

10/8 Lecture summary

Competition

Intraspecific Competition: comp between individuals of the same species for the same resource.

1. Competition for individual survival (food, space, light, water, etc.)
2. Competition for reproductive success → sexual selection (comp with same sex for mate)

Male Competition:

- Male fighting
- Threat displays (this leads to sexual dimorphism)
- Sexual Dimorphism: When male look diff than females
- Also, sperm competition (# of sperm), sperm removal
- Guarding females

Female Choice:

- Choose for traits with potential for reproductive success (health wealth power)
- Males are less discriminating than females (males have lower investment in reproduction)
- Notice traits w/o apparent survival value (peacocks), this causes runaway selection
- Runaway selection: Females choose males with fancy tails → son gets the fancy tail too → daughter tends to select mate with fancy tail → repeat

How are these preferences developed?

- Some are learned
- Some genetic (seagulls, fish with longer tails)

Intraspecific Cooperation:

- Why??
- Food
- Avoid preds
- Build shelter
- Care giving, etc.

Kin selection: nat selection that favors traits that increase survival or reproduction for the individuals in the kin, even it comes from self-sacrifice

Inclusive Fitness: sum of the reproductive success of individuals sharing a genotype (father mother son...)

Individual Fitness: # of individuals or offspring