

Competition

Logic of competition: must be some limiting resource

Space

Light

Water

Nutrients

Classical Lotka-Volterra equations predict one species per limiting resource

Species that can maintain growth at lowest concentration of limiting resource wins

Many tests using “common garden” experiments

Types of competition

Exploitation

Interference

Allelopathy

Territoriality

Space competition

Predation and Keystone species

Reasons competitive exclusion does not occur

Spatial and temporal variation in habitats

Tradeoffs in life history traits

E.g. you can either invest in roots or leaves, but investing more energy in one reduces the amount available to invest in the other