# Mosquito Attraction Research

Dominic Lampo $^1$ 

 $^1\mathrm{AGU}$  with NASA Stem Enhancement and Earth Science Highschool Internship

November 22, 2022

#### Abstract

Mosquitoes in recent years have increased greatly in numbers due to the rapidly changing climate and rising temperatures. With this change comes suitable habitats for mosquitoes which are the most efficient killers in all of the animal kingdom due to the number of death from mosquito-borne diseases. If we were able to pinpoint the certain areas that mosquitoes are most attracted to we could in theory slow or even prevent the spread of mosquitoes. In our project, the research was conducted to find a correlation between the color and size of the traps to the amount of mosquitos that are present. With our findings, we were able to conclude that the bigger the traps, the faster the mosquitoes would be attracted to that area. We also found that the different traps would hold similar densities of mosquito larvae per square inch.

### Abstract/Introduction

The research was conducted to find a correlation between the color and size of the trap to the amount of mosquitos that were present

### Research Method

To figure out whether the size played a role in attracting mosquitos 3 traps of 3 different sizes were set up in different locations but with similar land cover. The first was a small paint bucket that had a surface area of 28in<sup>2</sup>. The second was a medium sized trap was a bucket with a surface area of 100in<sup>2</sup>. The third was the largest with a surface area of 600in2. The buckets were filled and fish flakes were used as bait and everyday two days for a week the traps were checked for larvae.





# Mosquito Attraction Research





# Acknowledgements

We would like to give our thanks to NASA, SEES, and the Texas Space Grant Consortium along with our mentors Rusty, Cassie, Peder, and the peer mentors for the opportunity to present our research.

Research question: Do the color and surface area of mosquito traps have an effect on their ability to attract mosquitoes?

# Results

|   | Day<br>2 | Day<br>4 | Day<br>6 |
|---|----------|----------|----------|
| S | 0        | 603      | 416      |
| М | 243      | 1941     | 676      |
| L | 204      | 2743     | 1834     |

Over the course of the week I collected the data using the habitat mapper on the globe observer app to track my progress. As you can see the larger surface area attracts mosquitoes better. But what is interesting to notice is that the small and medium buckets held similar mosquito densities with about 20 larvae per in<sup>2</sup>.

### Discussion

The size traps were located in College Station, Texas while the traps in the discussion of color were set up in Florida. Due to heavy storming no data was collected on color resulting in no conclusion for the color variable.

### Conclusions

According to our data we can conclude that a larger surface area attracts more mosquitoes but can only hold so many larvae respectively. So anyone possible mosquito habitats need to be taken care of to help the spread of mosquito borne illnesses.



By: Dominic Lampo, Eitan Benzaquen, Andrew Quintana, Karim Elyoussef, and Ethan Arroyo