

UNIT 6: Competition

Outline

Introduction

Population model with competition

- Balanced competition

- Unbalanced competition

Population-level interactions

- Invasion theory

- Colonization and co-existence

Niches and coexistence

- The competitive exclusion principle

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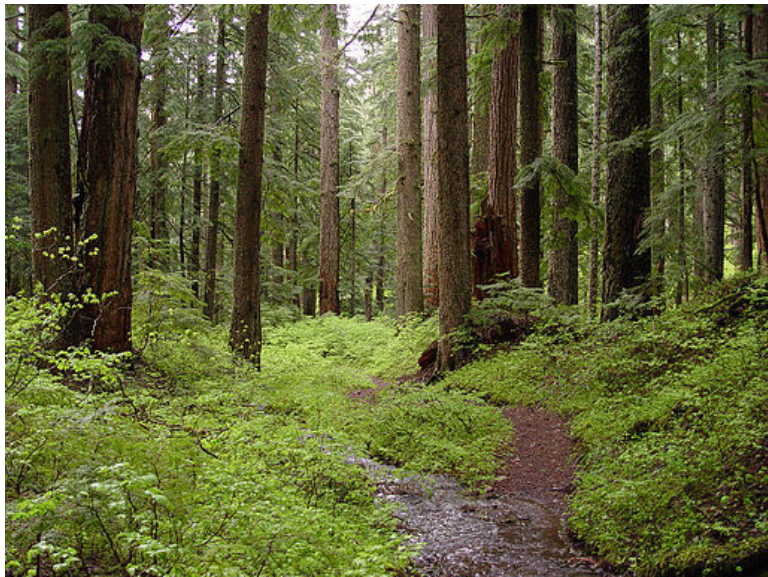
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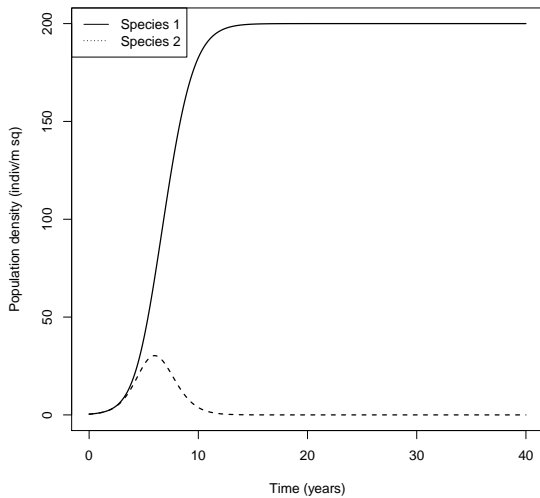
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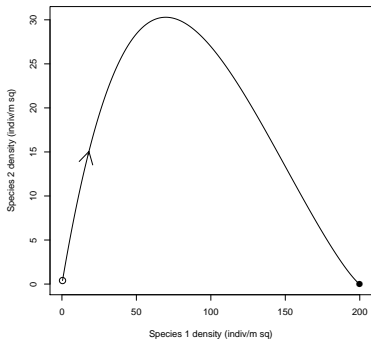
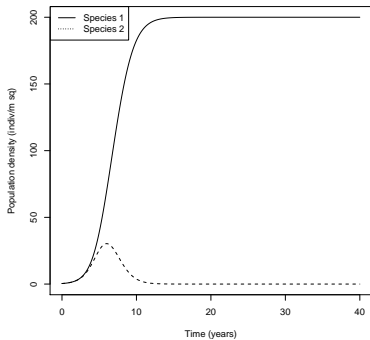
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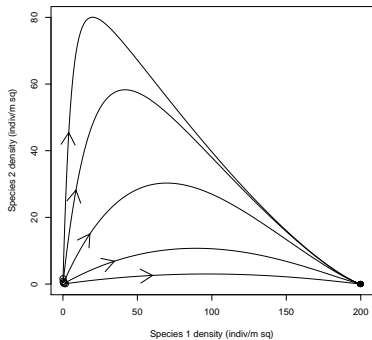
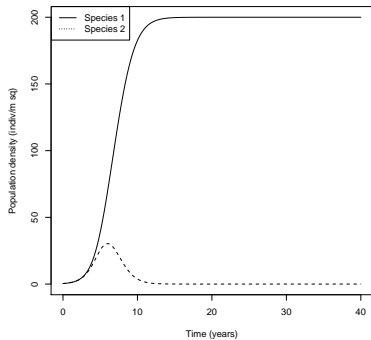
Dominance time plot



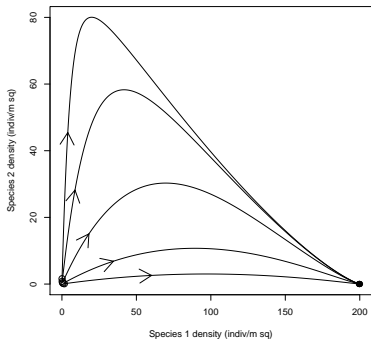
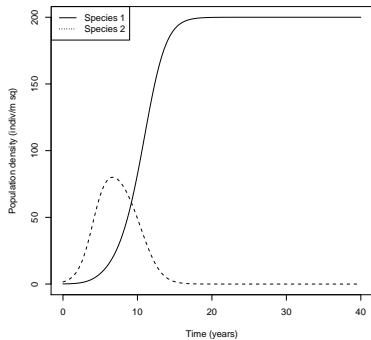
Dominance phase plot



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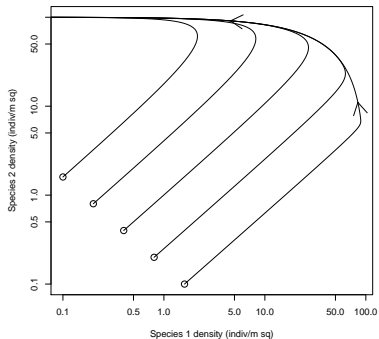
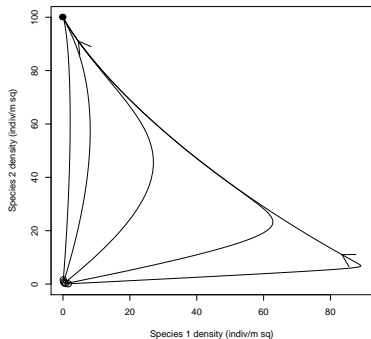
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Outline

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Population model with competition

- Balanced competition

- Unbalanced competition

Population-level interactions

- Invasion theory

- Colonization and co-existence

Niches and coexistence

- The competitive exclusion principle

Unbalanced competition

- ▶ If two species are competing by using a simple resource, we expect competition to be balanced



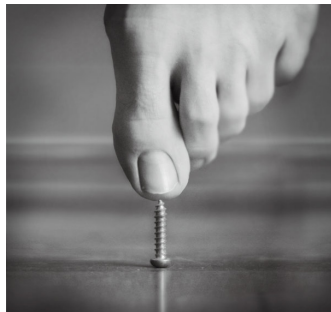
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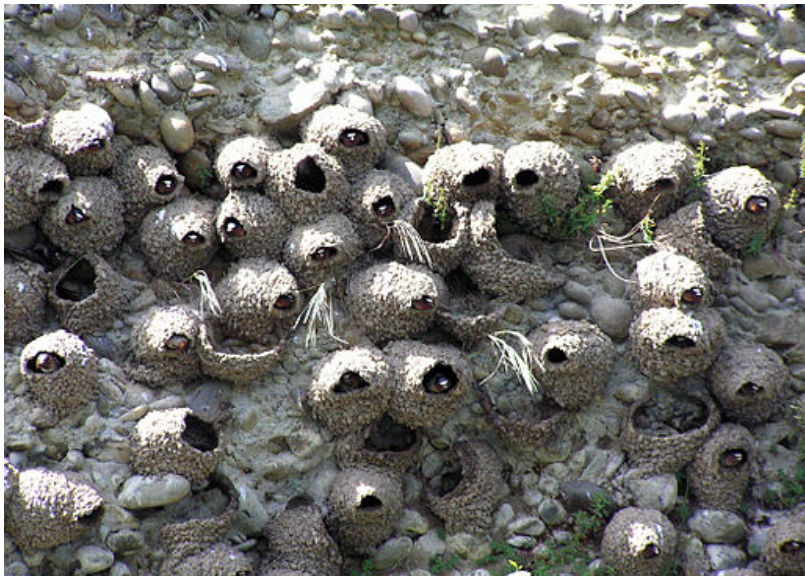
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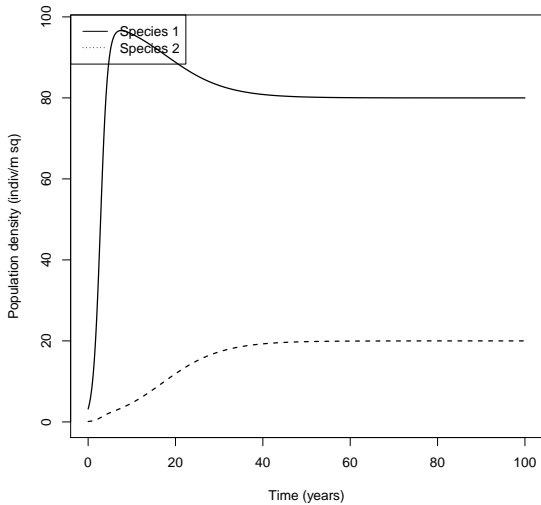
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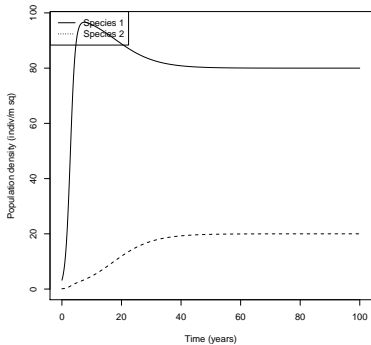
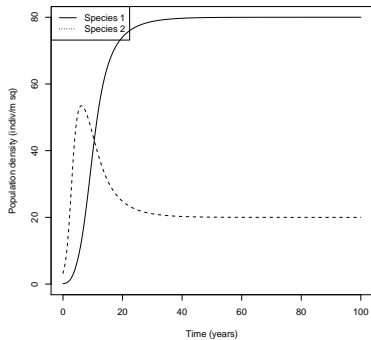
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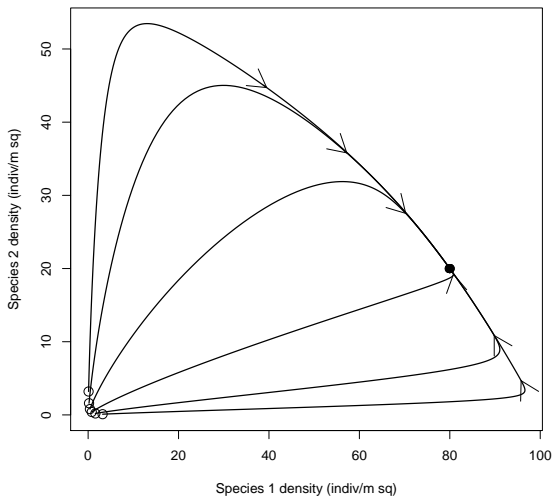
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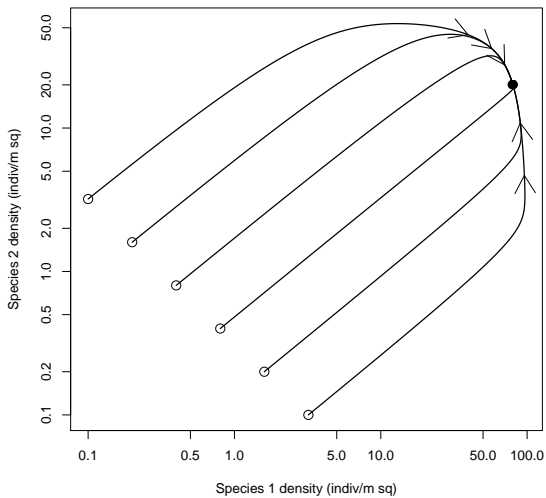
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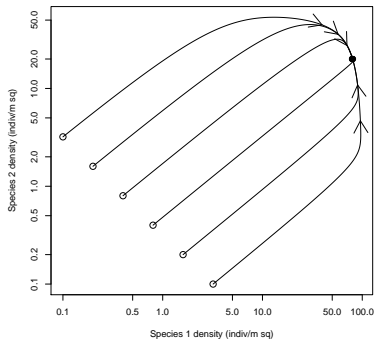
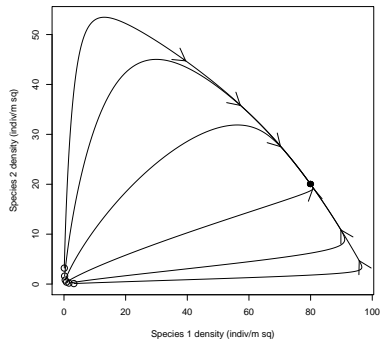
Coexistence phase plot



Coexistence phase plot (log scale)



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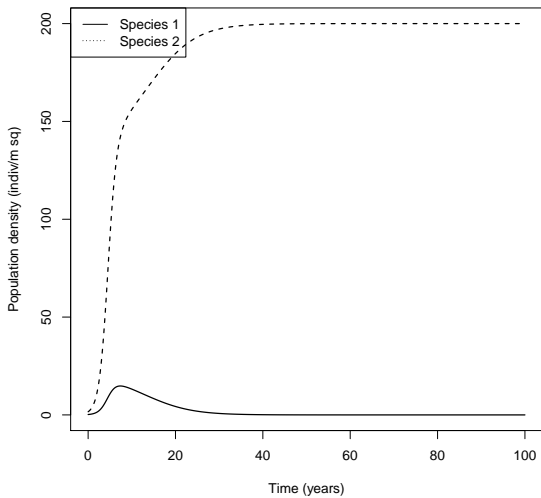
Co-operation

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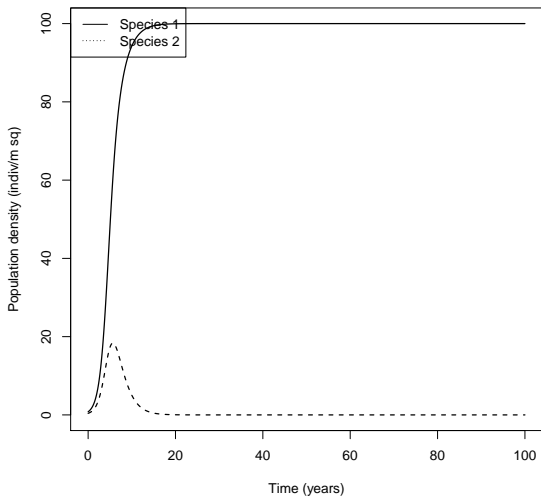


Changing the environment

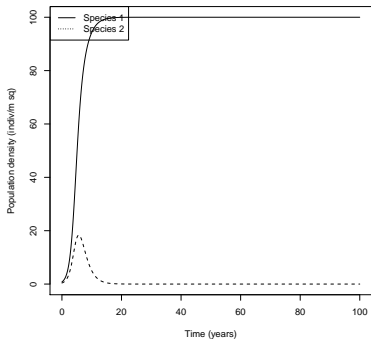
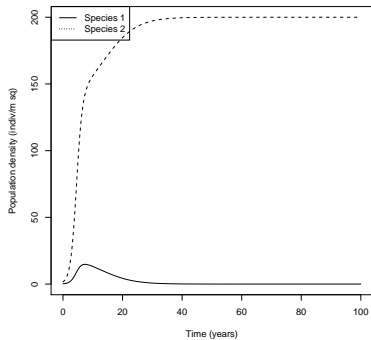
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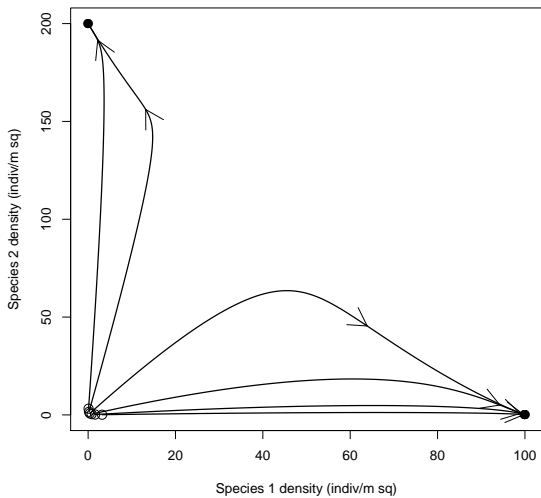
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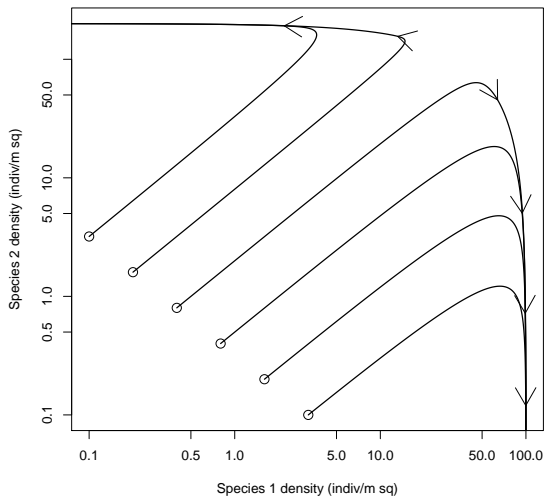
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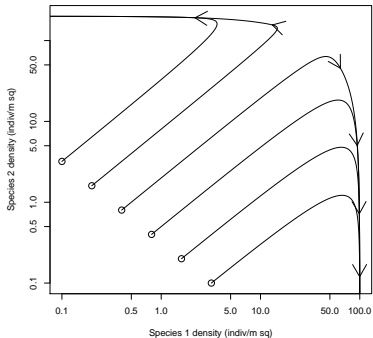
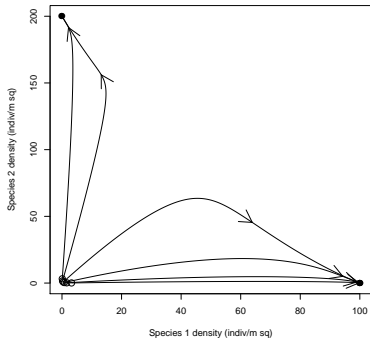
Founder control phase plot



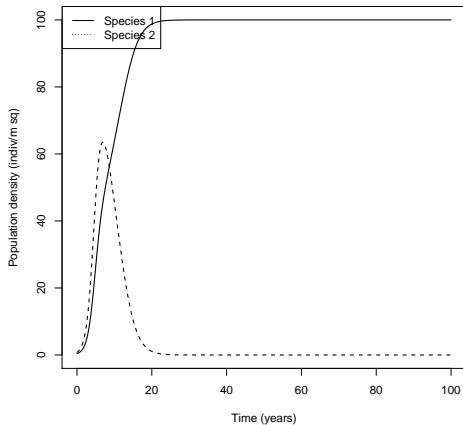
Founder control phase plot (log scale)



Founder control phase plots

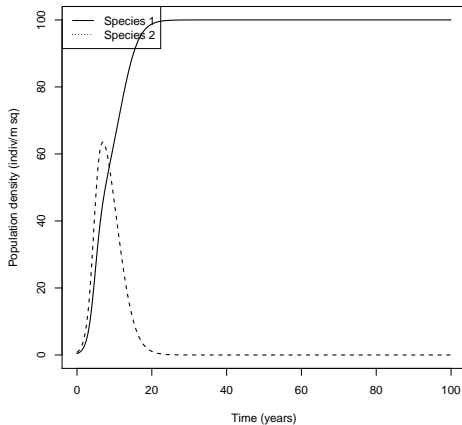


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Population model with competition

- Balanced competition

- Unbalanced competition

Population-level interactions

- Invasion theory

- Colonization and co-existence

Niches and coexistence

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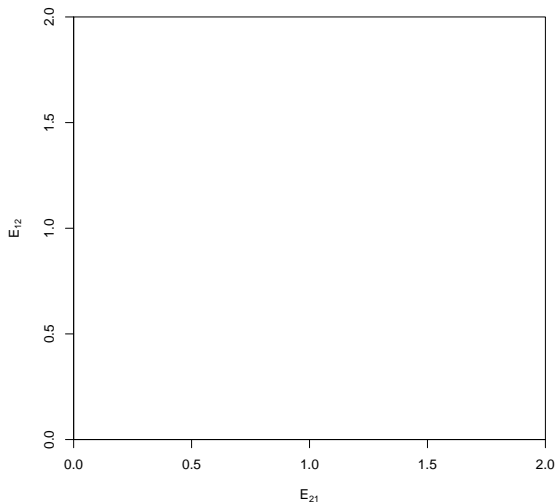
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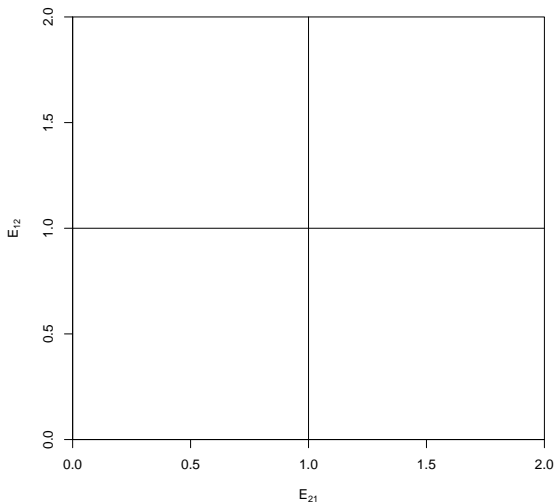
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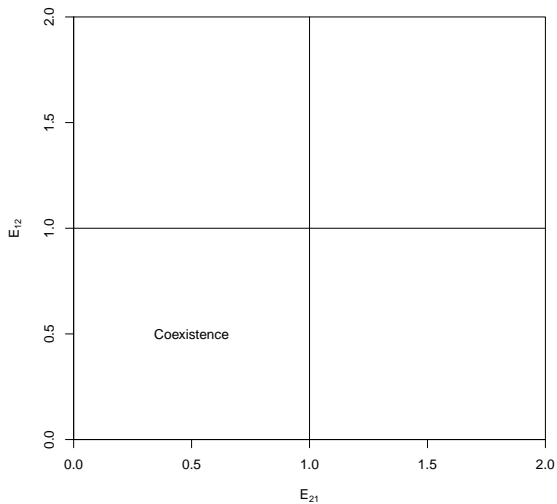
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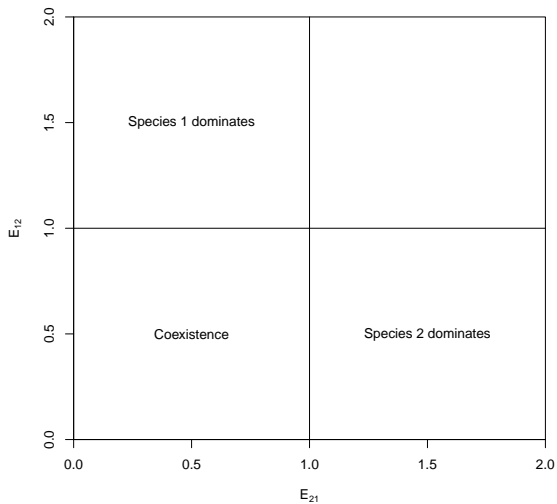
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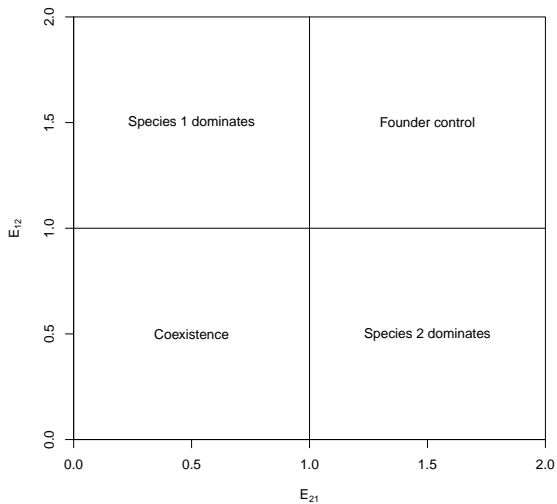
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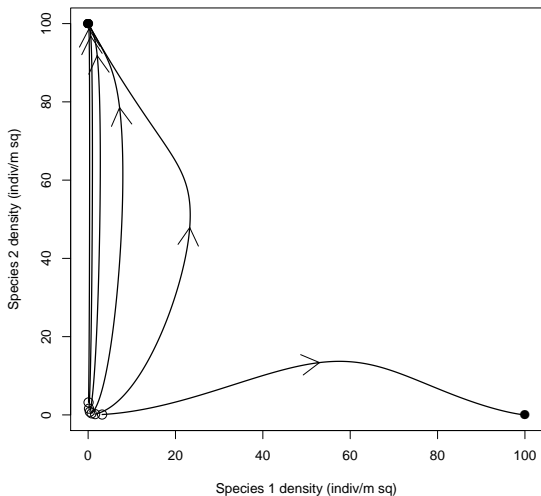
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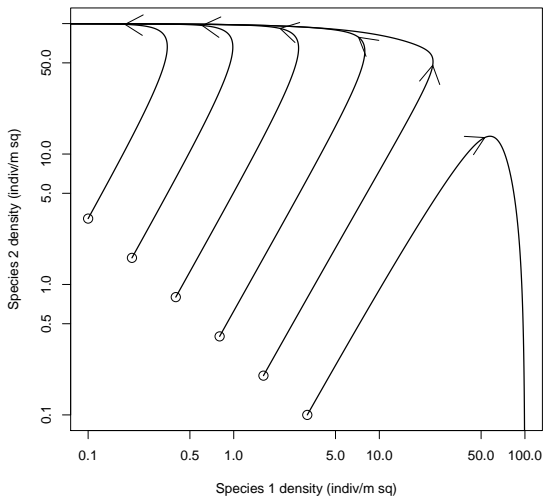
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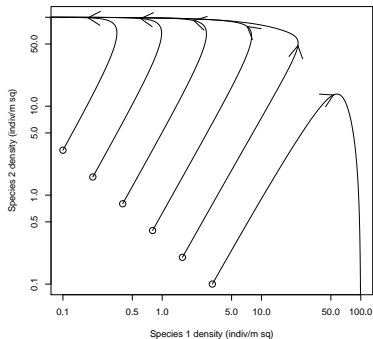
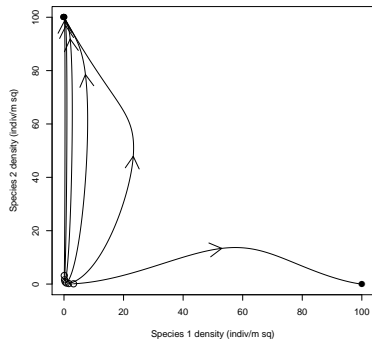
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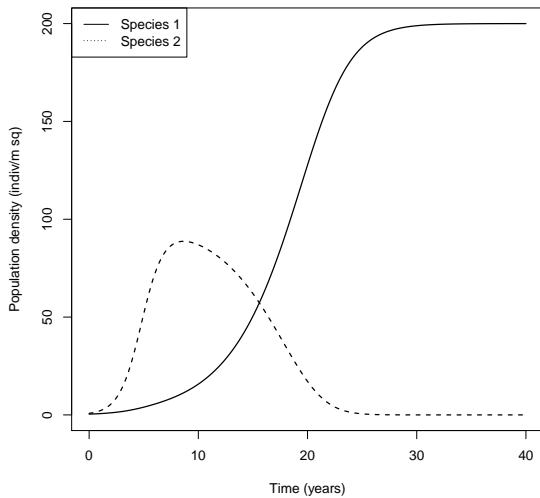
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Ecological Niche Theory According to Dr. Seuss



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Each Nutch in a Nich knows that some other Nutch
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