

# They Aren't Butterflies or Spiders!

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# Introduction

- We studied moths for our project because we were curious how many there were
- We added harvestmen as there were so many where we were studying
- We predicted there would be more moths at Cade's Cove due to consistent lighting and diverse ecosystems
- Moths are similar to butterflies, except for a few differences: moths have feathered or smooth antennae, whereas butterflies have clubbed antennae; also, butterflies generally rest with their wings together while moths normally have their wings flat
- Harvestmen are more commonly known as daddy-long-legs, which are different from spiders because spiders have two body segments, whereas harvestmen have one

# Methods

We brainstormed concepts and decided on moths

- When we began collecting data, we chose to look for harvestmen as well
- We searched for 20 minutes in each environment (manmade structure and meadow)
- For the manmade structures, we searched indoors (lobby at Tremont and bathrooms at Cade's Cove) and on surrounding walls and sidewalks outside
- In the meadows, we measured 10 meters along two edges of a meadow (20 m total) and used sweep nets to stir up vegetation and aerial nets to catch and observe flying specimens
- The meadows had tall vegetation, forest on at least one side (3 sides at Tremont), mowed grass on at least one side, and a river/ stream about 10 to 20 meters away

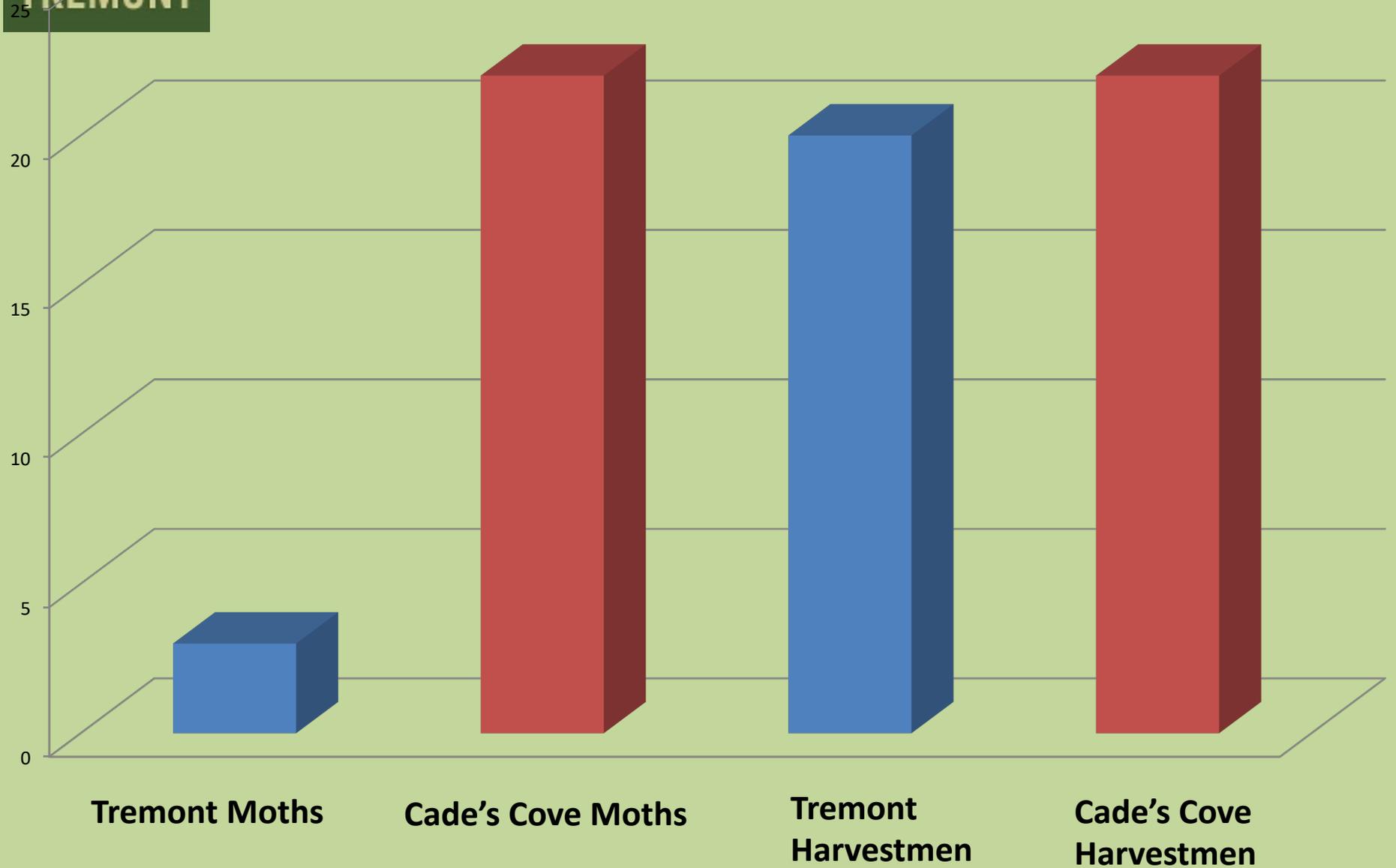


# Results

	<u>Moths</u>					
	<u>Tremont</u>			<u>Cade's Cove</u>		
Place	Lobby	Meadow	Total	Bathroom	Meadow	Total
Alive	1	2	3	22	11	33
Dead	2	0	2	0	0	0
<b>Total</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>22</b>	<b>11</b>	<b>33</b>

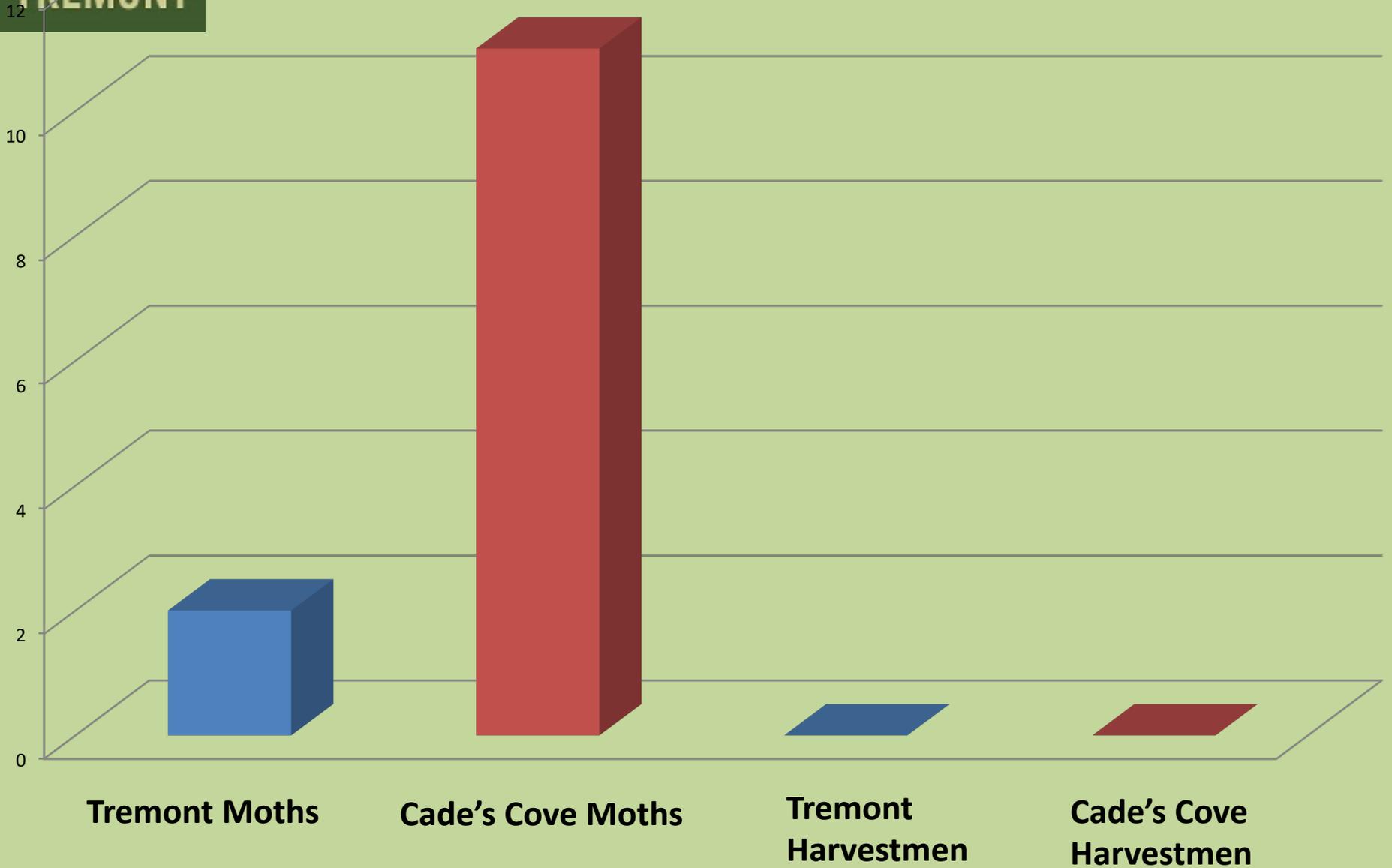
	<u>Harvestmen</u>					
	<u>Tremont</u>			<u>Cade's Cove</u>		
Place	Lobby	Meadow	Total	Bathroom	Meadow	Total
Alive	20	0	20	19	0	19
Dead	0	0	0	3	0	3
<b>Total</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>22</b>	<b>0</b>	<b>22</b>

# Manmade Structure Specimens



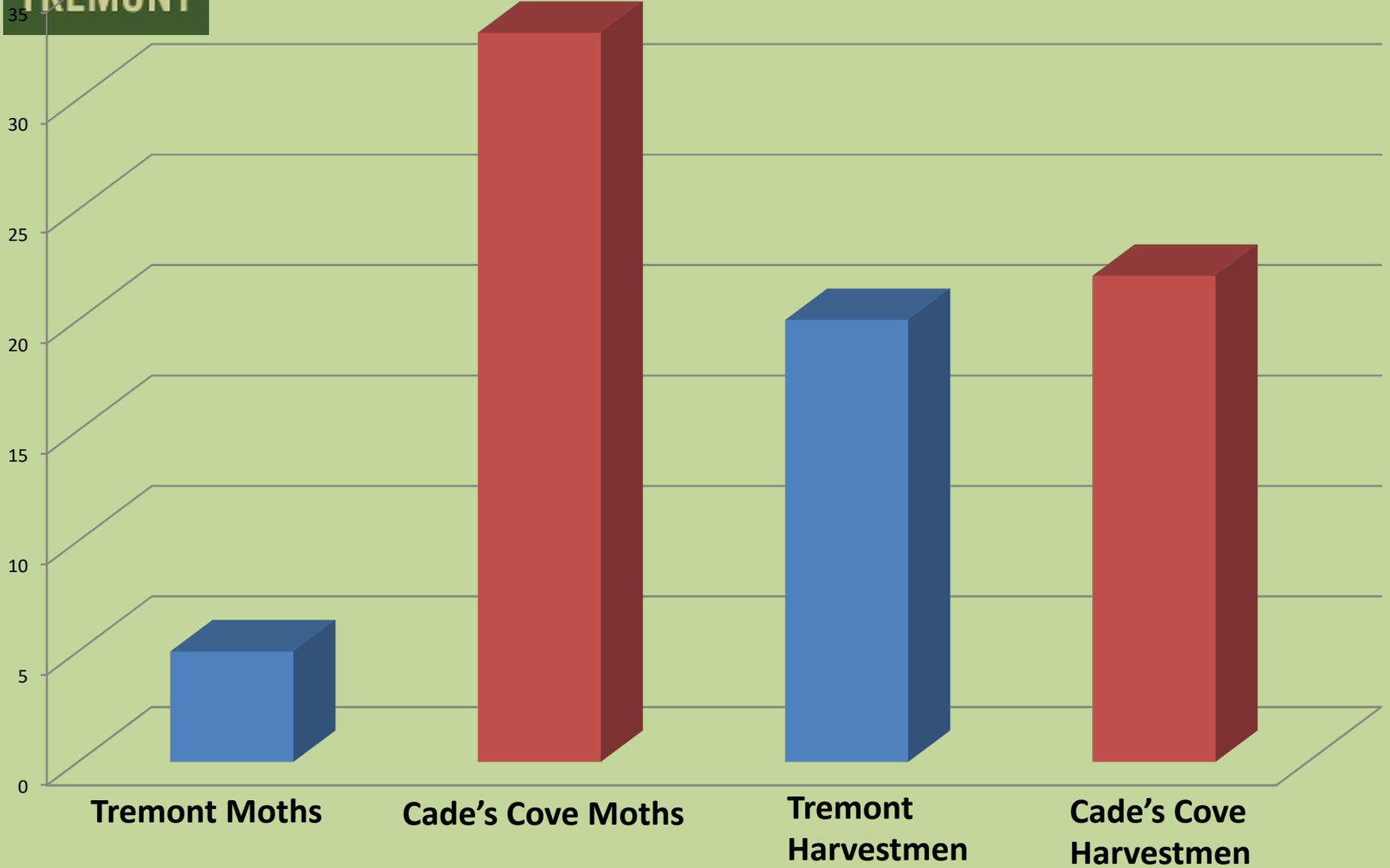
# Meadow Specimens

GREAT SMOKY  
MOUNTAINS  
INSTITUTE AT  
TREMONT



# Total Specimens

GREAT SMOKY  
MOUNTAINS  
INSTITUTE AT  
TREMONT



# Conclusion

- The data supported our hypothesis, which was that we would find more moths at Cade's Cove than at Tremont.
- We also hypothesized that we would find more moths in/on manmade structures than in meadows, a prediction that was supported by our data.
- We did not create a hypothesis involving harvestmen because they were not initially involved in our study.



# Discussion

- Moths and harvestmen are more abundant in Cade's Cove than Tremont
- More on manmade structures than meadows
- More moth species diversity at Cade's Cove
- The difference in moths between Tremont and Cade's Cove was far more significant than with harvestmen
- Differences in results between different locations and habitat types may be caused by several factors: easier to observe in manmade structures, specimens attracted to lights, predators, etc.
- Many factors could have affected the accuracy of our results: recounting specimens, bathrooms being cleaned, temperature cooler at Cade's Cove, searching not always consistent, etc.

# *Acknowledgements*

- T-bird
- Sophie
- Cade's Cove's staff
- Tremont

