



Effect of invasive and native plant status on deer browsing preference

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Introduction

Studies show that overabundant deer are an environmental issue because they:

- Limit biodiversity in forests
- Disrupt other wildlife habitats
- Spread ticks and zoonotic diseases
- Cause frequent motor vehicle accidents

Deer browsing preference can help us better understand:

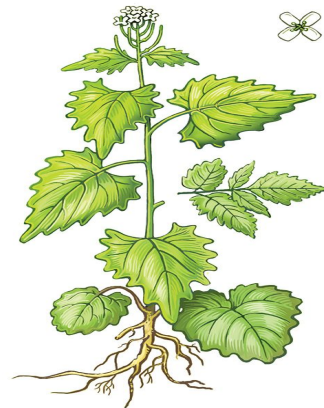
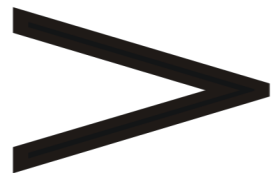
- Deer habitat use
- Changes in plant amount in response to overabundant deer populations

Question & Hypothesis

- ▶ What type of species of plants do deer prefer to browse?
 - Evolution = Chemical Recognition



Impatiens capensis
(Jewelweed) Native



Allaria petiolata
(Garlic Mustard) Invasive

Study Design

- Experimental Design:
Manipulate Plant Types to Test Preference

Native and Invasive
Choice Equal

MAP OF SITES



Site #1 was
near the
Cliffdale Loop



Site #2 was
near the Hilltop
Trail



Site #3 was
near the Hidden
Valley Loop

Methods



Collected and
transplanted the
plants

Transported all the
plants from the
Science Center to
my 3 sites



Methods



Set up trail cameras
at all my sites

Watered my plants
four times
throughout the week



Video Results

Results

**Did you notice what was missing
from the video?**

Deer!!!

Figure 1: Plant Height Comparisons

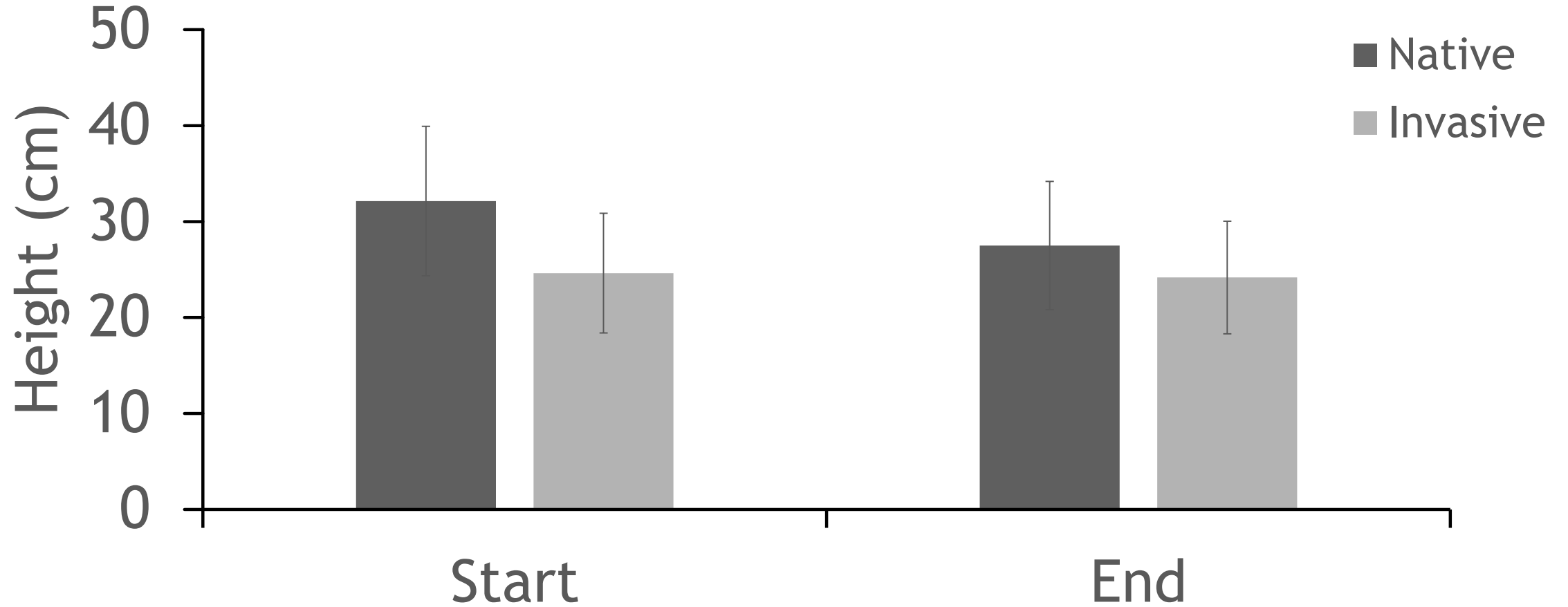
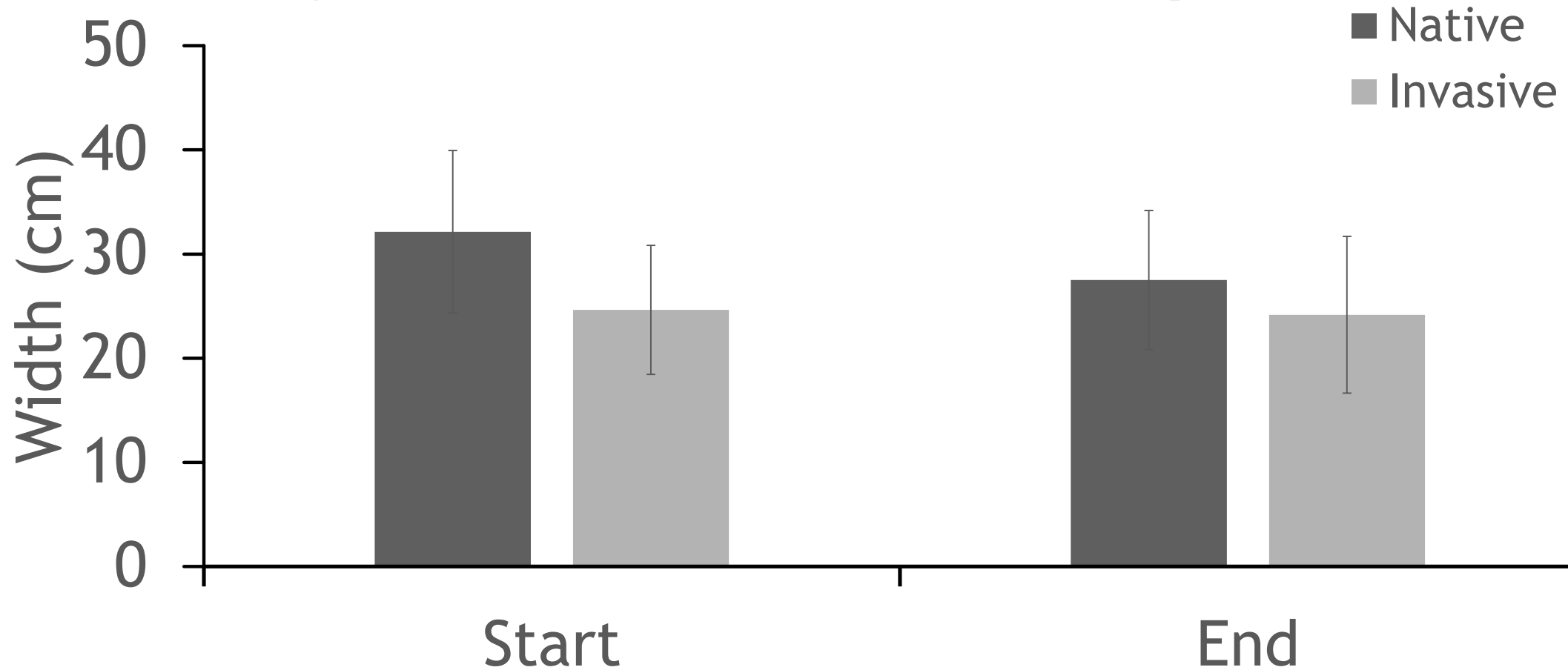


Figure 2: Plant Width Comparisons



Discussion

- ▶ Plants were available from start to end of study.
- ▶ My project was dependent on deer which limited my results.
- ▶ Predators could have deterred deer from my sites.
- ▶ Wildlife encounters at camera traps are variable, and a short study reduces the chance of finding the study animal.

Source of Error

- ▶ Sites could have been too close to human disturbances (noise, scent, etc..)
- ▶ Measurements could have not been as precise
- ▶ Limitations of time frame for experiment



Future Research

- ▶ Take more time to collect data.
- ▶ Use an attractant.
- ▶ Place sites in isolated areas.

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Any questions?