

Next 5 Sessions:

- Chapters 6 – 9
- Working in groups of ~4
- Short quizzes on reading material
- Small “project” due on Oct. 1

Right now:

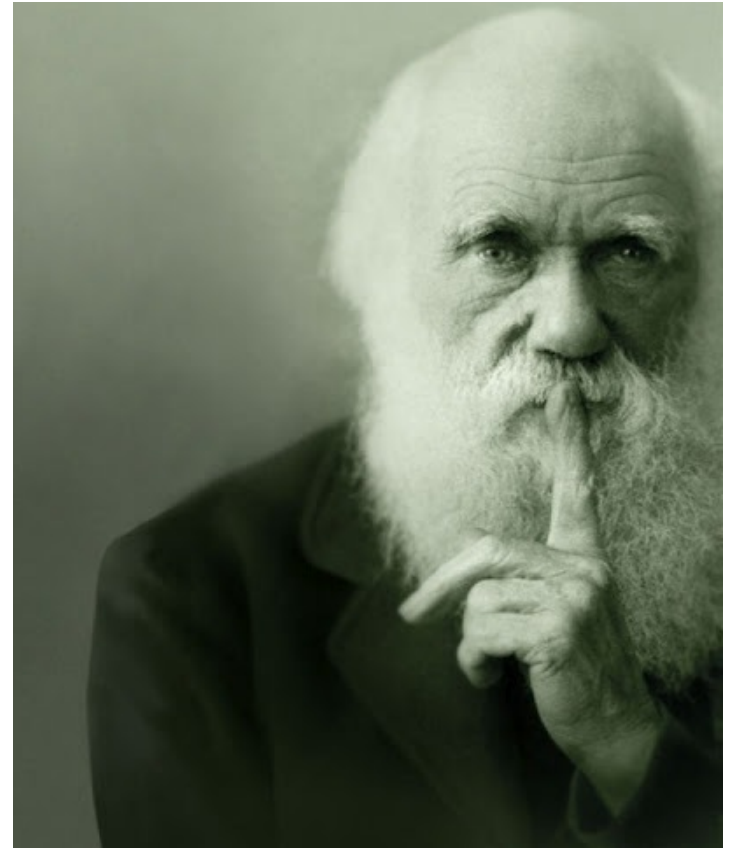
Pull out a piece of paper and answer:

“The factors that influence evolution are ...”

Turn the paper over when you're finished

Evolution in Large Populations

- What is evolution?



Evolution in Large Populations

- What is evolution?
- What causes evolution?

Evolution in Large Populations

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- What causes evolution?
- What effect does evolution have on a species?

Evolution in Large Populations

- What is evolution?
- What causes evolution?
- What effect does evolution have on a species?
 - What about the species changes?
 - Can we see this happening? Examples?

Factors Influencing Evolution

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- Natural Selection
- Mutation
- Migration
- Genetic Drift

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- Natural Selection
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Does the size of the population matter?

Worksheet Activity ONE

- Work through the activity as a group
- Take notes for yourself
- Create one copy to turn in
- ****Don't eat them ... yet****



Are all M&Ms created equal?

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- Are all new alleles equally advantageous?

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- Are all new alleles equally advantageous?
 - NO! Many are disadvantageous if not lethal.



Are all M&Ms created equal?

- In a population with variation do all alleles contribute equally?

Are all M&Ms created equal?

- In a population with variation do all alleles contribute equally?
 - NO! Some are dominant or recessive.
 - What does that mean

Are all M&Ms created equal?

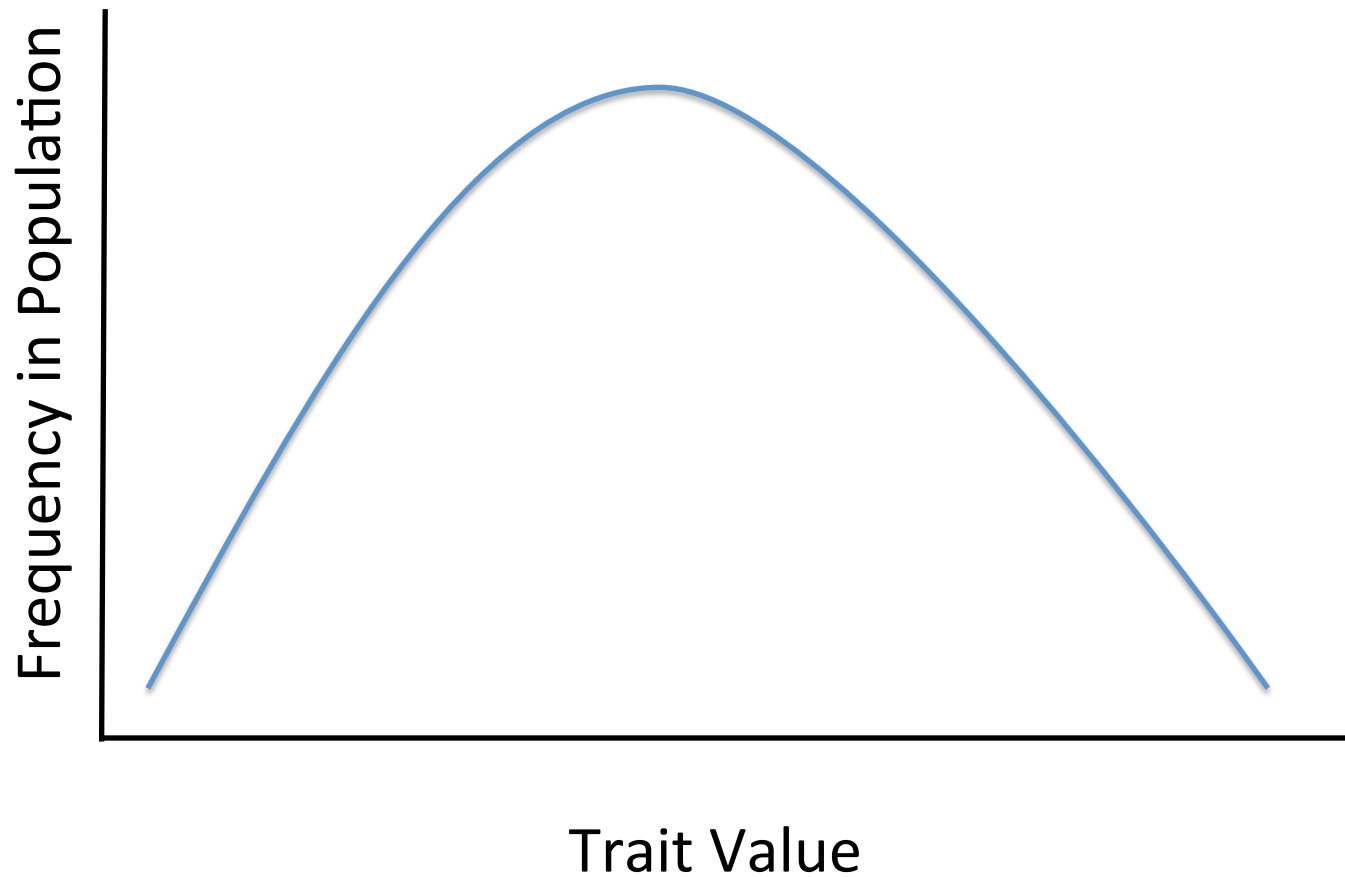
- In a population with variation do all alleles contribute equally?
 - NO! Some are dominant or recessive.
 - What does that mean
- Let's draw it out

- Are there always two alleles?

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- Is a trait always black/white, short/tall?

- Are there always two alleles?
- Is a trait always black/white, short/tall?
 - No, there are also quantitative traits. So, let's talk about them.

Evolution of Quantitative Traits



Worksheet Activity TWO

- Same routine as before
- ****Don't eat the paper ... seriously****

Real life examples

- Directional Selection

Real life examples

- Directional Selection – Salmon Migration

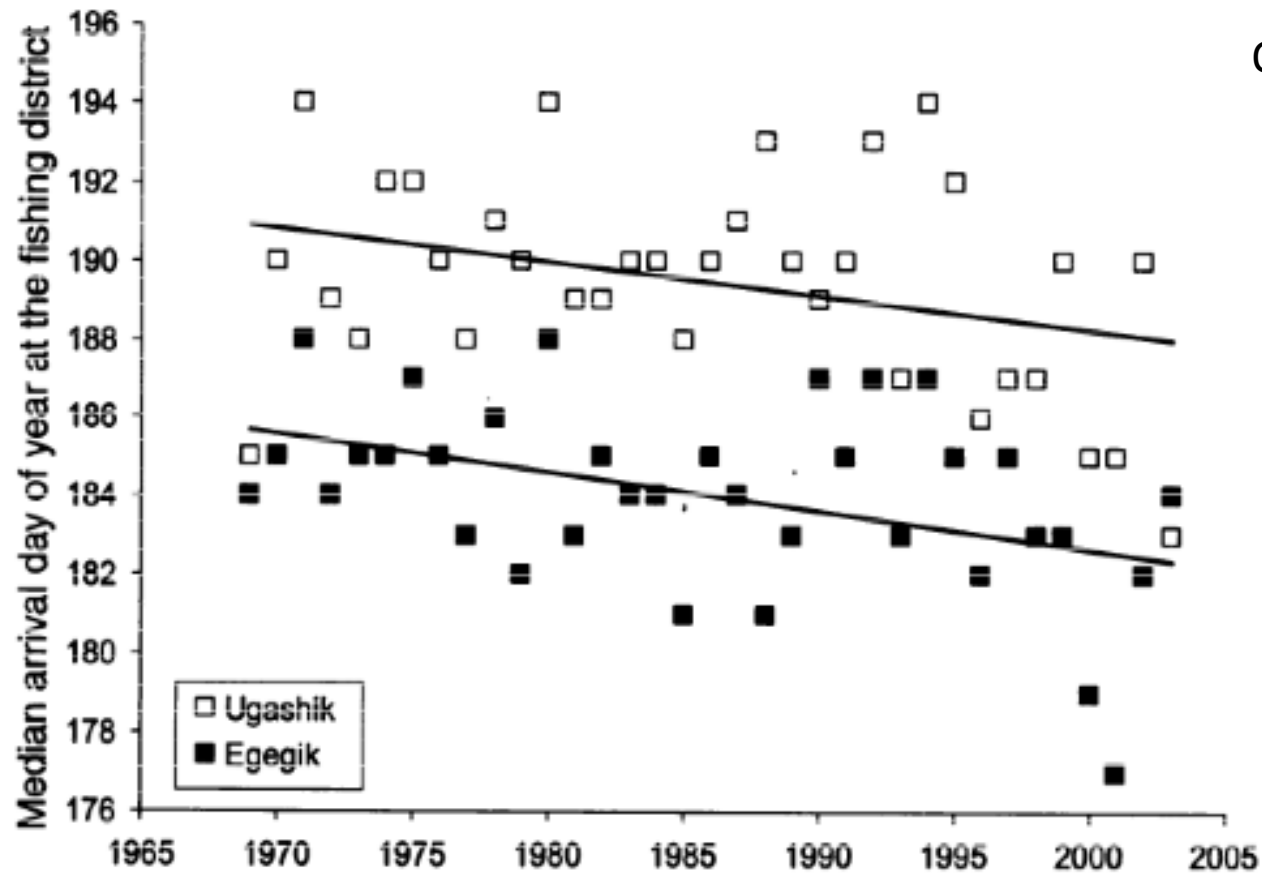


FIG. 5. Temporal trends in the median arrival date of sockeye salmon to the Egegik and Ugashik fishing districts. Day 1 of the year is 1 January.

Real life examples

- Disruptive Selection

Real life examples

- Disruptive Selection - Dwarf Spider
Oedothorax gibbosus



Vanacker et al 2003

Real life examples

- Stabilizing Selection

Real life examples

- Stabilizing Selection – Arabian Oryx



Marshall & Spalton 2006

Home Work

- Read Chapter 7 – there will be a quiz
- Group Project
 - Pick a paper that demonstrates the evolutionary force I assign to your group.
 - As a group, write a summary AND prepare a presentation that will guide the class in discussing your paper for exactly 15 minutes on Oct 1st