

A THEORETICAL RESEARCH ON MOSQUITO BEHAVIOR AND DECISIONS IN DIFFERENT ASPECTS

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Research Questions :

- Are mosquito breeding patterns affected and or altered in different altitudes, specifically higher ones?
- Does the color of water as a variable affect mosquito breeding attraction?
- Can color of clothing as a variable affect mosquito biting behavior patterns, and if so what color attracts mosquitoes more?

Abstract

In this study we're aiming to research mosquito behavior and decisions in different aspects and circumstances to better understand the nature and persona of mosquitoes. We centered our research based on three questions. Do mosquito patterns are affected and or altered in different altitudes? If the color of water as a variable affects mosquito breeding attraction? Does clothing color as a variable affect mosquito biting behavior patterns? If so, what color.

To conduct this research we planned 3 different experiments in the course of 3 weeks. For the first experiment (Altitude Preference) we used two bottled water traps with grass clipping which we placed on the roof and backyard. For the second experiment (Color Theory) we created 3 traps with black, red and blue dyed water with grass clipping. For the third experiment (Color Biting) we went outside for an hour using different colors of clothing each day.

In experiment 1 showed that there were more eggs and larvae found in lower altitude garden traps. In experiment 2 showed that the number of eggs and hatched larvae in the black dyed water was higher than in the red and blue. In experiment 3 we saw more bitings on our bodies on days 4,5, and 6 the days when exposed in darker colored clothing.



Introduction :

Experiment 1 (altitudes)

- 2 bottled water traps with grass as bait
- One trap placed on the roof and the other one in the backyard

Experiment 2 (color theory)

- Three buckets each with a different color (black,red,blue).
- Also had grass as bait and were placed in the backyard

Experiment 3 (color biting preference)

- Wear different colored clothing and try to go outside for an hour
- Use darker colors (black, navy blue, red) and light colors (white, kaki,yellow)

Results :

- **Experiment 1 (altitudes)**
 - More eggs and larvae found in lower altitude backyard traps.
- **Experiment 2 (color theory)**
 - The number of eggs and larvae in the black dyed water was higher then in red and blue. In the red and blue dyed water were roughly around the same number of eggs and larvae.
- **Experiment 3 (color biting preference)**
 - We saw more bitings on our bodies on days 4,5,6, the days we were exposed in darker colored clothing.



Discussions :

Although mosquitoes are able to fly up to 950 feet up they prefer low altitudes. This might be because in high altitude areas have less oxygen content in the air.

Most mosquitoes prefer dark places due to the absence of light moisture level will be high when compared to places exposed to light, when moisture is high it helps the mosquitoes to lay eggs.

Mosquitoes are attracted heat and dark color clothing absorbs light which is naturally turned into heat.

Conclusion :

- Mosquitoes are more attracted and or prefer low altitudes, black dyed water, and dark color clothing.

Bibliography :

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