
Reproductive Strategies

Sexual vs. asexual

Selfing vs. outcrossing

Sexual vs. Asexual

- Sexual reproduction.
 - Recombination.
 - Reduces genetic load.
 - Breaks up adaptive gene combinations.
 - Economics.
 - Cost of specialized structures (flowers).
 - Unreliable gamete vectors.
 - Dispersal.
 - Colonization of new sites.
 - Maintains the metapopulation.
 - Propagule loss (predators, inappropriate sites).
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Sexual vs. Asexual

- Asexual reproduction.
 - No recombination.
 - Maintains advantageous genetic combinations.
 - Reduced efficiency for purging genetic load.
 - But what about cell lineage competition?
 - Could somatic mutations result in a eunuch?
 - Economics.
 - No specialized structures required for vegetative reproduction.
 - Apomixis
 - Requires flowers
 - Increases dispersal ability.
 - But, appropriate sites may be more limited.
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Selfing vs. Outcrossing

- Outcrossers.
 - Recombination among genotypes allows more experimentation.
 - Combine novel mutations.
 - Faster rate of evolution.
 - Breaks up advantageous gene combinations.
 - Unreliable gamete vectors.
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Selfing vs. Outcrossing

■ Selfers.

- Recombination within genotypes.
 - Allows purging of genetic load.
 - Cell lineage competition.
 - Gametophytic competition.
 - Lineage sorting.
 - Advantageous mutations will be retained.
 - Rare outcrossing events generate new lineages.
 - Slower rates of evolution.
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