



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

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| <b>Name(s)</b><br>Whitney J. Yankauskas  | <b>Project Number</b><br><b>S2017</b> |
| <b>Project Title</b><br><b>Predator Avoidance of Pachygrapsus crassipes Due to Moving Shadows</b>  |                                       |
| <b>Abstract</b><br><b>Objectives/Goals</b><br>The point of this experiment was to see if there was a significant difference in the behavior of a lined shore crab that was subjected to an inconsistency of light caused by moving shadows. The behavior was assessed by how many times the lined shore crabs exited their shelter, entered the water, and how long they stayed outside of their shelter, while they were subjected to moving shadows.<br><b>Methods/Materials</b><br>I tested four groups, three crabs in each group, twelve times. One group was subjected to a 1 minute interval shadow(1 minute on, 1 minute off), one group was subjected to a 5 minute interval shadow(5 minutes on...then off), one group with a shadow on for the entire testing time, and one group with no shadows for the testing time. Materials used were an incandescent lamp, lined shore crabs large white paper, a 3.3 cm by 2 cm plastic box, a petri dish, and rocks, sand, and sea water.<br><b>Results</b><br>When taken into statistics, there was a significant difference when comparing the control group to the rest of the groups, except when it came to time spent outside. The 1 minute group crabs spent the least time outside, had the least shelter exits and the least water entries.<br><b>Conclusions/Discussion</b><br>My results supported my hypothesis, and my null hypothesis could be rejected. |                                       |
| <b>Summary Statement</b><br>My project was about how a lined shore crab perceived what type of shadow is more threatening  |                                       |
| <b>Help Received</b><br>My dad drove me to the beach to get the crabs. Used equipment from the science building.   |                                       |