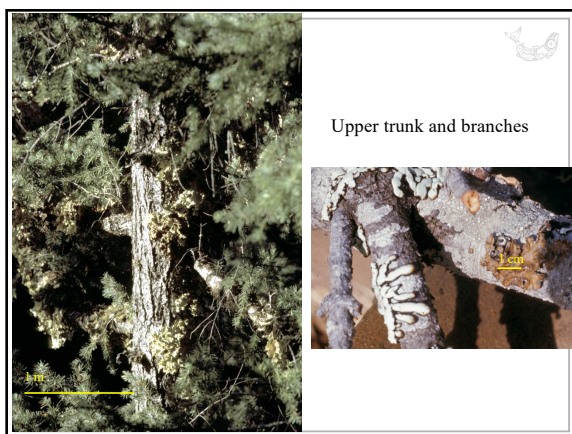
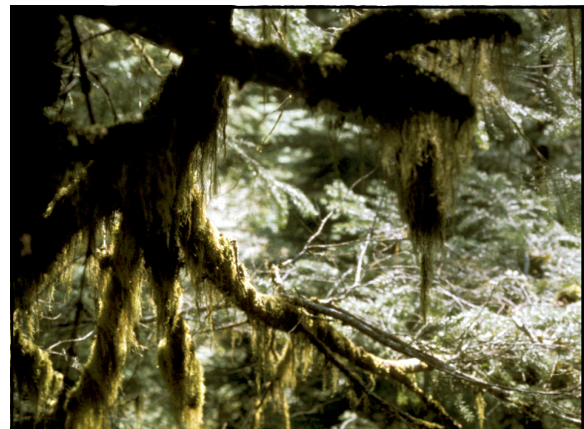
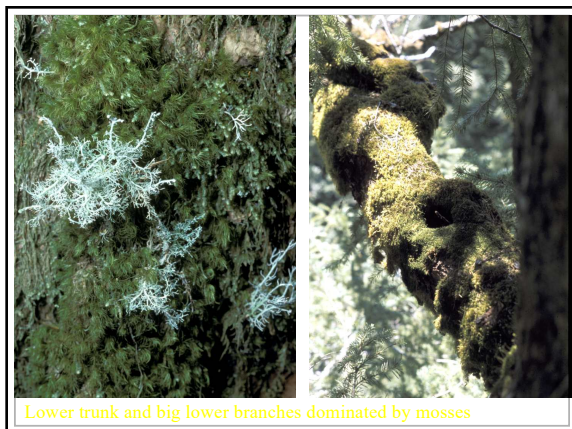




Photo: David Blevins



Shore Pine  
Catkins









# HISTORICAL BOGS OF THE LOWER MAINLAND Map by Rachel Wiersma (June 2003)

