

Habitat Use of Pacific Banana Slugs in Natural Recreational Areas in Humboldt County

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Introduction

Pacific banana slugs (*Ariolimax columbianus*), are terrestrial gastropods that are abundant in California. They are involved in seed dispersal and contribute to a significant part of leaf litter breakdown. Understanding the relationship between vegetation type, weather, canopy cover (tree and shrub), and leaf litter can help inform the public on how to better manage natural recreational areas to maintain a healthy Pacific banana slug population.

Objective

The goal of this study was to determine whether factors such as vegetation type, temperature, shrub canopy coverage, and tree canopy coverage contribute to Pacific banana slug habitat use in natural recreational areas in Humboldt County, CA.

Methods

- ❖ Plots were documented at the Arcata Community Forest, Arcata Marsh & Wildlife Sanctuary, and Hiller Park.
- ❖ The plots were measured using a one-meter square area made of PVC pipes.
- ❖ These plots were chosen systematically with set intervals to reduce bias. To do this, I alternated from going left to right from my starting point.
- ❖ What was measured: vegetation type, shrub canopy cover, and tree canopy cover, and temperature when arrived.

Habitat Characteristics	Estimate	Std. Error	p Value
(Intercept)	-3.245657	1.446081	0.0248
Tree Canopy Cover %	0.034014	0.007117	< 0.0001
Shrub Canopy Cover %	0.006215	0.004351	0.1532
Temperature	-0.006766	0.027042	0.8024

Table 1.

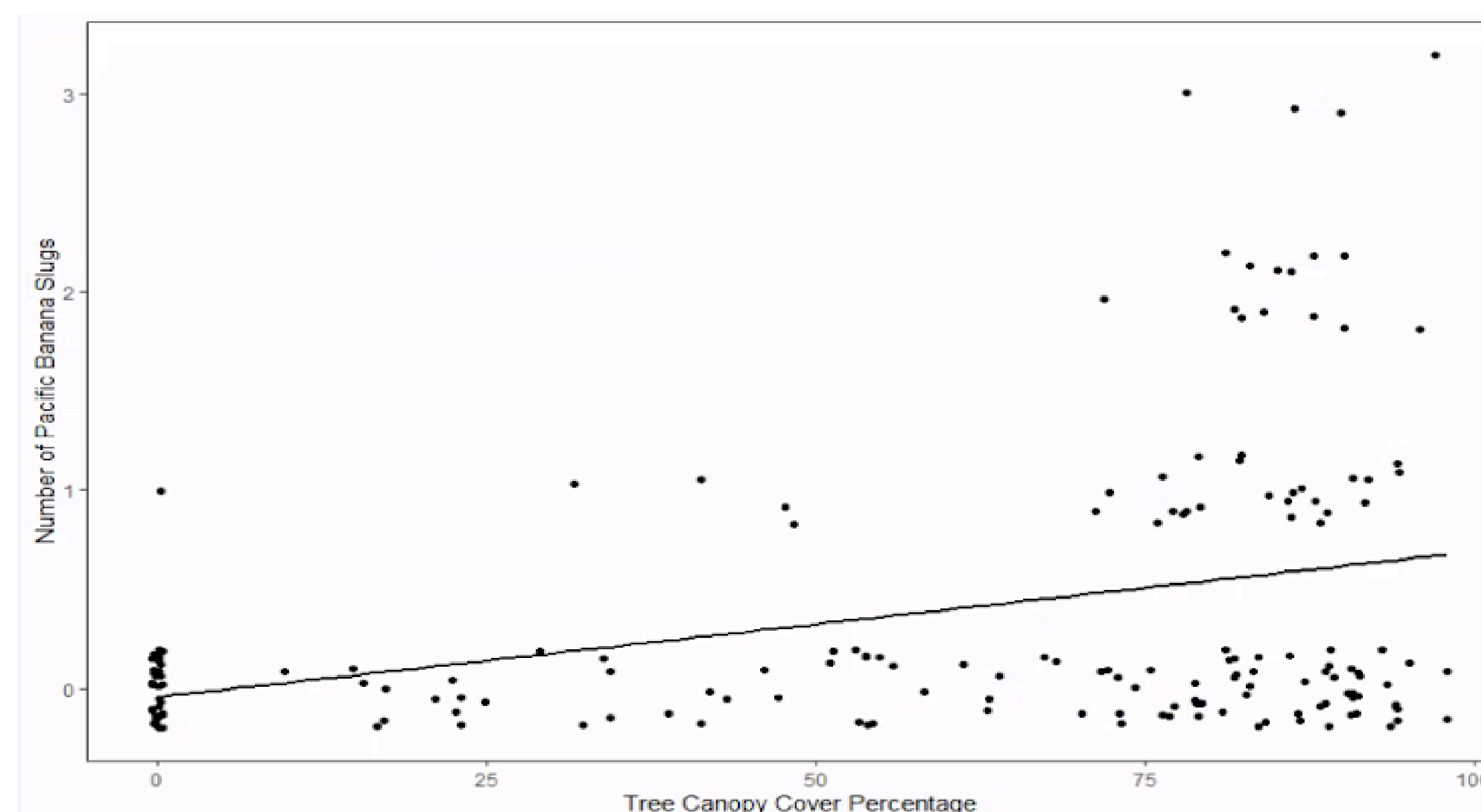


Figure 1.

Results

- ❖ The p value for canopy tree cover was below 0.05, thus proving that my Poisson linear regression model to be significant, meaning there is a relationship between Pacific banana slugs and canopy tree cover as seen in Table 1.
- ❖ Vegetation type, temperature, and shrub canopy cover did not affect Pacific banana slug habitat selection.

Management Implications

- ❖ There are gaps in knowledge of Pacific banana slug studies in terms of habitat use and I believe this study can help be a building block for future studies
- ❖ As climate change progresses, understanding the relationship between Pacific banana slugs and habitat use can help maintain a healthy population size in the natural recreational areas in Humboldt County as well other coastal areas.

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