

10/6 Lecture Summary

Species and their relationships

Selection in 2 allele systems cont.

- Selection favoring heterozygotes, can only occur if there is co-dominance
 - The environment determines what is fit
- Natural selection in polygene traits:
 - Directional stabilization
 - Disruptive stabilization
 - Stabilizing stabilization
- 1. Neutralism: Two species don't have relations with each other
- 2. Commensalism: one species gets benefit, other doesn't care (whale+barnacles)
- 3. Amensalism: one species is hurt, one has no benefit
- 4. Mutualism: both organisms benefit
 - Resource-resource relationship (resources are exchanged)
 - Service-resource relationship (services exchanged for resources)
 - Service-service relationship: services are exchanged

Facultative vs. Obligate Mutualism:

- Facultative: partners aren't necessarily dependent on each other
- Obligate: partners are dependent on each other

Interspecific Competition: between species

Intraspecific Competition: between different species

Interspecific:

- Scramble Competition: same resource at diff time
- Contest competition: same resource same time

Competitive exclusion principle: One species will be selective, and other will die

- Co-existence: due to a shared habitat
 - Shifting advantages: due to variables (heat, humidity, etc.)
 - Populations are maintained below competitive level

Keystone Species: a species that plays a critical role in maintaining the structure of an ecological community and whose impact in the community is greatest than would be expected based on its relative abundance or total biomass.

Resource partitioning:

1. Habitat
2. Temporal (day and night)
3. Seasonal

4. Feed type or foraging strategy