

UNIT 4: Life history

Outline

Introduction

Tradeoffs

The r vs. K metaphor

Bet hedging

Sex ratios

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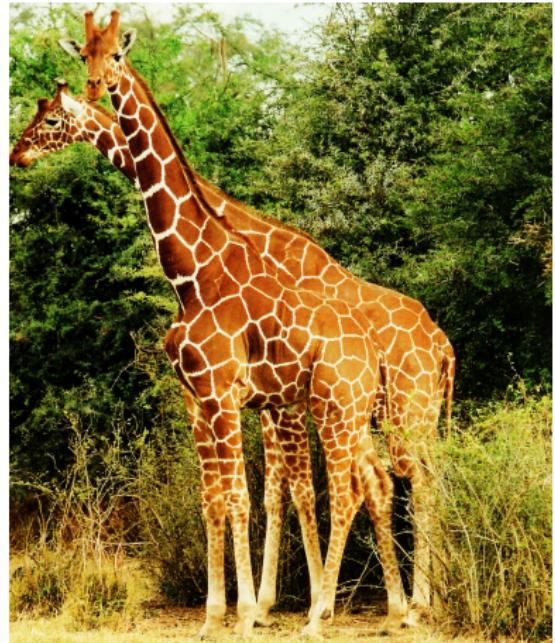
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Between populations



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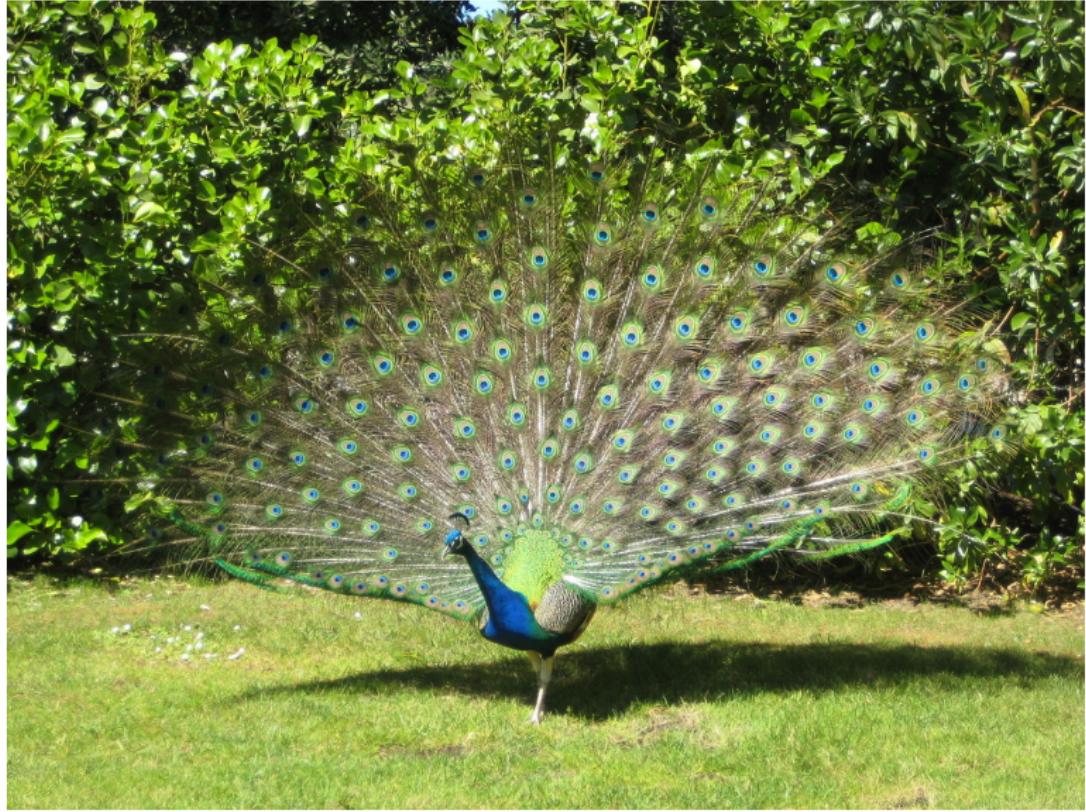
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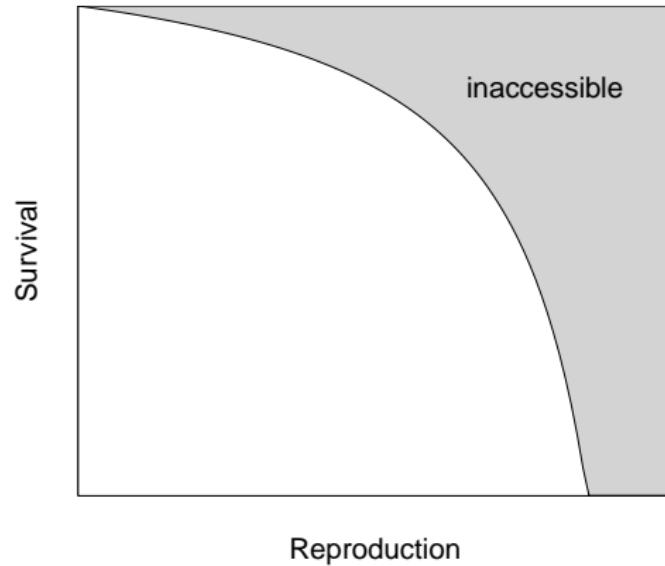
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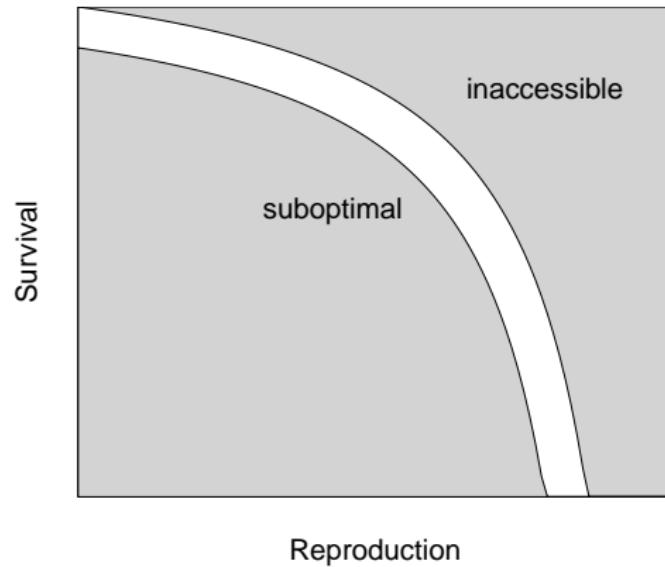
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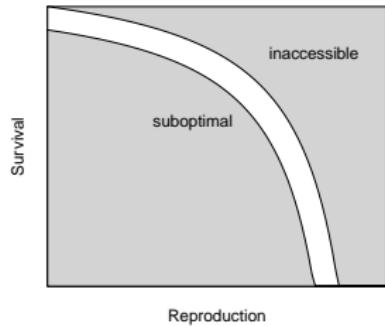


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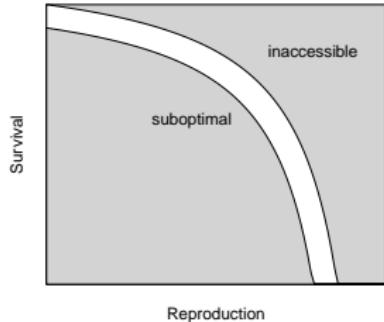
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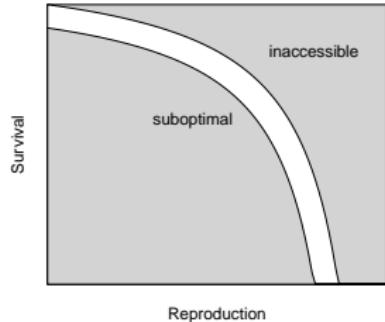
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Cole's paradox



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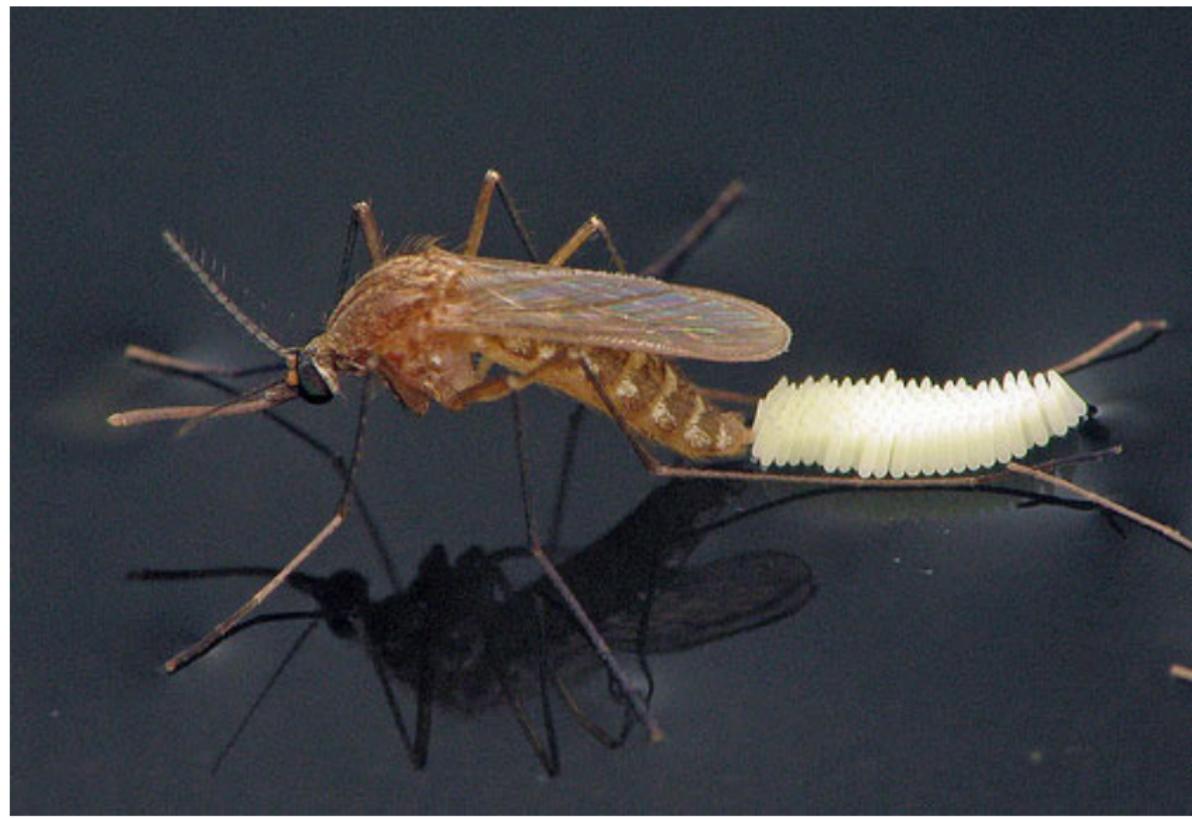
Tradeoff example: many offspring vs. high-quality offspring

- ▶ Apart from how much energy to put into offspring now vs. later, organisms can make many or few offspring, using a given amount of energy
- ▶ What is a vivid example of ecologically similar organisms that produce wildly different numbers of offspring?
 - ▶ * Oaks vs. pines
 - ▶ * Tsetses vs. mosquitoes
- ▶ Poll: What are potential advantages of producing fewer offspring with the same amount of energy?
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How many offspring?



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Tradeoff: direct investment vs. dispersal investment

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Outline

Introduction

Tradeoffs

The r vs. K metaphor

Bet hedging

Sex ratios

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Maples and marigolds



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Pictures of the above

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Outline

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Tradeoffs

The r vs. K metaphor

Bet hedging

Sex ratios

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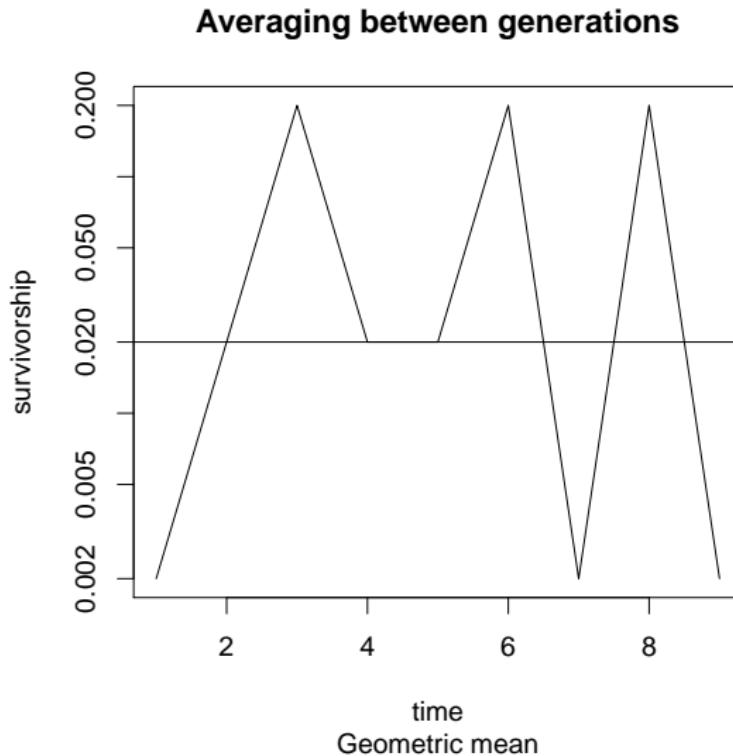
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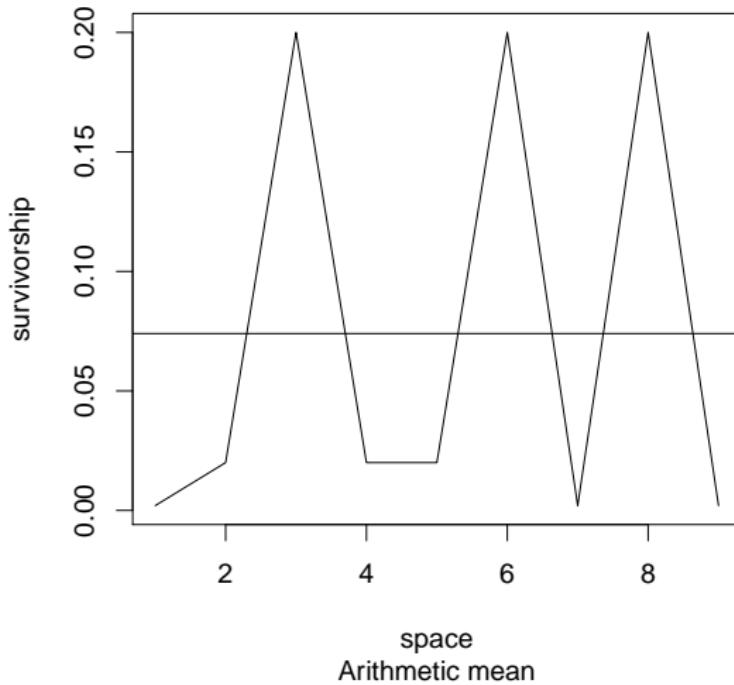
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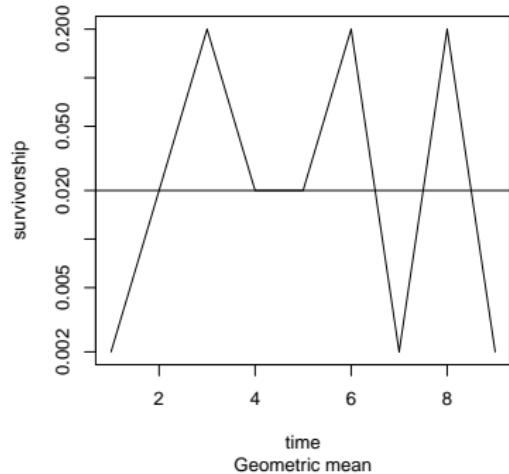
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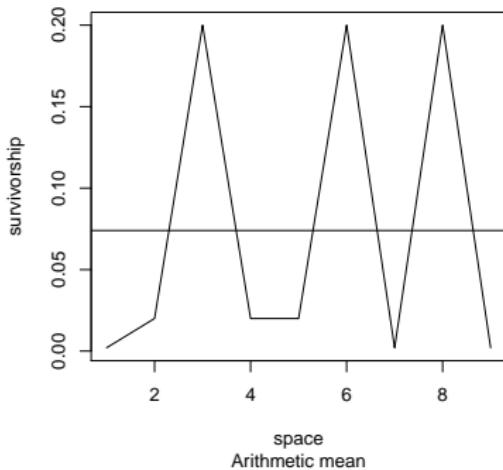


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Outline

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Tradeoffs

The r vs. K metaphor

Bet hedging

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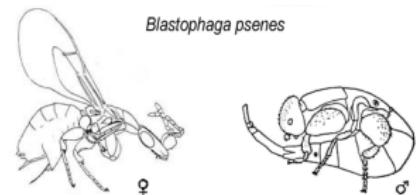
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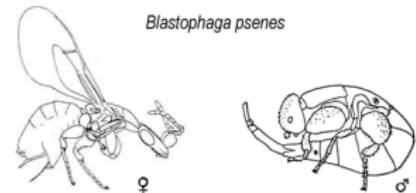
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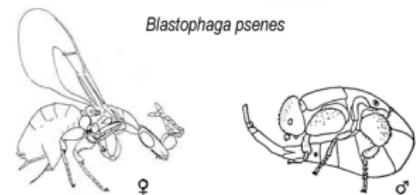
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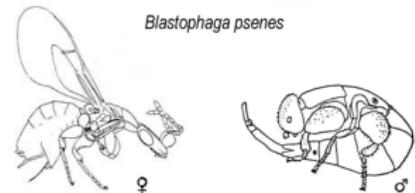
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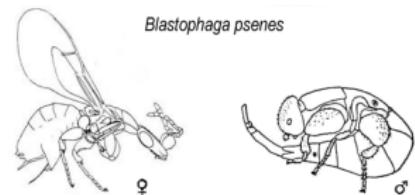
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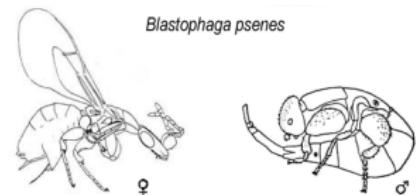


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 - ▶ * Nest-guarding fish

Sexual roles

- ▶ What do you expect to happen in a population where males contributing more to raising offspring than females do?
 - ▶ * All of these stories can be reversed
 - ▶ * Females compete for males
 - ▶ * Parents invest more in individual females
 - ▶ * Possible male-biased sex ratio
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