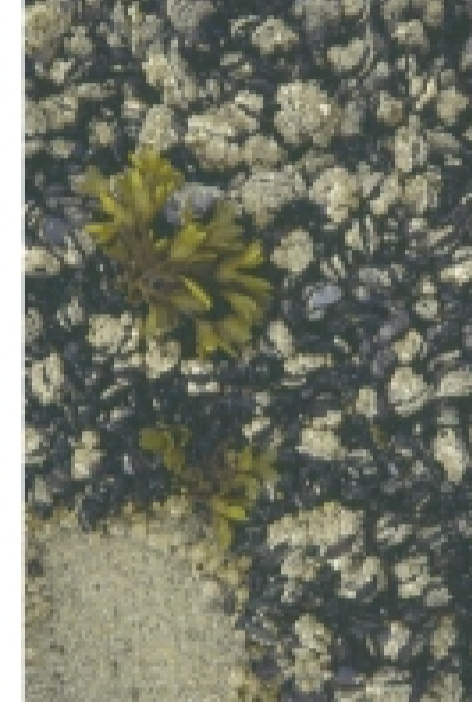


Competition in nature

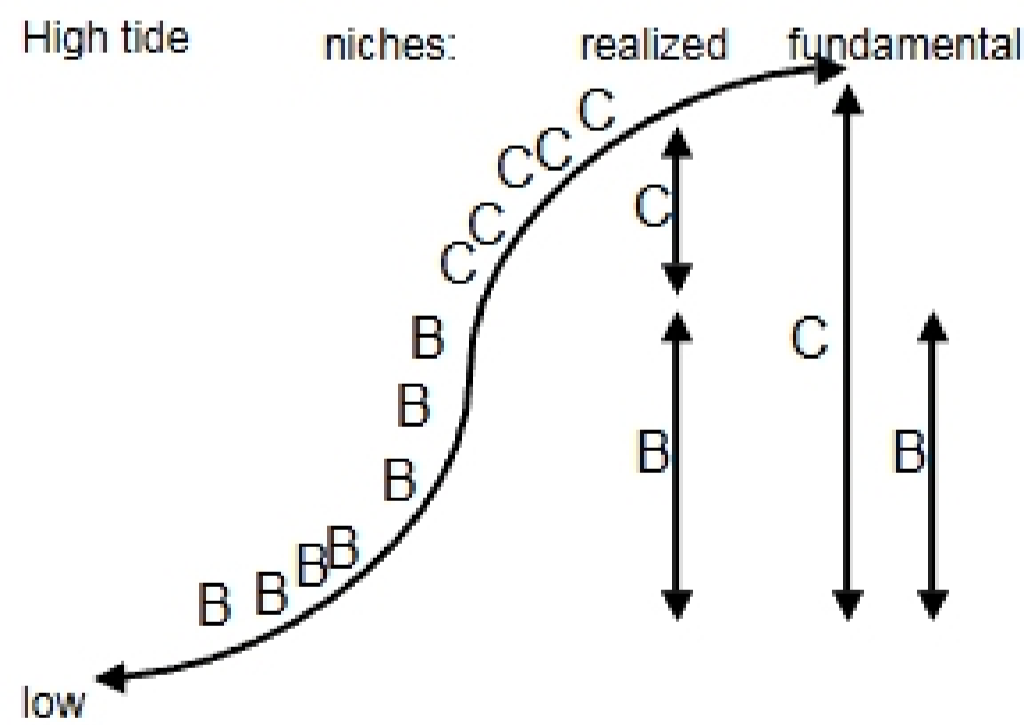


Strong zonation of species
Different niches



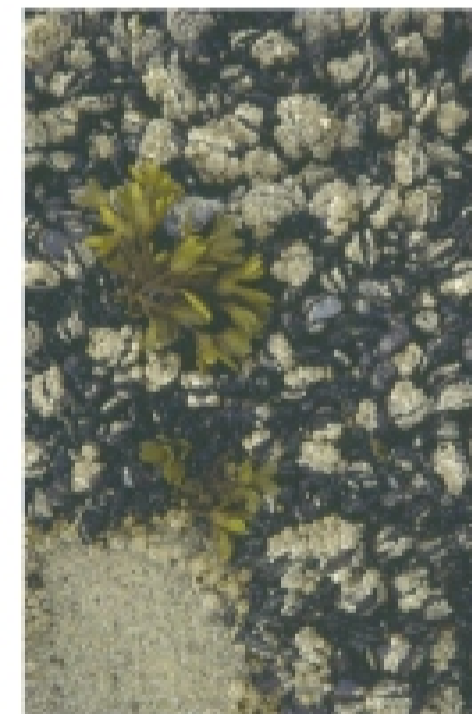
2 barnacles
(Balanus and
Chthamalus)

Competition in nature



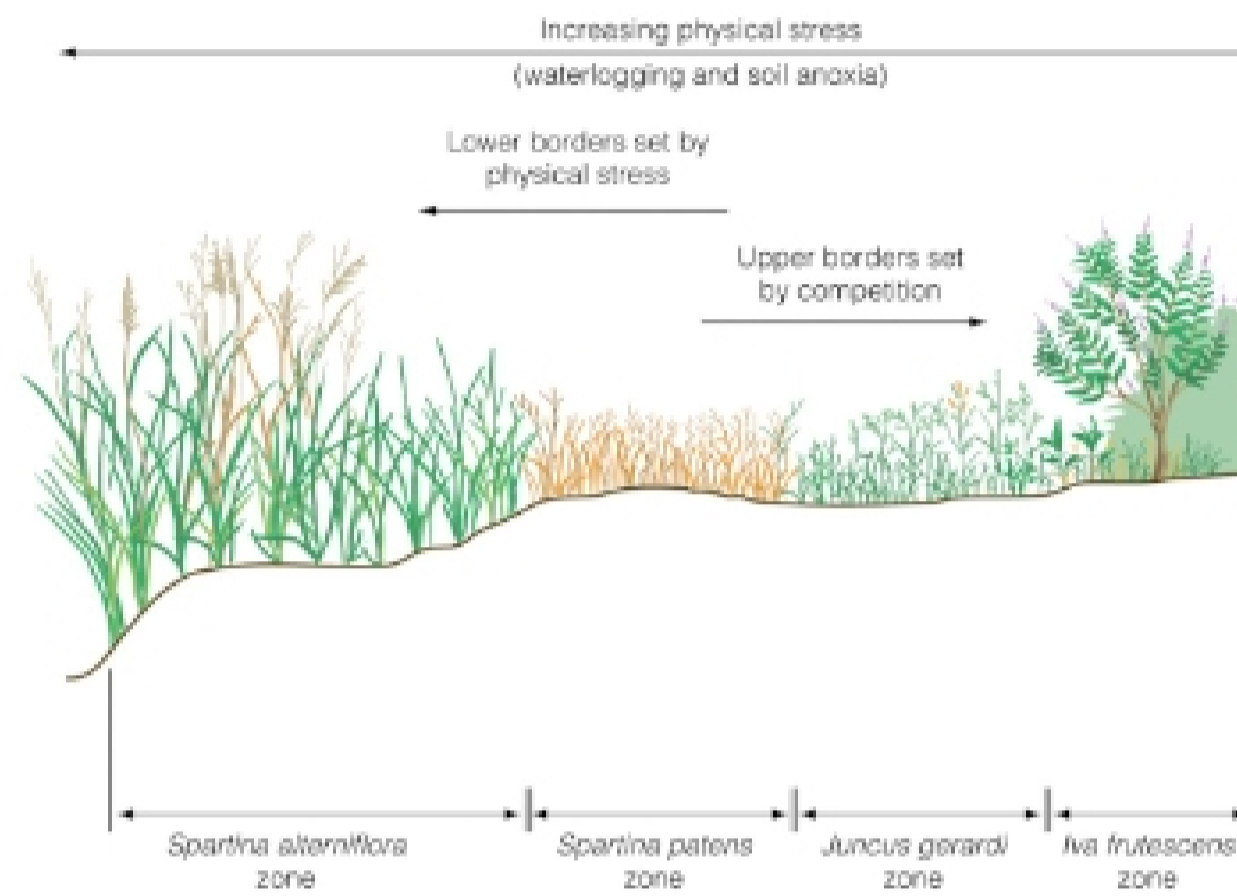
Why zonation?

Fundamental niche: niche in the absence of competitors
Realized niche: niche in the presence of competitors
Competitive release when predators are absent



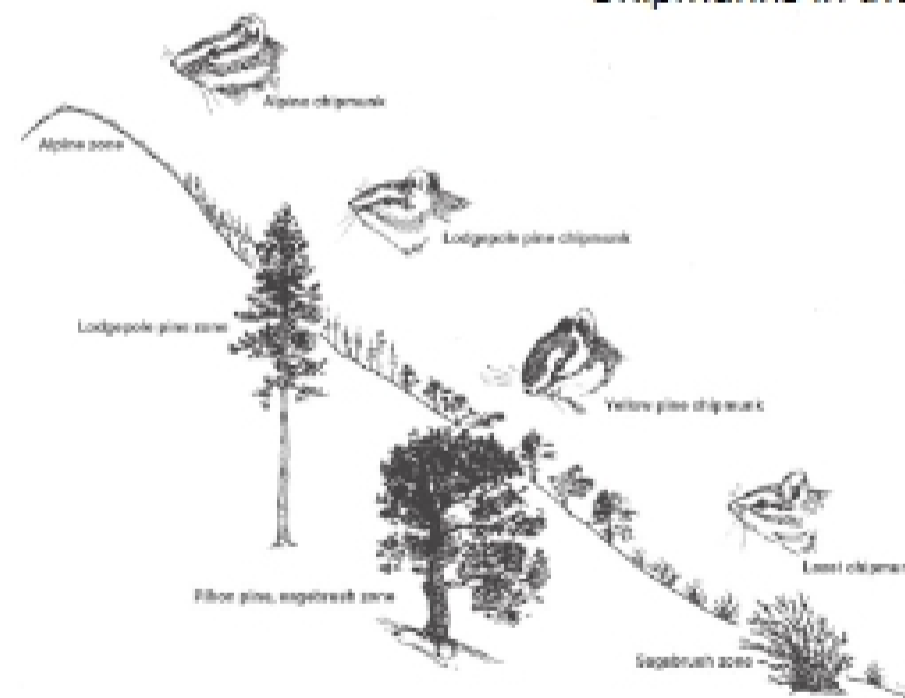
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Competition in nature



Competition in nature

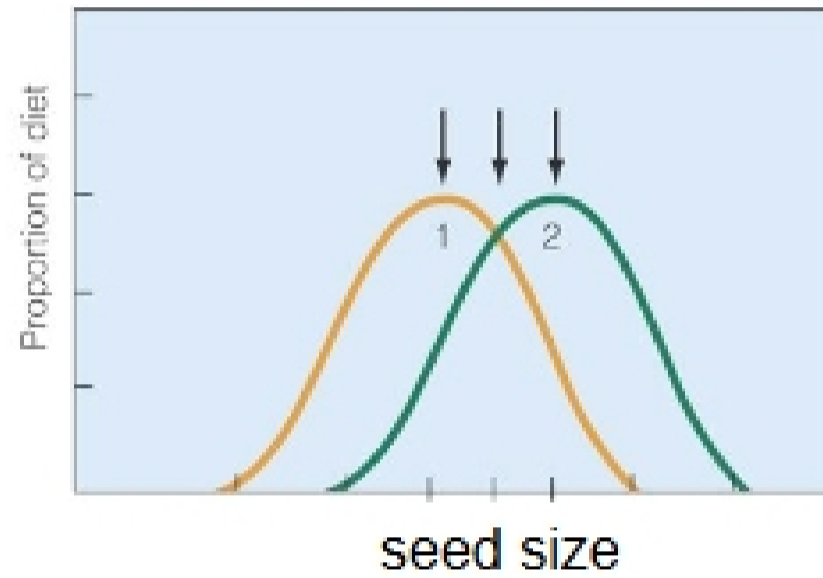
Chipmunks in the Sierra Nevadas



Realized niches are less than fundamental niches due to both interference (aggression) and exploitative (shared resources) competition

Models show us that we can achieve coexistence if intra-specific competition is stronger than inter-specific competition

Implies that two species are not using exactly the same resources
=> niches are different



See drawings on board

Competitive exclusion:

a) completely overlapping niches

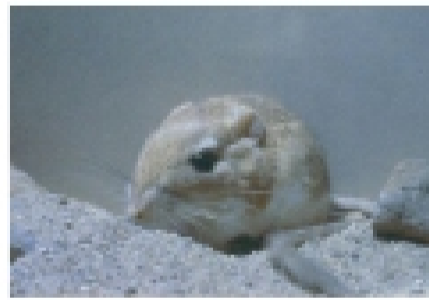
Coexistence:

a) different niches, no competition

b) partially overlapping niches (not too much)

c) included niches, different efficiencies

Evidence for competition in nature : experimental manipulations
research by Davidson and Brown



Pogonomymex barbatus © Alex Wild

