

Equilibrium and Change

Section 3.2



Equilibrium

- The state of an ecosystem with relatively constant conditions.
 - Abiotic conditions are stable
 - Energy flows through the system (food chains)
 - Nutrients are cycled
 - photosynthesis = cellular respiration

Eruption of Krakatoa

- August 27, 1883 – Island off Indonesia
 - Sound wave traveled 4600km
 - Destroyed the island
 - Life returned within 9 months
 - Seeds carried from nearby islands – plants grew
 - Insects and spiders followed, then animals
 - Within 100 years a lush rainforest community was re-established

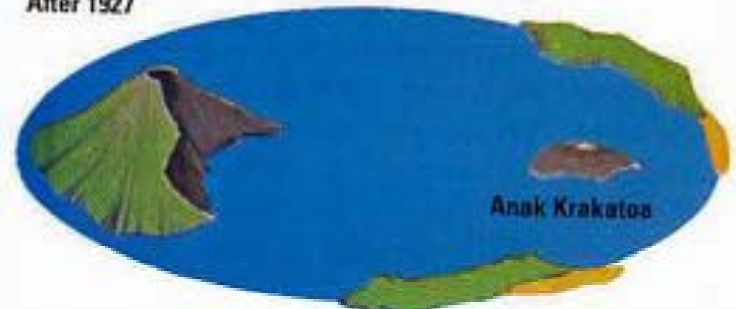
Before 1883



After 1883



After 1927



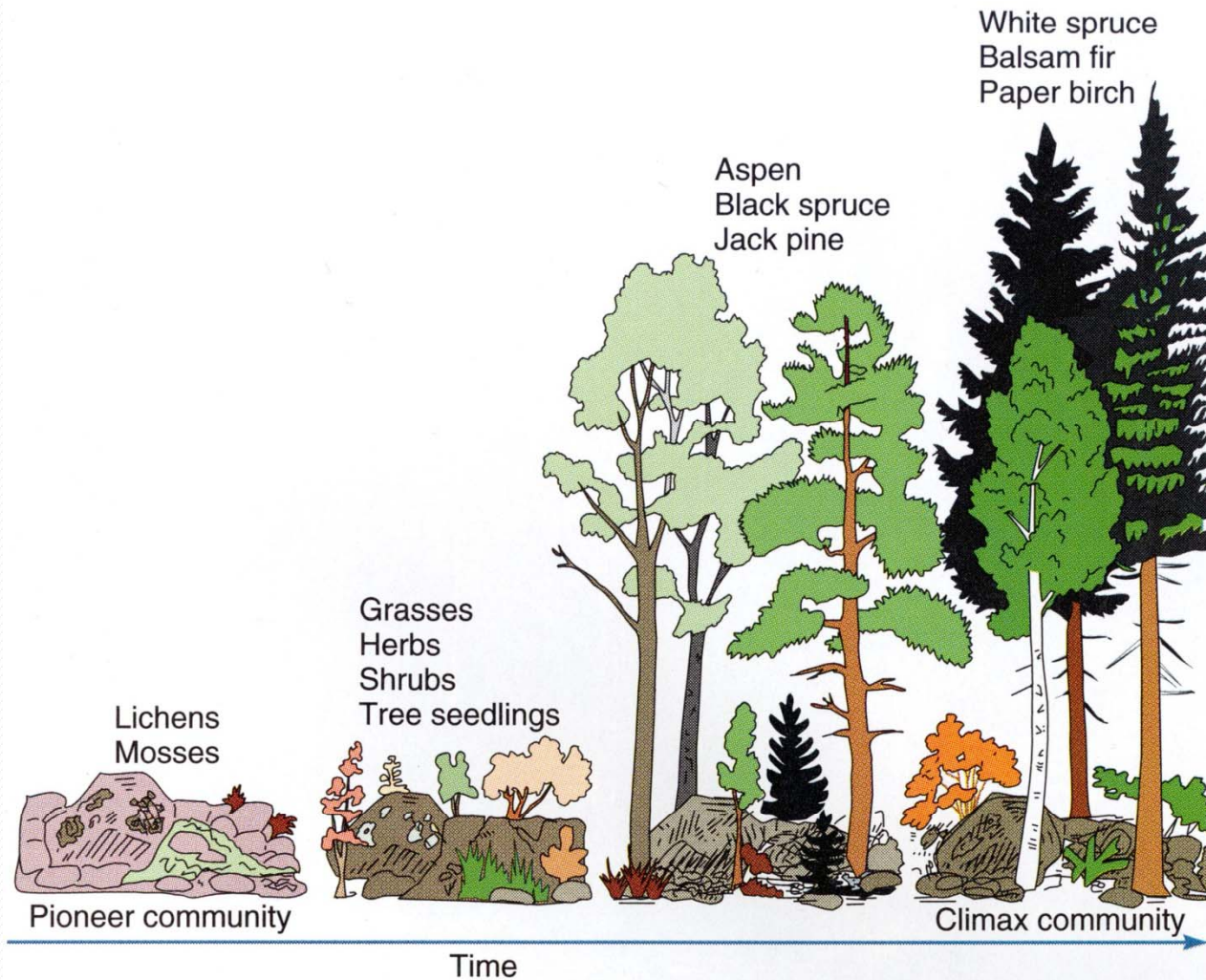
Krakatau before and after the explosion



Ecological Succession

- The gradual and usually predictable changes in the composition of a community and the abiotic following a disturbance.
 - Primary Succession – occurs on soil or bare rock where no life previously existed (i.e. after volcanic eruption)
 - Secondary Succession – succession in a partially disturbed ecosystem (i.e. after a forest fire)

Forest Succession





Succession is a good thing

- Provides a mechanism for ecosystems to maintain long-term sustainability.
- Allows ecosystems to recover from natural or human disturbances

Today's Task

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