



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Sarah Stutsman	Project Number J2212
Project Title Color: An Attractant to Egg-laying Aedes Mosquitoes or Not?	
<p style="text-align: center;">Abstract</p> <p>Objectives To determine whether mosquitoes prefer to lay their eggs in a specific colored oviposition trap.</p> <p>Methods Method: Set up and fill traps 2/3 of the way with water. Every day record your observations. After 4 days, take out paper towels from traps and count the number of Aedes mosquito eggs collected. Repeat eight times, rotating the traps positions each time. Materials: 2 graduated cylinders (250ml and 10ml); red, orange, yellow, green, blue, purple, black, and white cups; notebook; paper towels; magnifying glass</p> <p>Results After performing eight trials (one trial took four days), I found that the white oviposition trap collected a statistically significant average number of Aedes mosquito eggs when compared to the control (the black oviposition trap). The differences between the average number of Aedes mosquito eggs collected by the other traps were not major. To determine if mosquitoes actually prefer white, more data would need to be collected. After each of the trials, I rotated the oviposition traps positions to eliminate the position variable. A graph was made of the number of Aedes mosquito eggs laid in each of the different positions on average. However, there was no major difference between this data.</p> <p>Conclusions It can be concluded from this experiment s data that, unlike stated in my hypothesis, Aedes mosquitoes, when laying their eggs, prefer the color white as the white oviposition trap collected a statistically significant number of eggs when compared to the control (the black oviposition trap). Each trial, the oviposition traps rotated spots to eliminate the variable of mosquitoes preferring a specific location. However, after examining the data further, it could be concluded that mosquitoes don t prefer a specific spot when laying their eggs as there was no major difference between the average number of eggs collected in each spot. This experiment of mosquito vision could be continued with a malaria net, seeing if mosquitoes could see a hole in it, or if they would have to rely on randomly checking the net. It could also be continued by testing to see whether mosquitoes prefer a certain shade of white, or by testing whether they are attracted to an oviposition trap with a certain color paper towel. The results from this experiment could improve the world by allowing scientists to more mosquitoes track and the diseases they carry easier, preventing their spread.</p>	
Summary Statement After collecting and counting eggs that Aedes mosquitoes laid in eight different colored oviposition traps, it was found that the number of eggs collected in the white oviposition trap was statistically significant; leading to the conclusio	
Help Received Ms. Julie Tsecauras from the UCR entomology department gave me suggestions, ideas, and helped answer any questions I had; Mr. Andrew Garcia from the UCR entomology department clarified what Aedes mosquito eggs look like	