CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
S2310

Project Title
Biting Back: Affordable Mosquito Control

Abstract

Objectives/Goals
My research and experiment was based on creating an affordable way to mitigate the carriers of many waterborne diseases - mosquitoes. I used materials available to the impoverished civilians of third world countries. The test that I carried out at a research entomology lab was a solution to the problem posed; it involved testing traps of different colors and sizes to lure harmful female mosquitoes.

Methods/Materials
Once in the trap, I employed homemade flypaper to immobilize the mosquitoes and prevent them from laying eggs. In order to set up this experiment I built nine different prototypes of traps in three varying in color and size to see which lured in the most mosquitoes. I then took the data I received from that experiment and applied it to my phase two prototype - a red colored medium sized trap. I set up my new red only trap with the flypaper along with a control - a medium red shell, and ran the test.

Results
Student t test results showed that there was a significant difference between the amount of mosquitoes caught by the treated trap than by the shell resulting in a p value of 0.0209. The red treated trap caught 42.4%, while the shell only caught 6.06% of the mosquitoes flying in its enclosure.

Conclusions/Discussion
The data shows that my red medium sized trap, using homemade flypaper, worked and caught mosquitoes at an efficient rate of 1 mosquito every 4 minutes and 30 seconds.

Summary Statement
My project dealt with creating an enviromentally friendly and affordable solution, out of reusable materials, to control the number of mosquitoes in third world countries.

Help Received
I worked at an entomology lab called Sierra Research Laboratories, under the supervision of Dr. Bill Donahue and his team. I was sponsored by my biology teacher Victoria Acquistapace. My research paper was edited by my english teacher Rick Graham.