CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
S1712

Project Title
Which Local Plant Extracts Will Be an Effective Pesticide on Mosquito Larvae and Still Be Safe for Other Aquatic Life?

Abstract

Objectives/Goals
The purpose of my science project is to determine if local plant extracts will kill mosquito larvae and still be safe for other aquatic life. The reason I am doing this project is to find a natural pesticide for mosquito larvae that will not cause harm to other living creatures in our environment.

Methods/Materials
To make my plant extracts for testing I will take plant cuttings (2 cups)from test plants and blend with 30ml water then strain through cheese cloth. For my control I will place 10 mosquito larvae in a container filled with water. In my next test I will place 10 mosquito larvae in a container filled with 15% oleander extract and 85% water. In the next test I will place 10 mosquito larvae in a container filled with 5% oleander extract and 95% water. In the next test I will place 10 mosquito larvae in a container with 15% chrysanthemum extract and 85% water. In the next text I will place 10 mosquito larvae in a container with 5% chrysanthemum extract and 95% water. I will repeat all of these tests using 10 frog eggs in place of the mosquito larvae. I will check and count live larvae/frog eggs every 8 hours for 120 hours to determine toxicity of the plant extracts.

Results
The results of my science project; which local plant extracts will be an effective pesticide on mosquito larvae and still be safe for other aquatic life? were that of the variables used, neither chrysanthemum or oleander extract would be a safe pesticide to use in our ponds to kill mosquito larvae.

Conclusions/Discussion
After completing my project I found that my hypothesis for both oleander and chrysanthemum were incorrect. While both were very effective in killing the mosquito larvae; both substances also damaged the frog egg sacks. I feel further testing needs to be done to find a more environmentally friendly pesticide that will kill mosquito larvae and not harm the other aquatic life in our waterways.

Summary Statement
It is my goal to determine if a local plant extract will be an effective pesticide against mosquito larvae and still be safe for other aquatic life in our waterways.

Help Received
UC Davis supplied mosquito larvae and mosquito information; Mom helped with typing and took pictures