CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
22721

Project Title
Stink Bugs! Do Scents Affect Cricket Behavior?

Abstract

Objectives/Goals
The object of my experiment is to see if different scents affect cricket behavior.

Methods/Materials
One 12.5 x 7 inch clear plastic cricket cage
5 sheets of paper marked out in 2cm x 2cm grids to line cage
10 crickets, commercial cricket food, water
5 cotton balls
small amounts of Pine-Sol, lemon extract, peppermint extract, and musk colngne

Results
The crickets in the control group moved freely about the cage. The crickets exposed to the lemon extract begame agitated and went to the far ends of the cage. A similar response was also seen with thet peppermint, but to a lesser degree. When the crickets were exposed to the musk, they seemed to t attracted to it. Many touched the cotton with their antannae and staved near the cotton. The crickets exposed to the Pine-Sol acted much like the control.

Conclusions/Discussion
My hypothesis was partially correct in that some of the scents did affect cricket behavior. My hypothesis was incorrect in the effects of the different scents. The crickets seemed to avoid the lemon and to a lessor degree, the peppermint; which I thought would attract them. This can be explained by the fact that I now know that lemon is related to citronella, which is used in insect repellents. I thought that the musk would repel the crickets since it is produced by animals who prey on crickets, however, it seemed to strongly attract them. This may be explained by the fact that some insects, like the scorpion, use a musk-like substance in their mating. I thought the Pine-Sol would repel the crickets because of its strong smell and was surprised to see that they were not bothered by it at all. This may be because the crickets are familiar with pine or only sensed a small portion of it with their antannae. In the future, other scents may be tested which may lead to safer forms of insect control.

Summary Statement
My project is about the affect of different scents on cricket behavior.

Help Received
Mother helped type report; Father helped glue information to board