

# UNIT 7: Predation

# Outline

## Introduction

- Balance and equilibrium

- Tendency to oscillate

## A simple model

- More detailed models

- Reciprocal control

## Adding details

- Dynamics

- Equilibria

## Who controls whom?

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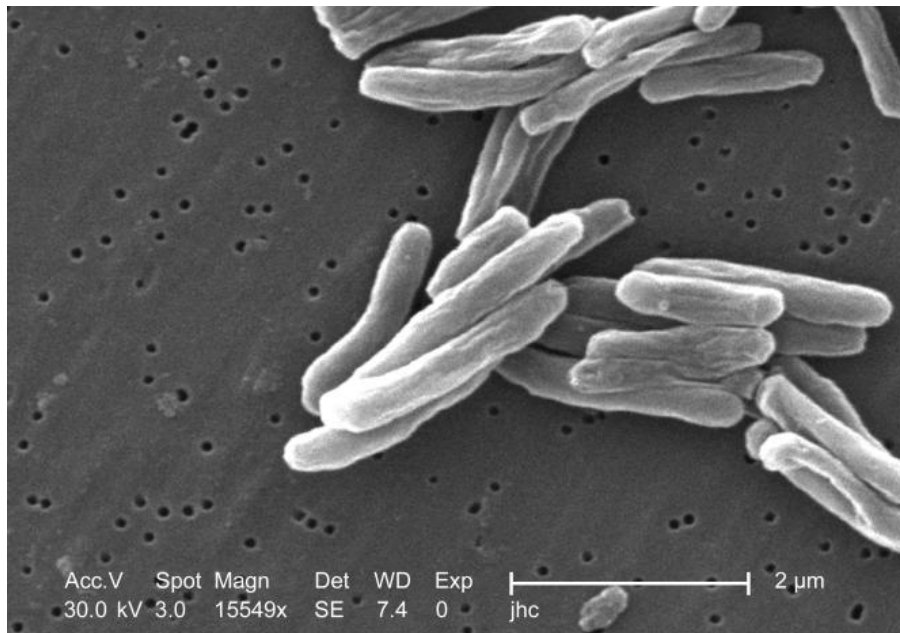




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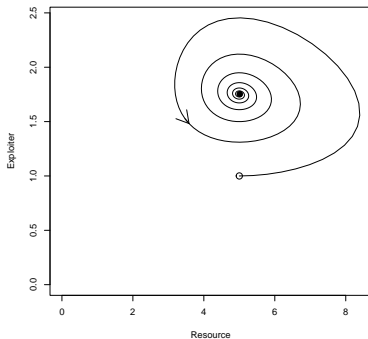
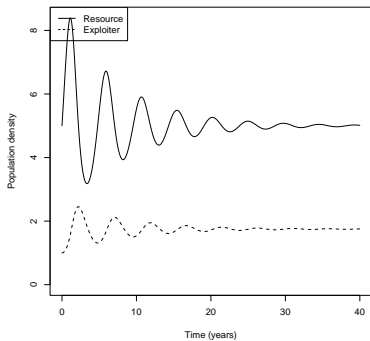
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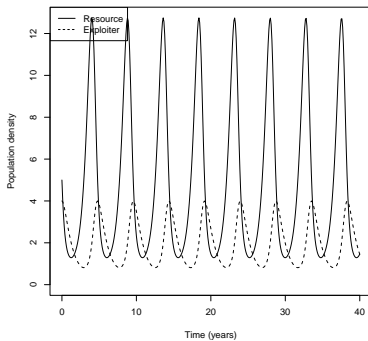
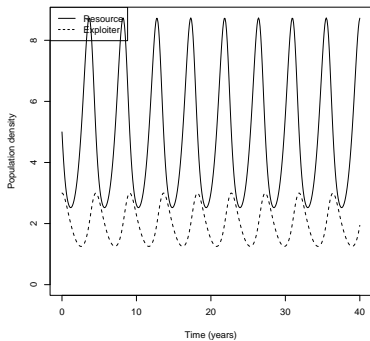
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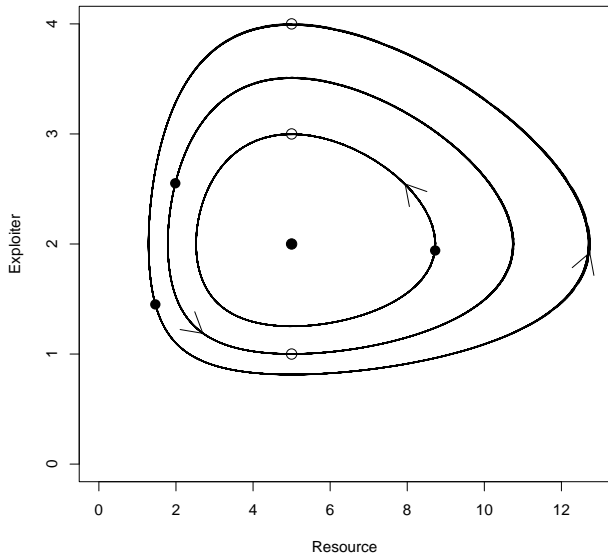




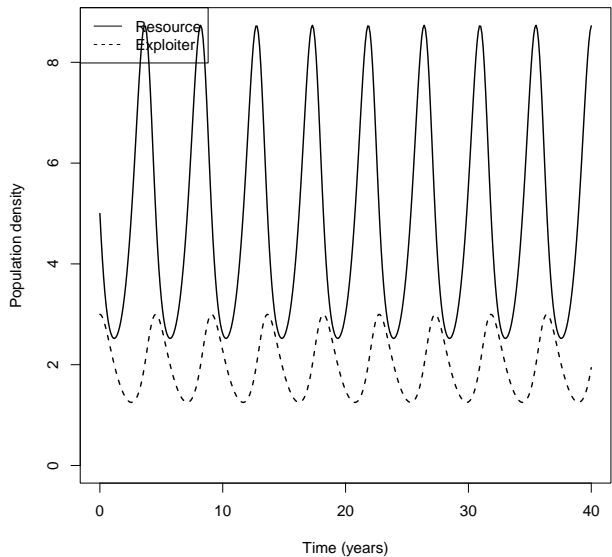
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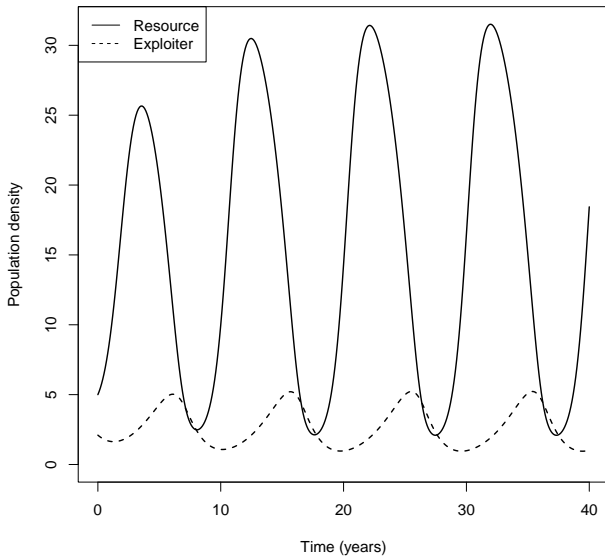
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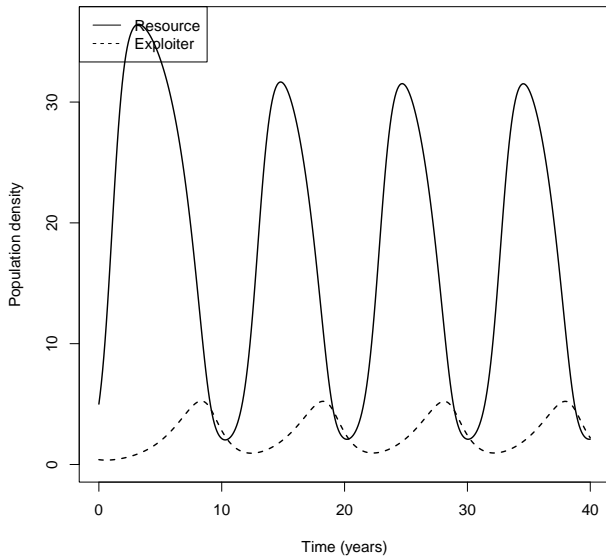
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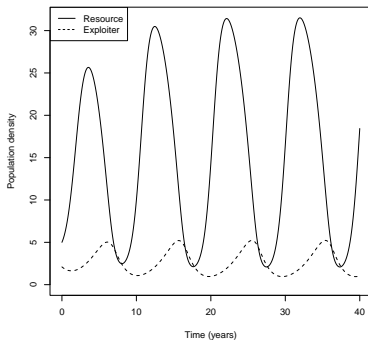
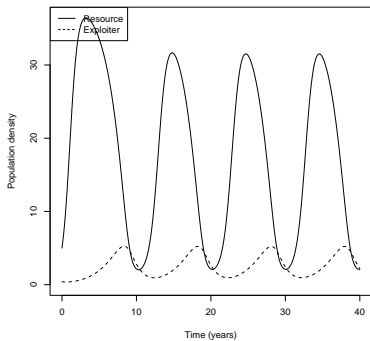
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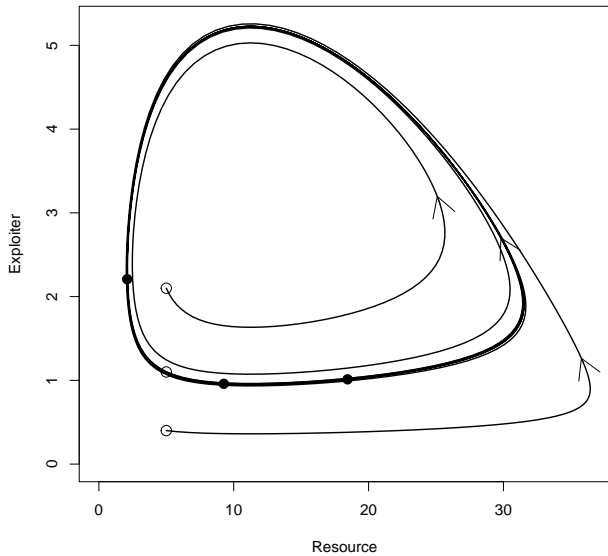
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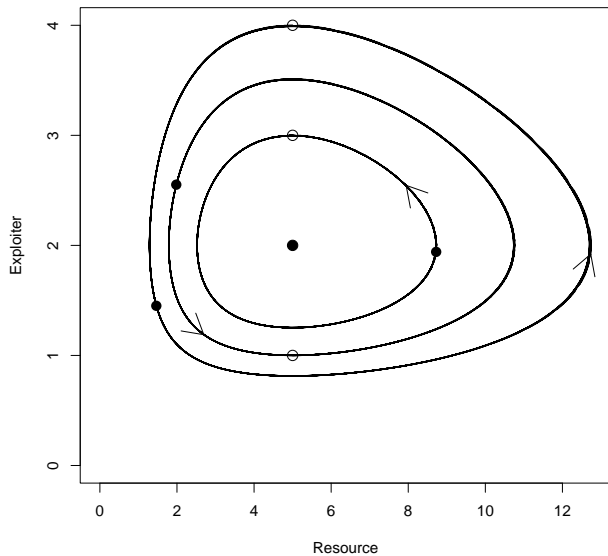
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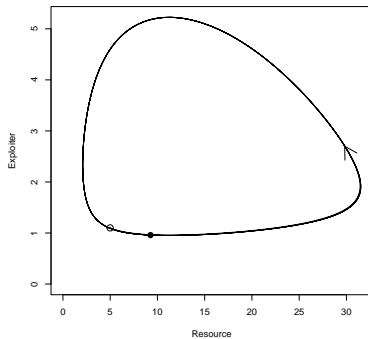
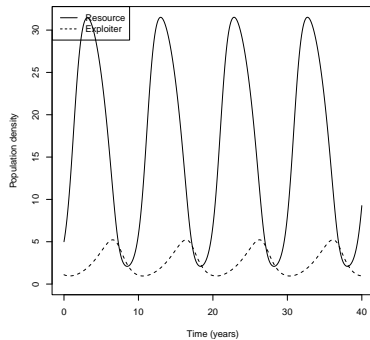
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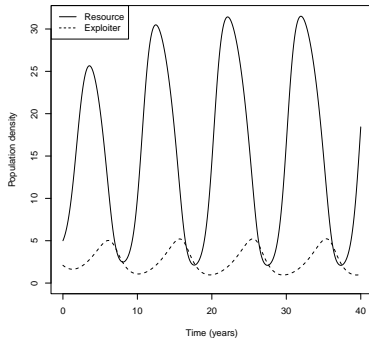
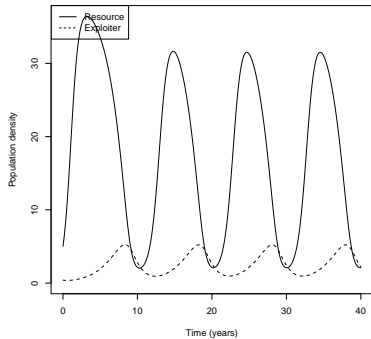
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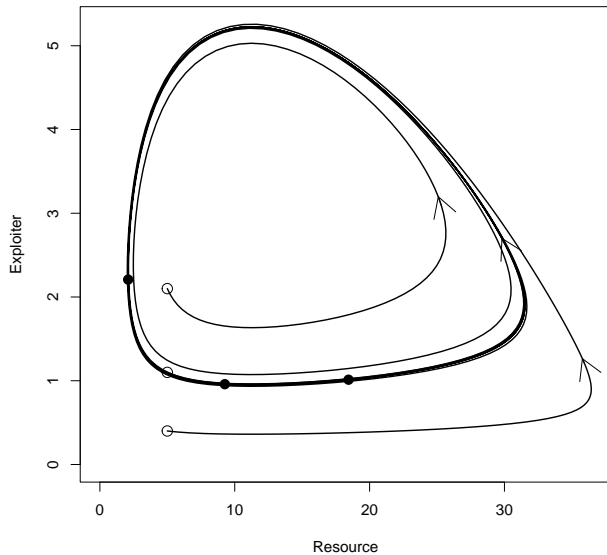
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## Limit cycles (repeat)



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Balance and equilibrium

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## A simple model

More detailed models

Reciprocal control

## Adding details

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How do populations affect their own growth rates?



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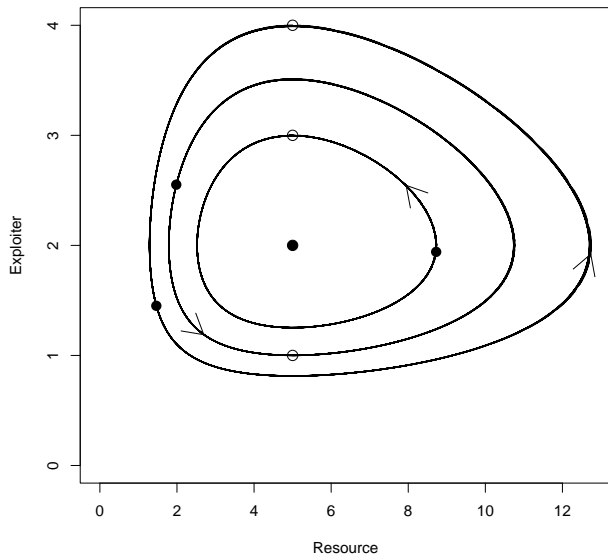
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## People and the ocean



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- More detailed models
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## Adding details

- Dynamics
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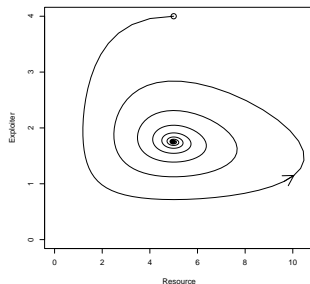
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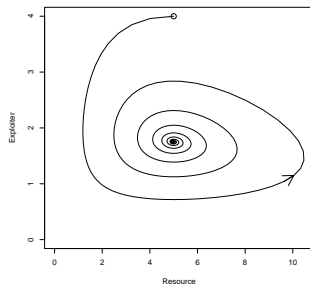
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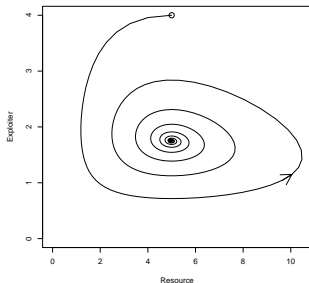
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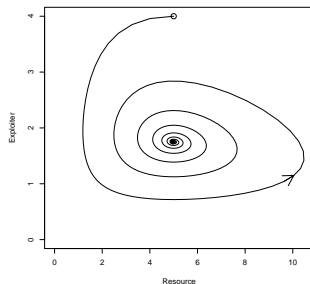
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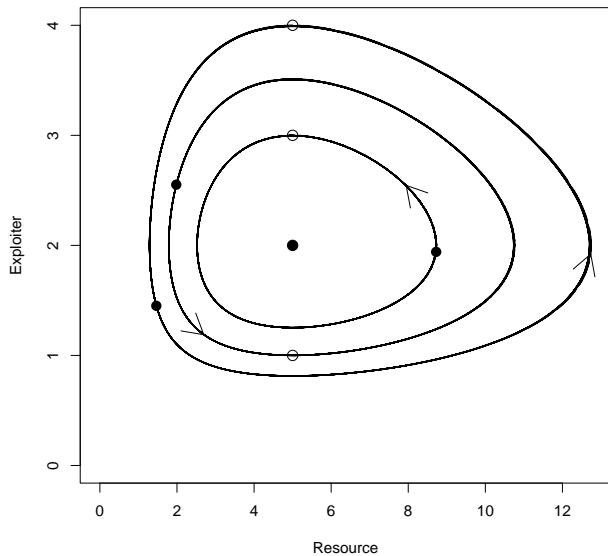


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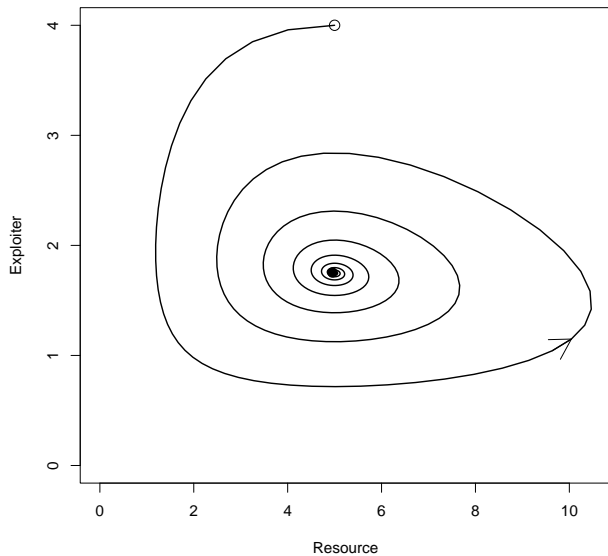
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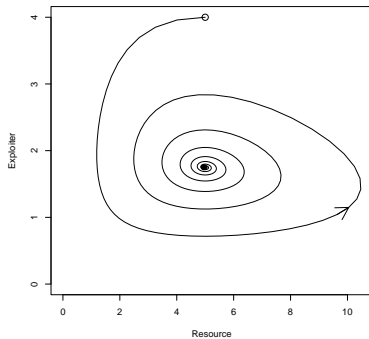
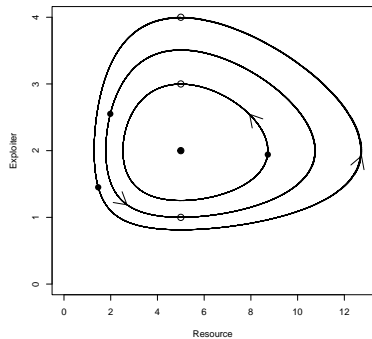
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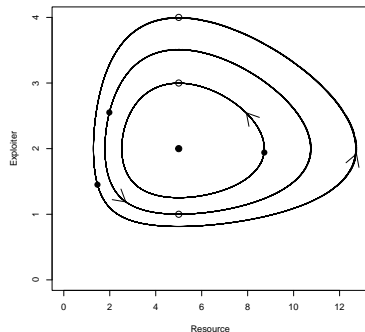
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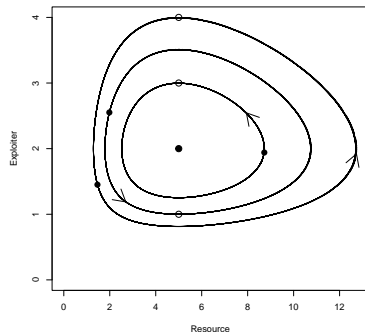
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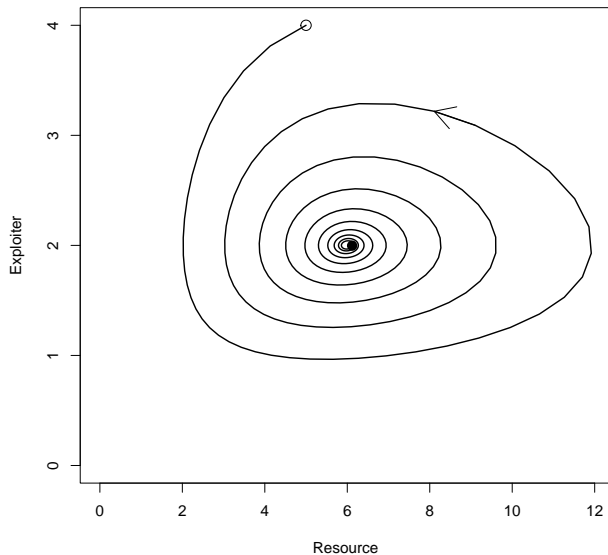


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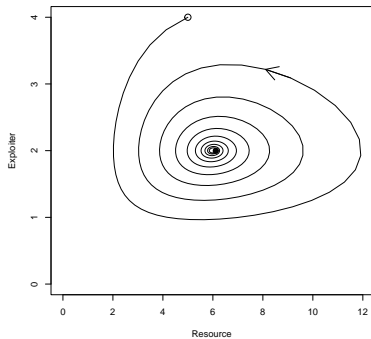
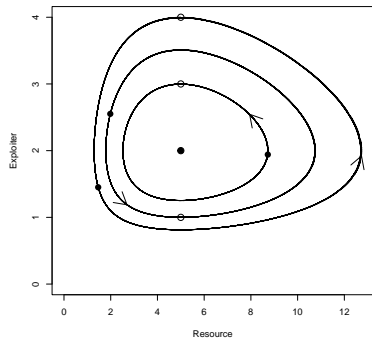
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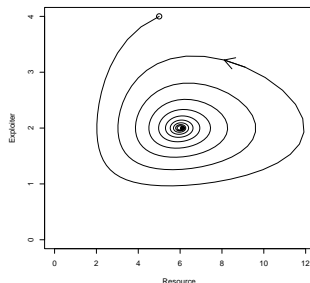


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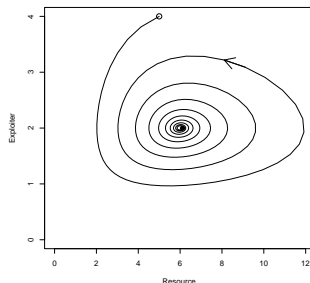
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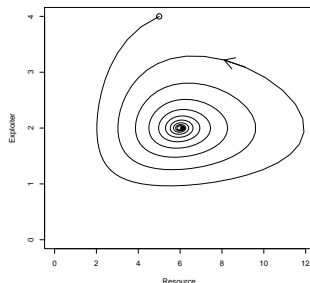
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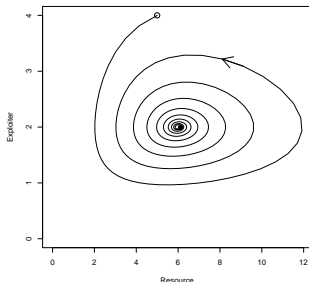
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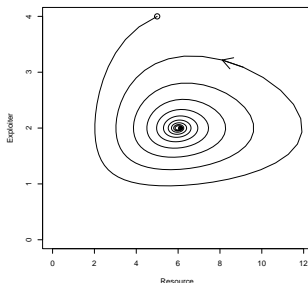
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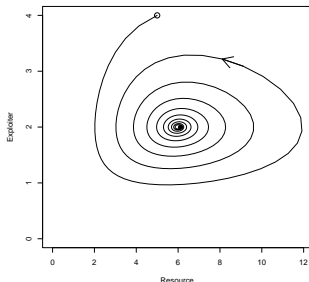
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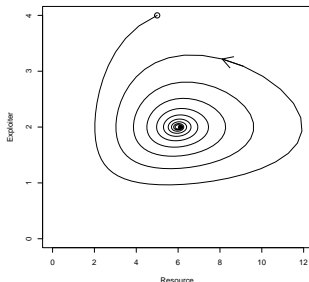
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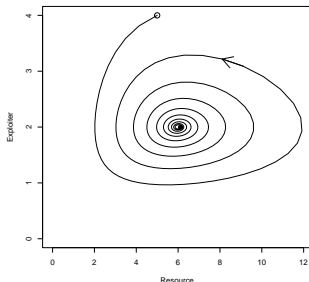
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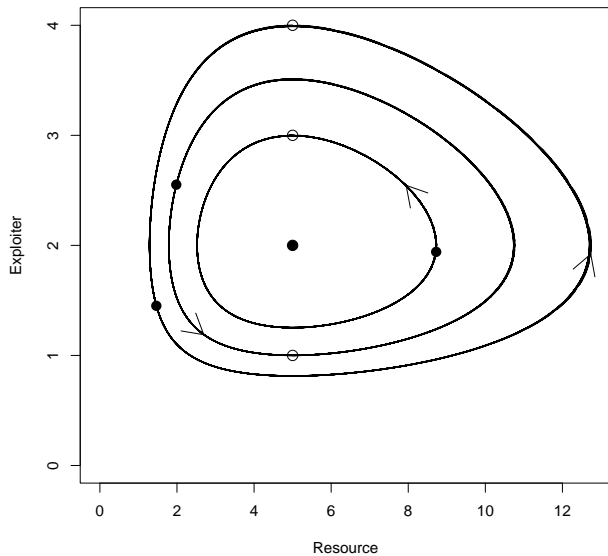
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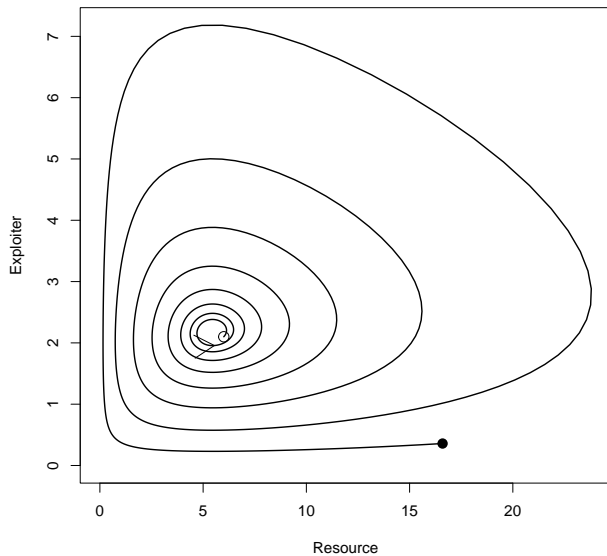
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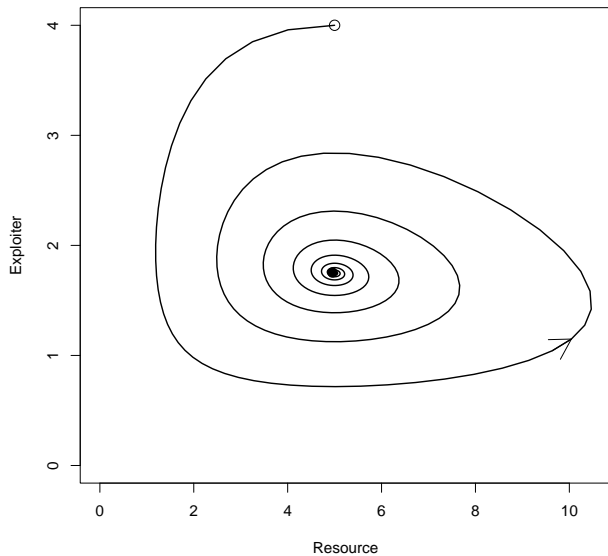
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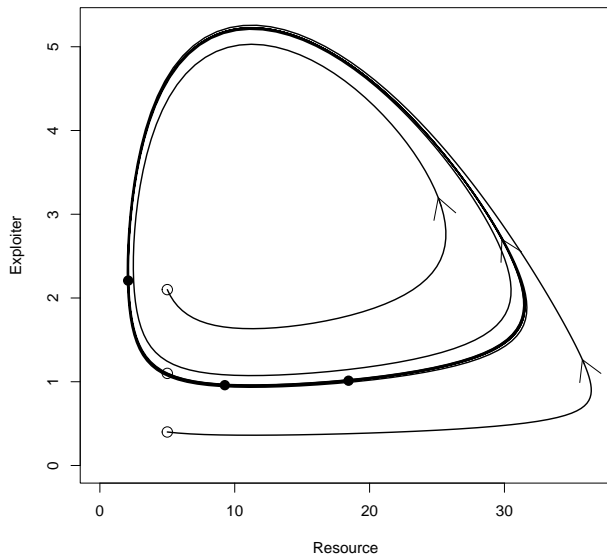
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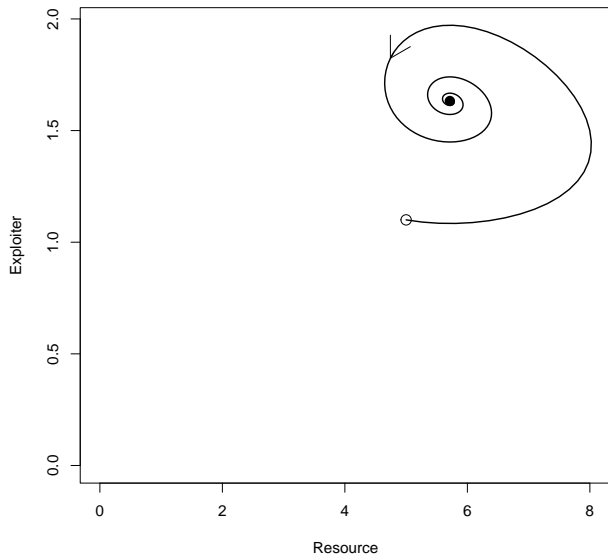
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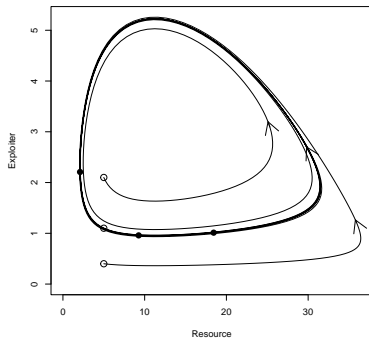
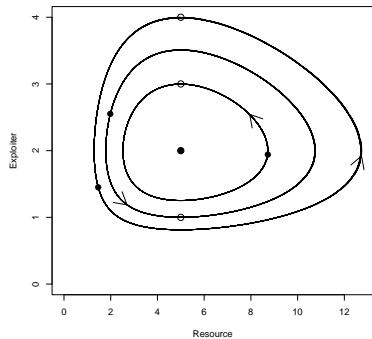
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# Outline

## Introduction

- Balance and equilibrium
- Tendency to oscillate

## A simple model

- More detailed models
- Reciprocal control

## Adding details

- Dynamics
- Equilibria**

## Who controls whom?



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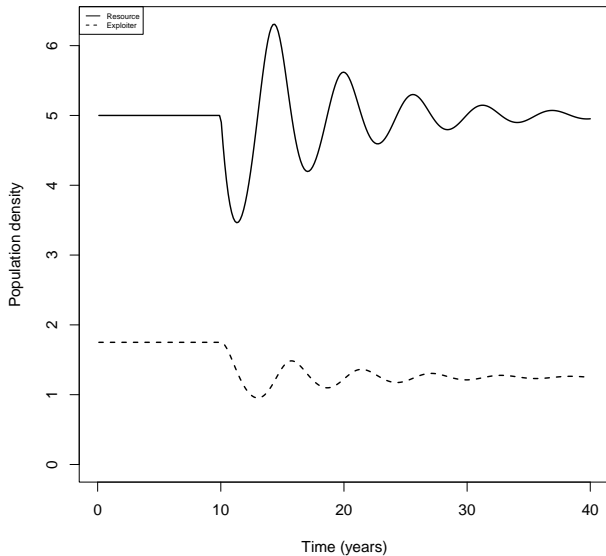
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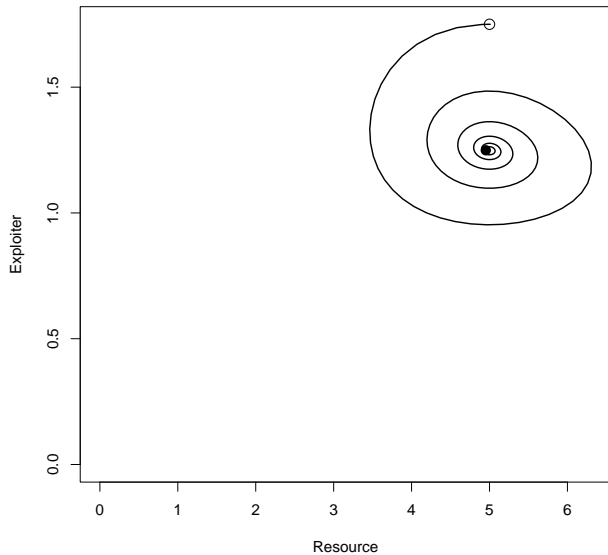
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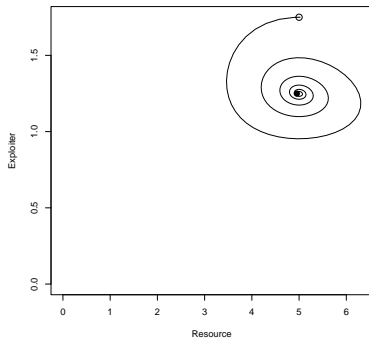
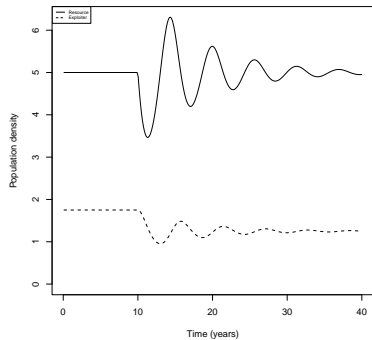
# Harvesting dynamics



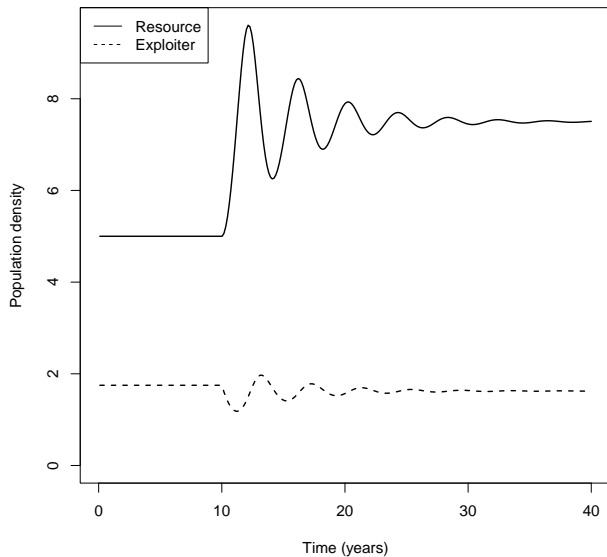
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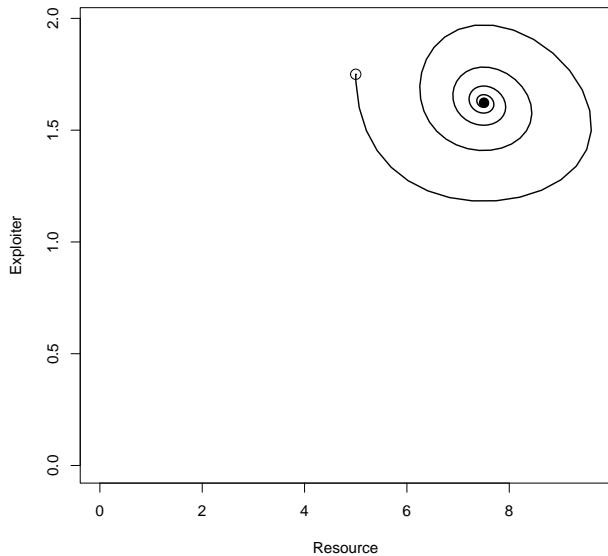
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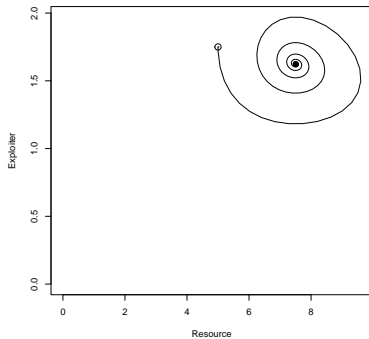
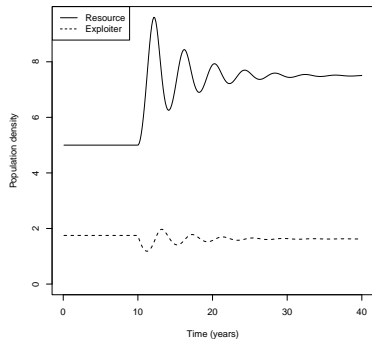
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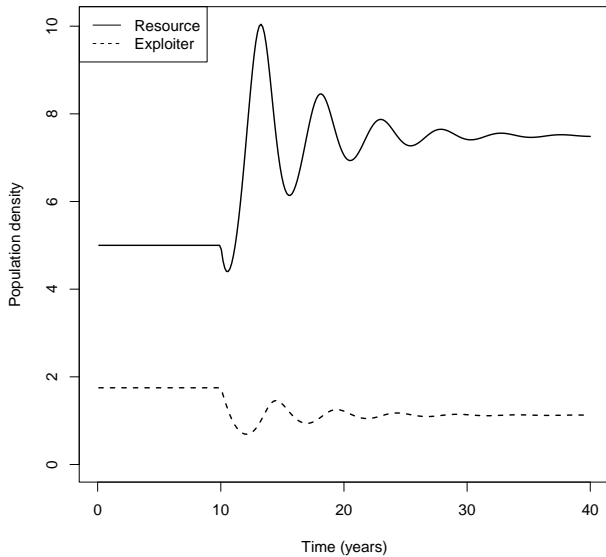
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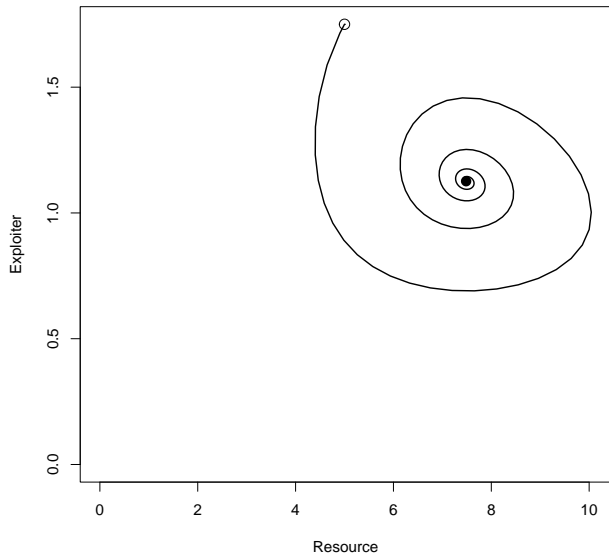


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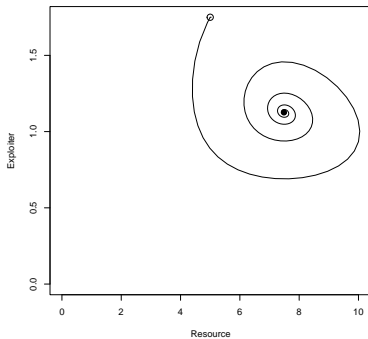
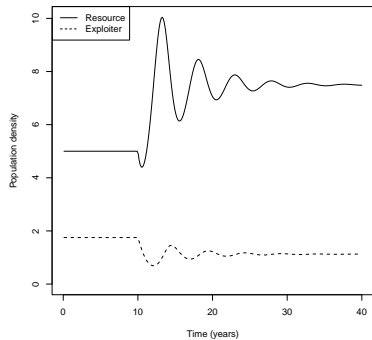




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# Outline

## Introduction

- Balance and equilibrium
- Tendency to oscillate

## A simple model

- More detailed models
- Reciprocal control

## Adding details

- Dynamics
- Equilibria

## Who controls whom?

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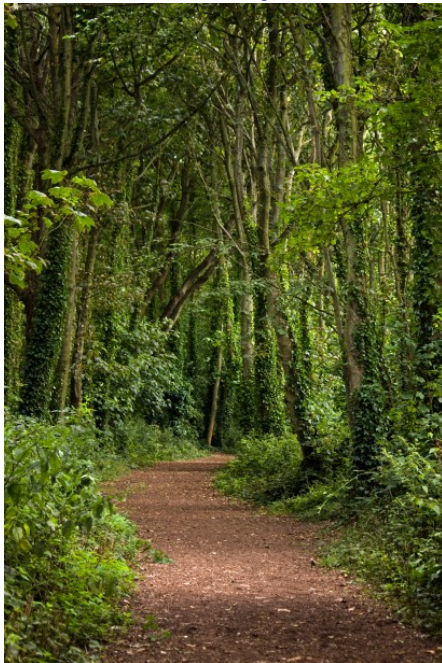
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