

# SHADY SNAILS!



Portia  
Agnes  
Stefan  
Nicholas  
& Rory

# OBSERVATIONS

- We observed periwinkles in the water, as well as out of the water, both in the shade and in direct sunlight
- The majority of the periwinkles observed were in the water and densely distributed under and around rocks; strongly attached
- The ones out of the water were spread further apart and easier to detach from it's surface



## RESEARCH QUESTION

- Assumption: The majority of periwinkles are drawn to the shade, based on our observations.
- *Are periwinkles drawn to the shade because of the food source that is found there?*

# EXPERIMENTAL SET-UP

- Two set ups were placed next to each other with the following controlled variables:
  - Number of periwinkle
  - Volume of water
  - Starting point of the periwinkle
  - Coverage of the chambers; Light and shade



# INDEPENDENT VARIABLE

- We placed bladder rack in one of the chambers in the shade and none was placed in the other chamber.

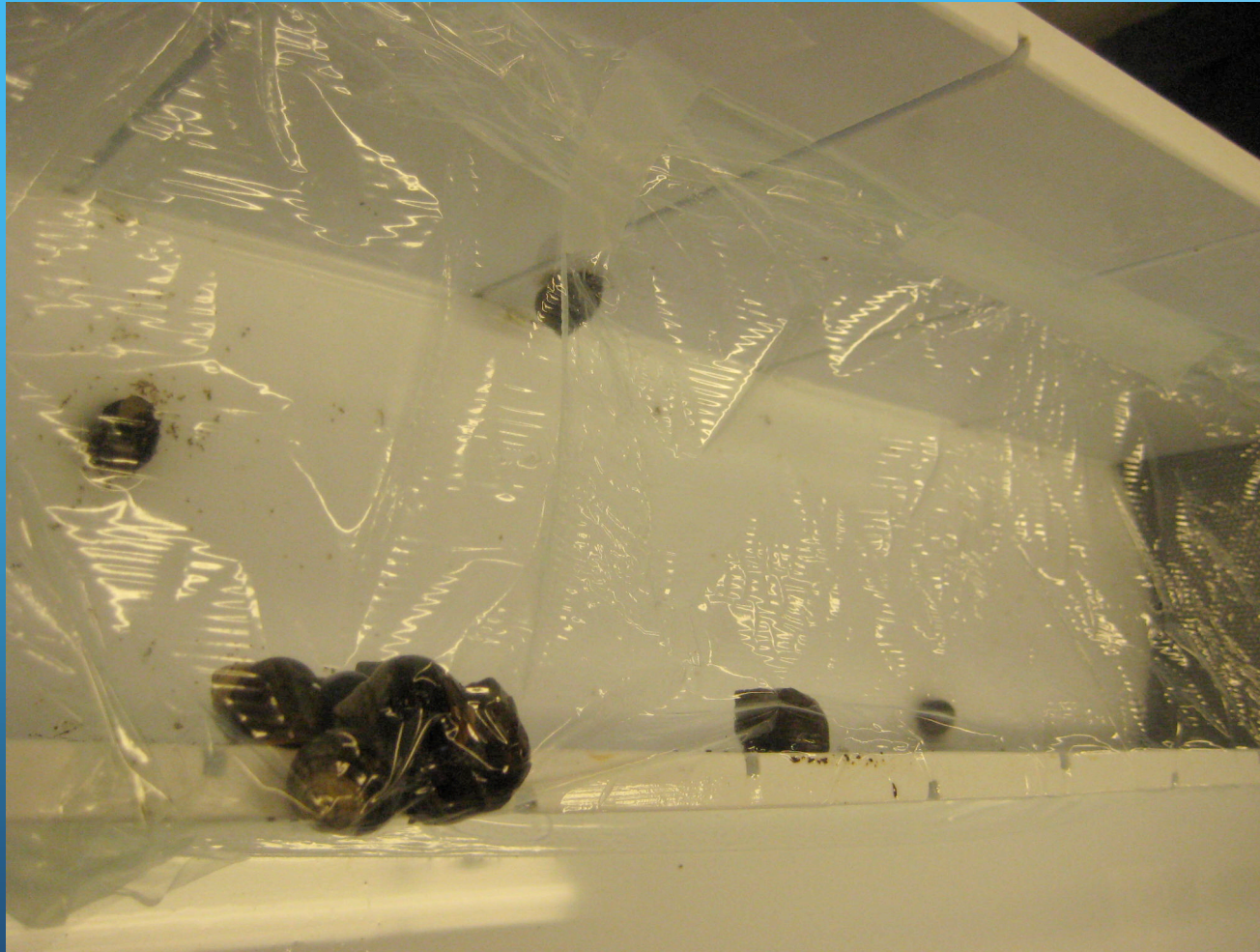


# DEPENDENT VARIABLE

- We were measuring the movement of periwinkles by counting how many were in both areas of light and dark over a period of about 14 hours



# EXPERIMENTAL SET-UP





# Hypothesis

- ✧ More periwinkle will choose the shade if there is food located in that area. This is because in nature, we observed the fact that a periwinkle's food source is located in the shady areas, which are submerged in water.



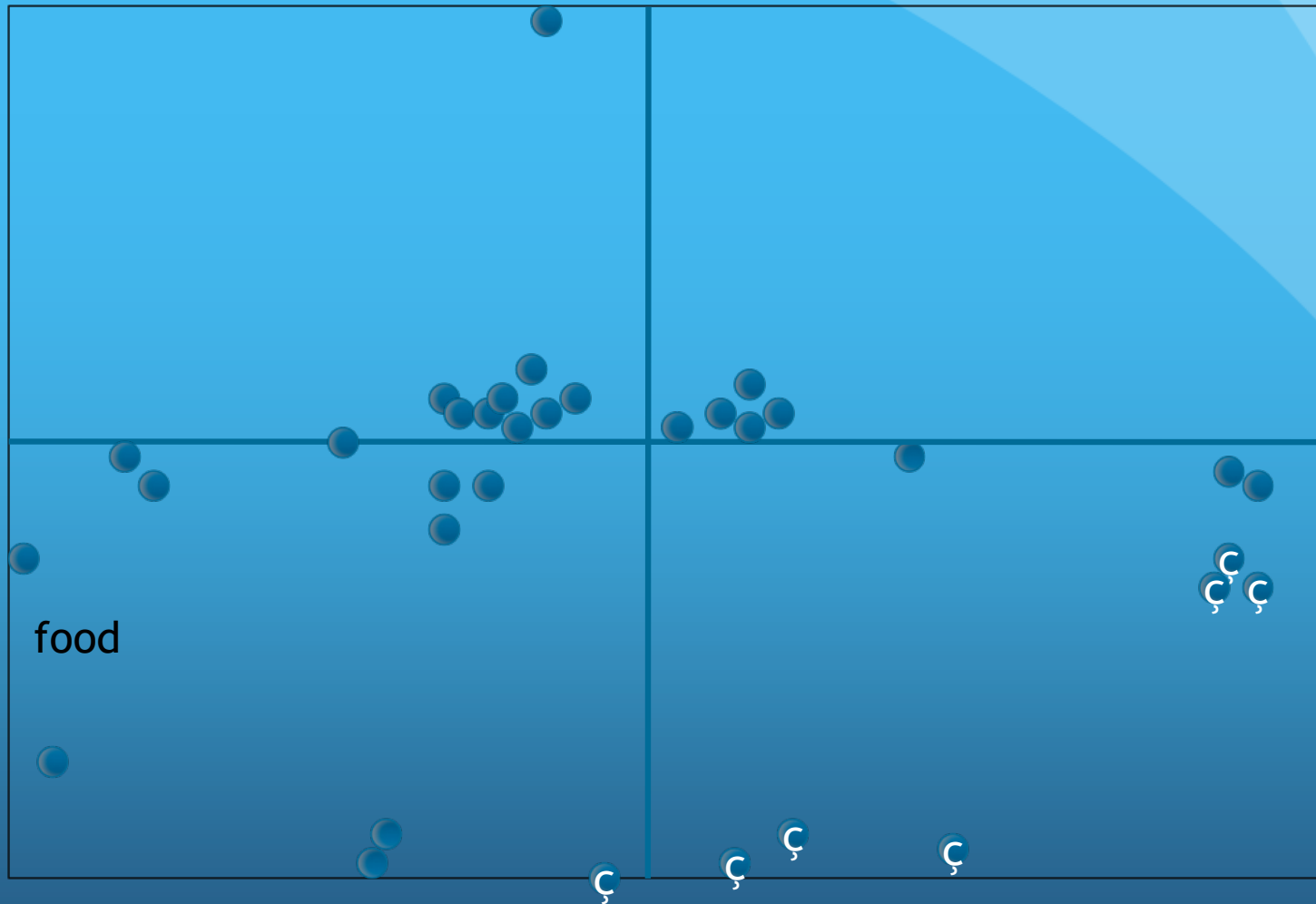
# NULL HYPOTHESIS

- ✧ The food source will not have a significant impact on where the periwinkle will choose to go when compared to the set up without a food source.

# RESULTS TABLE

	Amount In Chamber w/ Food	Amount In Chamber w/o Food	Amount Of Escape es
Light	9	6	5
Dark	11	9	0

# Distribution of periwinkles



Dark side

Light side

# Observations

- ✧ When in the shade, the chamber with food had some sort of draw towards it
- ✧ The chamber without food, there were many in the shade, but they didn't go as far down the chamber compared to the one with food
- ✧ Approximately half of our original population ended up in the light, something that was a surprise to our team



# Interpretation

- Because 5 of them escaped from the chambers, our results ended up being inconclusive
- As a results of this, with our following experiment we had to make sure that when we did it the next time, our barriers and covering were more secure than beforehand
- We also decided to place algae in both the light and the dark areas



# 2ND EXPERIMENT

## RESEARCH QUESTION #2

Do periwinkles prefer direct sunlight or the shade when food is no longer a factor?

## HYPOTHESIS #2

- ✧ We think that a large majority of the periwinkles will choose shade over direct sunlight when given the choice of the two factors in an isolated situation. We think this because we found more periwinkles in the shade compared to the sunlight in their natural habitat.

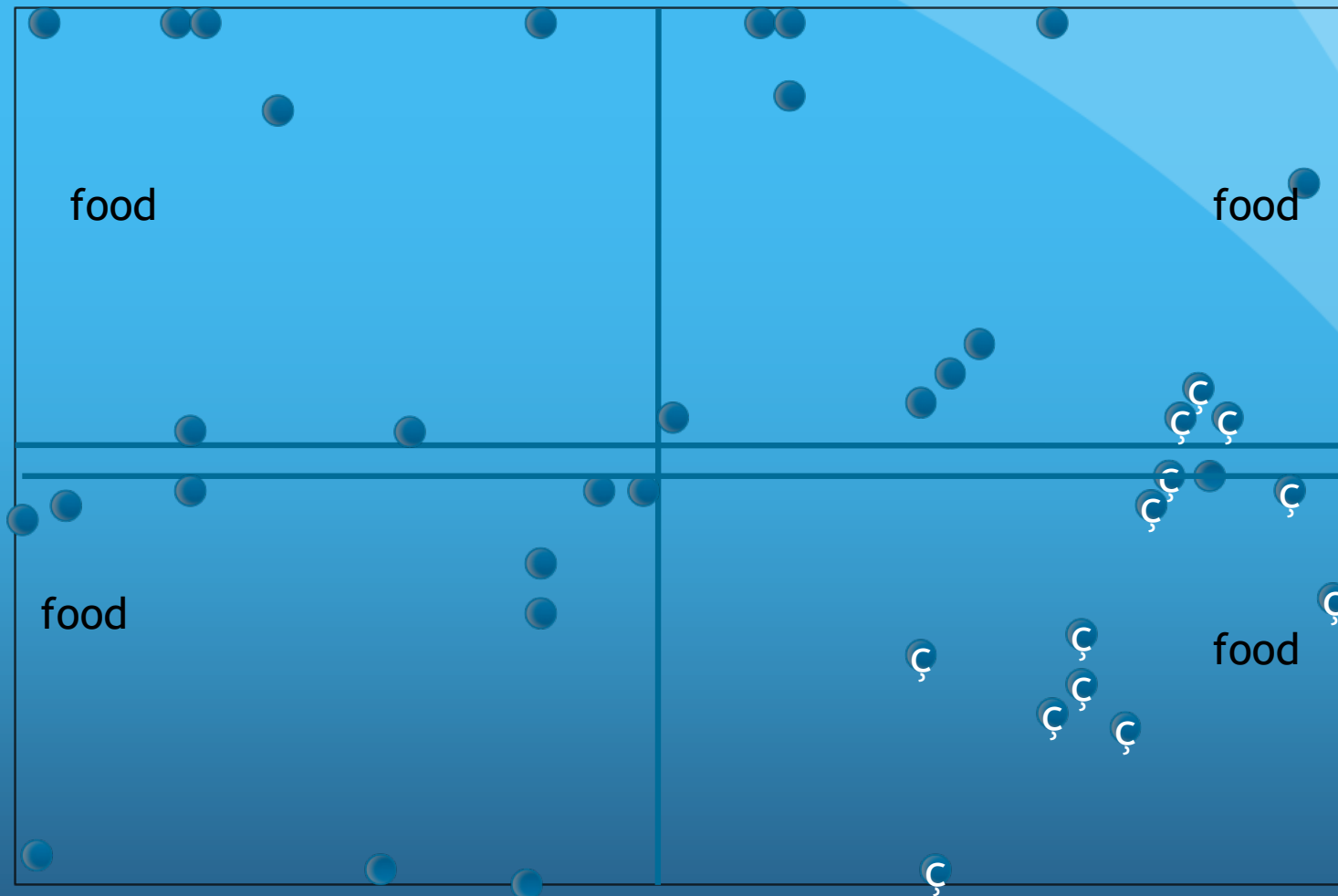
# EXPERIMENTAL SET UP

- The set up was the same as the previous experiment; the only changes were:
  - More secure barrier
  - A food source for the periwinkle was placed in every corner of each chamber

# RESULTS TABLE

	Amount In Chamber 1	Amount In Chamber 2
Light	12	11
Dark	7	10

# Distribution of periwinkles



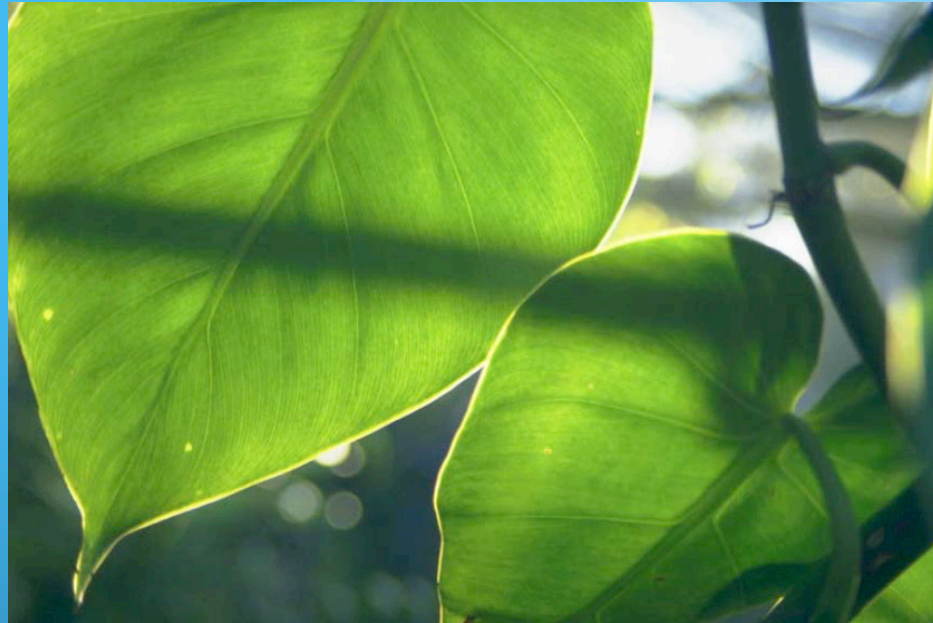
Dark side

Light side

# OBSERVATIONS

- ❖ One of the periwinkles managed to escape from one chamber to another; however, it doesn't affect our results considering all of the conditions were the same, as it still chose light over dark
- ❖ A majority of the periwinkles (55%) moved to the side with direct sunlight





## INTERPRETATION

- We had to accept the fact that our null hypothesis was correct, as our data didn't truly show any preference from one side to another. Our results suggest that light was not a significant factor in the distribution of the periwinkle

THANK  
YOU FOR  
LISTENING  
=D



# SOURCES

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